



Product catalogue

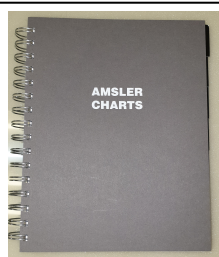


Cardiff Contrast Test

We manufacture and supply many established vision tests and other ophthalmic equipment. PA Vision Limited have been producing and providing eye care products for over 25 years. We value our key role in helping vision testers and eye care professionals detect vision disorders the world over.



MOLLON-REFFIN 'Minimal' Colour Vision Test



PA Vision Amsler Manual

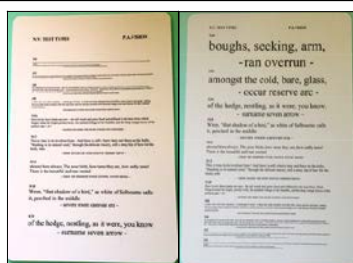
PA Vision ring bound Amsler book. From the original maker of Amsler Charts produced exclusively for PA Vision. Containing 50 easily detachable Amsler recording charts, Amsler instructions, Procedure and questions 1 – 6 and Standard charts 1 – 7.

PA Vision Ltd

Suite 4, First Floor
The Argyle Centre, York Street
Ramsgate
Kent CT11 9DS
www.pavisionuk.com
sales@pavisionuk.com
shane@pavisionuk.com
+44 1843 293057



UC Cube
New 2019 design



Reading Test Cards.

The original card has N4 to N24 on one side and music notes etc. on the other. The new reading test card is N4 to N48 on one side, N48 to N4 on the other.



Do you have Trial Frames in need of new parts? Contact us today to have your old frames repaired and refurbished.



All Products are CE Marked



Company Registration No. 7493023 VAT No. 858205316

Placing an order

Website : www.pavisionuk.com Email: sales@pavisionuk.com

Tel: +44 (0)1843 293057

Request an Invoice: shelly@pavisionuk.com Enquiries: shane@pavisionuk.com

Mail Purchase Orders to:

PA Vision Ltd

Suite 4, First Floor

The Argyle Centre, York Street

Ramsgate

Kent CT11 9DS

Terms of sale

Delivery and Price

Carrier options – Carriers / Royal Mail. Shipping charges will be added to invoice at time of shipment.

Any shipment surcharges will be billed separately if they are received after initial invoicing. Shipping costs vary depending on weight and delivery site. Please ask for a shipping quote when placing your order.

Prices are subject to change without notice.

Please provide an email address so a sales acknowledgement confirming prices may be emailed to you before shipment.

Educational Discount

Educational Institutions of Higher Learning (such as Universities and Teaching Hospitals) are offered a discount on products. Orders must be confirmed by email with an acceptable purchase order from the institution. Shipment must be made to the school address, unless paid in advanced or put on a charge card.

Please include the part numbers of the items you wish to order, shipping address and payment method. See How To Order.

Payment

We accept major Credit Cards: Master Card and VISA. Charges to your credit/debit card will incur a 4.0% charge, an invoice would be sent to you from our PayPal account with a link (you do not need an account to use this service except in Ireland). Bank transfer: Please contact us by phone, or email sales@pavisionuk.com for bank transfer Information. Bank details are on the invoice.

Special Orders

Special orders are not 'stock' items and so the delivery times may be longer. Special Order items are not returnable unless defective.

Returns

Please return in original packaging within 28 days of purchase (unless it's a special order then please contact us to discuss). Faulty products can be returned up to 28 days of date of purchase and an exchange or full refund will be given.

Cancellation

Orders must be cancelled within 48 hours of purchase order. Orders cancelled after this period will still be charged.

Shipping/Delivery: Costs vary please ask for a shipping quote when placing your order.

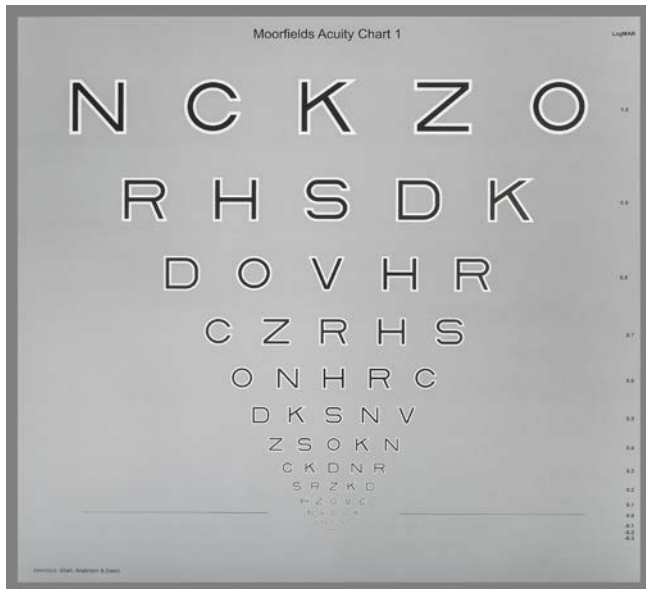
Items without prices will be supplied upon request.

New Tests

New Flip Format Vision Tests



Moorfields Acuity Chart



Acuity Flip Test



This test is designed to measure visual acuity of young children (1-3 years of age), or older children or adults with disabilities. It relies on the technique of preferential looking, so that the patient does not need to be able to recognise or name pictures. Each page of the test contains a picture, made up of black and white outline. The proportion of black and white is the same, so that the average brightness of the outline exactly matches the grey background. This means that when the outline is too narrow to be seen, the picture merges into the background and becomes invisible. The targets are known as ‘vanishing optotypes’. The technique of preferential looking means that all the patient is required to do is to look at the picture. If he or she can look at the picture, we know that he/she can see the outline. The outlines narrow as the test proceeds, and we score the visual acuity as the narrowest outline that can be seen.

On each page, the picture is either at the top or the bottom of the page. The important feature of preferential looking is that the examiner should NOT know where the picture is. To achieve this, the booklet has identical covers and the test proceeds in either direction, with the picture position varying randomly. There are three pages for each acuity level. The booklet can be held on the examiner’s lap or placed on a table between examiner and child, and can be held freely or mounted on the easel.

INFAFLIP Acuity Flip Test £546.00

City Gratings Acuity Flip Test



"The City Gratings Acuity Cards have been developed by a team of clinical vision scientists at City University to provide a means of assessing infant visual acuity.

The cards make use of an established and validated assessment technique known as the “acuity card procedure” whereby an infant’s innate visual tendency to fixate patterned, rather than homogenous objects in their environment, is exploited to obtain a quantitative estimate of visual acuity.

This new version is more convenient to use in that it is lighter in weight and more compact. It can be carried around easily. The flip format allows the tester to easily prepare the cards for the next test without the time consuming task of rearranging the cards in order and replacing them in the box. The test comes with an “A” shaped display stand allowing the tester to sit behind the unit while the child sits opposite with mum or dad. Viewing distance should be 50cm and a table of acuity levels is supplied for this distance.

This simple-to-use test, involves presenting an infant with a series of card-mounted grating patterns differing in spatial frequency (fineness / coarseness) and observing their looking behaviour through eye movement across the card. Each grating is paired with a similarly sized, grey, “blank” pattern of the same brightness. The examiner determines whether a looking preference exists for a given grating and if it does, the infant can be presented with further cards with gratings of increasing spatial frequency until the infant’s acuity limit is reached i.e. they no longer exhibit a preference for the grating.

The City Gratings cards offer several refinements over other similar preferential-looking based tests: they are scaled using the approach (considered the most appropriate for visual acuity testing) and are small and lightweight facilitating their use across multiple locations.

CITYFLIP City Gratings Acuity Flip Test £546.00

Universal Contrast Sensitivity Flip Test



Adult one side



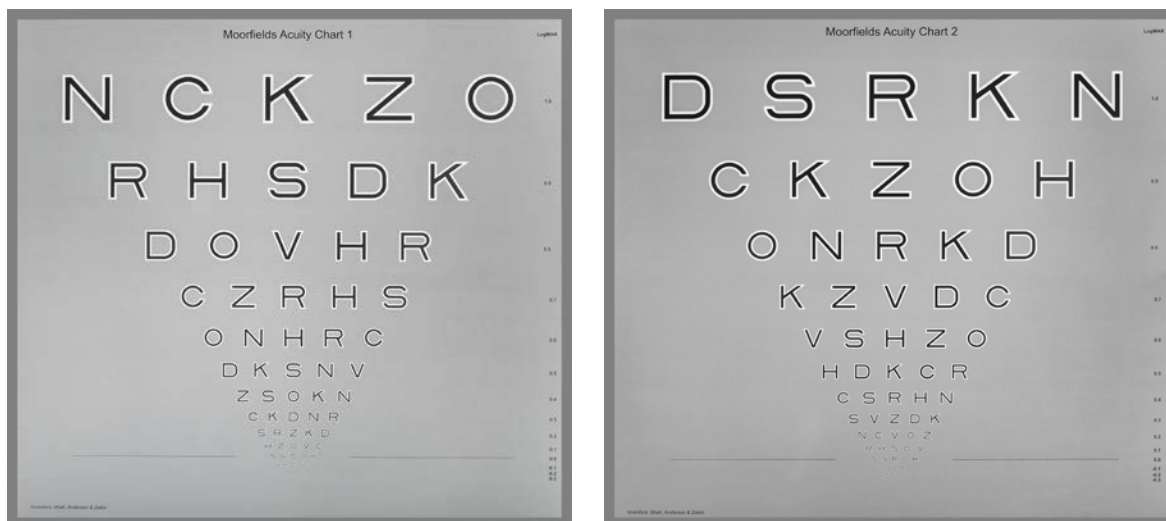
Children the other side

Contrast sensitivity is an important measure of visual capabilities. It complements a measure of visual acuity (which describes the finest detail visible at high contrast) by defining a subject's ability to discern large targets at low contrast and is particularly useful in the examination of patients with reduced vision or visual impairment.

The Universal Contrast Sensitivity Test provides a straightforward, speedy method of measuring contrast sensitivity, in a convenient portable form. It has two alternative sets of targets, letters or pictures, so that it is suitable for adults, children and people of all ages with communication or cognitive difficulties. The size of each picture or letter remains constant throughout but the contrast of the outline of the targets reduces so that the targets become more difficult to discern against the grey background.

CONTFLIP Contrast Sensitivity Flip Test £512.00

Moorfields Acuity Charts 1 & 2



Conventional black on white letter charts have two distinct visual thresholds. These are:

- a) The detection threshold, when the presence but not identity of the letter can be distinguished
- b) The recognition threshold, when the letter can actually be identified.

The Moorfields Acuity Chart (MAC) test includes two different, foldable letter charts (MAC 1 for the right eye and MAC 2 for the left eye). They are constructed using high-pass filtered letter targets. These letters are composed of a black core with surrounding white borders and are presented on a grey background.

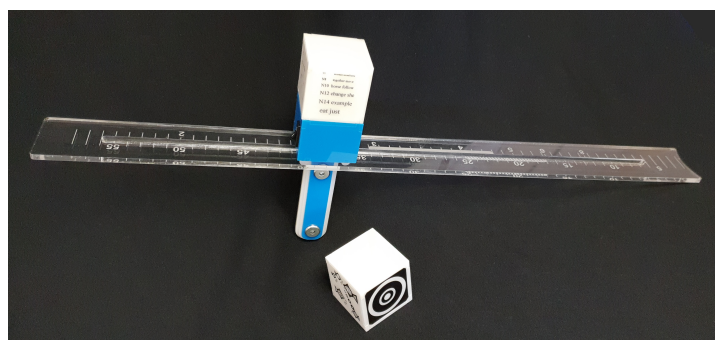
The mean luminance of the letter target is similar to that of the background resulting in very similar detection and recognition thresholds. This leads to the appearance of the letters vanishing close to threshold, hence their description as 'vanishing optotypes'. This holds true for individuals with no ocular abnormalities viewing centrally using the fovea.

These test targets have been shown to be more equally discriminable and have shown lower measurement variability compared to conventional letter designs. They have also demonstrated a superiority in detecting deficits in visual function in age-related macular degeneration when conventional letter acuity remains normal. More data is needed to evaluate their performance in the presence of other ocular abnormalities and it is anticipated that the MAC will be incorporated into world-wide research protocols to investigate this comprehensively.

The charts are constructed based on the gold standard design of the Early Treatment Diabetic Retinopathy Study (ETDRS) charts. These employ a logarithmic progression in letter size allowing for single letter scoring, in which each letter read correctly is incorporated into the final calculated acuity score. This has demonstrated more accurate and precise visual acuity measurements with lower test retest variability compared to conventional line scoring using Snellen chart designs.

MAC Moorfields Acuity Charts 1 & 2 £341.00

UC Cube - New Design



The Ulster-Cardiff Accommodation CUBE has been developed by Maggie Woodhouse (Cardiff University) and Kathryn Saunders (Ulster University) to provide a quick, objective measure of accommodative function (focusing accuracy) in optometric, orthoptic and ophthalmological practice.

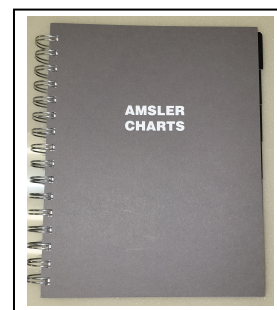
We, and our colleagues, have used a similar device for many years to assess accommodation in babies, young children and those with communication difficulties.

UCC UC Cube £417.00

PA Vision Amsler Manual

PA Vision ring bound Amsler book. From the original maker of Amsler Charts produced exclusively for PA Vision. Containing 50 easily detachable Amsler recording charts, Amsler instructions, Procedure and questions 1 – 6 and Standard charts 1 – 7.

5762 Amsler Manual £89.00



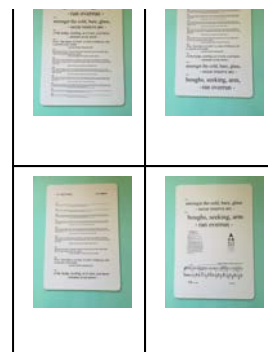
Reading Cards

Reading cards, starting at font N4 increasing to N48 on the front, then starting from N48 to N4 on the reverse. Both sides have continuous reading examples. To be used at 16 inches.

66991 Big to Small Reading Card £15.00

Reading cards, starting at N4 increasing to N24 and on the reverse side with various test types and musical notes.

66992 Musical Notes Reading Card £15.00



Trial Frame Repairs

As you may already know we offer a great service for trial frame repairs with a FREE loan frame service whilst we work on your frame. If you have any faulty frames or perhaps a frame that's in need of a little TLC just give us a call and we will arrange to have it looked at for you. Very occasionally trial frames become beyond repair, if this happens you may wish to take note that we supply the Oculus UB4 Ultimate Trial frame at the excellent price (6213) or if you prefer we also stock a fully adjustable universal trial frames (7117R). Contact PA Vision Ltd to enquire.



NV100

The NV100 near vision tester enables a complete refractive and binocular vision investigation to be carried out with the head and eyes in their normal posture at any working distance. (This item is not supplied with batteries due to import laws).



Colour Test Daylight Illuminator

The Colour Test Daylight Illuminator is specifically designed to provide the optimal light when using Panel 16, Farnsworth 100 Hue, Farnsworth D15 and Lanthony Desaturated D15 colour tests. The dual purpose tray can be either folded for use with colour books or folded flat for arrangement colour testing.

DI2018 Daylight Illuminator £410.00



MOLLON-REFFIN 'Minimal' Colour Vision Test



Used to diagnose colour vision deficiencies, this test is rapid, it can be administered even at the bedside and it is intended to offer the simplest possible task to the patient, being completed by children as young as three years of age. The test consists of a set of grey chips of varying lightness, 3 sets of coloured chips and one demonstration chip. The test is supplied in a Perspex box the lid of which is used to present the stimuli. Those familiar with "arrangement" tests of colour vision will recognise this as a rational reduction of earlier tests and will be the only test an optometrist needs. A pre-test demonstration was performed first. The child was presented with 6 grey caps selected at random and the orange demonstration cap and asked to identify the coloured cap as instructed in the test manual. The grey caps act as distracters so that the caps cannot be identified by difference in brightness. When this task was successfully completed, the child was presented with the same number of grey caps in addition to cap number 3 of one of the confusion lines (medium saturation). When this was identified it was replaced with cap number 2, and number 1 respectively (i.e. decreasing the saturation). When it is not seen, a cap with higher saturation was placed and the procedure was repeated. This was completed for the 3 sets of caps: deutan, protan and tritan. The task was initially presented to the child's carer to establish the appropriate terminology while the child was being entertained by another member of the research team. For example, some children were asked to *choose the different one*, whereas others were asked to *pick the wrong one*. The children were given a paint brush and were instructed to point at their chosen cap. The coloured cap was 'hidden' in a different location at each presentation. A second attempt was given to the child if they failed to correctly identify the coloured cap. However, this was masked from the child; the examiner removed and returned the same cap. The child's threshold was considered as the cap with lowest saturation that was correctly identified in each line. Figure 7.2 shows the presentation of the test. The result identifies the children as colour normal, protan, deutan or tritan. A reduction in sensitivity to a specific area of the spectrum was demonstrated as a lower score in one of the 3 groups of caps. Screens for both red/green and blue/yellow deficiencies.

24592 Mollon-Reffin 'Minimal' Colour Vision Test £341.00

HRR Pseudoisochromatic Plates 4th Edition

Advanced Colour Test



The HRR (Hardy Rand and Rittler) 4th Edition provides three very important features to provide the most advanced colour vision test available: congenital and acquired testing, identification of the type of defect and diagnosis of the extent of the defect as well as quick positive classification of normals. The HRR employs a sophisticated test strategy that virtually eliminates the potential for memorization and malingering. The figures used by the HRR Pseudoisochromatic Plates are independent of language and suitable for both adults and children. The HRR 4th Edition has achieved worldwide acceptance with instructions for the test administrator available in 24 different languages. Extensive clinical trials employing almost 100 normals and 125 colour defectives testify to HRR efficacy.

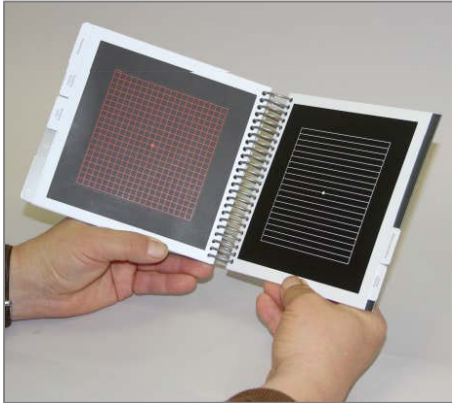
Product	Screening?	Con-genital	Acquired	Ability to Classify	Determine Extent	Number of Plates	Paediatric Version	Time to Administer
HRR 4th Edition	Yes	Yes	Yes	Yes	Yes	24	Yes	Quickest
Ishihara - 24 Plate Version	Yes	Yes	No	No	No	24	Separate	Incomplete
Molon Reffin	Yes	Yes	Yes	Yes	Yes	-	Yes	Quick
Dvorine	Yes	Yes	No	No	No	23	No	Moderate
Lanthony Tritan Album	Yes(BYonly)	No	Yes	No	Yes	5	No	Quick
SPP1	Yes	Yes	No	Yes	No	19	No	Slower
SPP2	Yes	Some	Yes	Yes	No	12	No	Slower
Farnsworth D15	No	Yes	Yes	Yes	Medium/Strong	16 chips	Yes	Slow
Lanthony Desaturated 15	No	Yes	Yes	Yes	Mild Only	16 chips	No	Very Slow



Easy to Administer

The HRR Pseudoisochromatic Plate Test 4th Edition supports very efficient colour deficiency screening. The first four plates are used to show the patient how the test works. The fourth plate in this demonstration series has no figure and serves to potentially uncover attempts to memorise this test. The next six plates (screening series) present the most difficult protan, deutan and tritan (red, green, yellow, and blue) targets. Success with these plates defines the subject as having 'normal colour vision and completes the test. The subsequent 14 plates are the diagnostic series and provide diagnostic as to the extent (mild, medium or strong) and type of defect (Protan, Deutan, Tritan).

Choice of Packaging and Plaquenil Referral Package



The most popular configuration of the HRR is called the **HRR Combo** and provides the full 24 plates laminated with plastic to protect them against the acid in fingerprints. The Combo also provides a full set of Amsler Grids. Amsler testing completes the prescribed regimen for acquired colour testing such as Plaquenil Screening.

A less expensive configuration called the **HRR Laminated Version** provides the full 24 HRR Plates without the Amsler Grids.

The **Standard configuration** includes the full 24 plates printed on acid free archival paper (similar to the Ishihara Plates).

All configurations include a laminated score sheet, instructions and a pointer to be used by the patient to identify the targets.

Helpful Accessories



HRR Matching Kit

Provides laminated matching card and three flash cards with each of the HRR targets. The set is used to teach younger patients the 'matching' concept for subsequent colour testing. Also includes an extensive write-up (laminated) for the parents to help them understand the occupational implications of colour vision defects.



Occluding Glasses

Acquired testing must be conducted monocularly as toxic affects occur monocularly. These Occluding Glasses are included in Combo and Laminated Sets and are available separately.

HRR Options

HRR 4th EdPackage	Description	Part Number
Standard English Version	24 plates (archival paper), brush, English instructions and score sheet	13396R
HRR/Amsler Combo - English	24 plates, 7 Amsler Grids, brush, English instructions, score sheet , occluding	5858R
Laminated English Version	24 laminated plates, brush, English instructions, score sheet, occluding	13396LMR
Laminated English HRR ExpandedAmsler Combo	24 laminated plates, 7 Amsler Grids, brush, English instructions, score sheet, occluding glass	5860R
HRR Standard with Daylight C	HRR Standard, brush, English instructions, score sheet, C Daylight Glasses	4628R
HRR Laminated with Daylight C Glasses	HRR Laminated, 24 Plates, brush, English instructions, score sheet, C Daylight Glasses	5752R
HRR Expanded Amsler Combo with Daylight C Glasses	HRR Laminated with 7 Amsler Grids, brush, English instructions, score sheet, C Daylight Glasses	5743R
Red/Green Subset	16 Red/Green plates, brush, English instructions, score sheet	13396RGC
Blue/Yellow Subset	8 Blue/Yellow plates, brush, English instructions, score sheet	13396BYC
Accessories		
HRR Camel Hair Brush	Brush to avoid fingerprints - replacement	5869R
HRR 3rd Edition Score Pad	100 pages	13397R
HRR 4th Edition Score Pad	100 pages- supports HRR 4th Edition	4594R
HRR 4th Edition laminated Score	Sold separately	4894
Occluding Glasses	Reversible Metal Frame with spring loaded temple for acquired testing	4523C
HRR Paediatric Matching Kit - English	Laminated cards with English instructions to parents	4518C
Daylight Illuminator with easel	Daylight bulb, 110 Volt only, UL	5137R
Daylight Bulb	Replacement Daylight bulb	6665R
Daylight Illuminator-120/220V with	Daylight bulb, 120/220 Volt 50/60 Hz, Universal Power Supply, UL, CSA, CE	5735R
Multi-Language Instruction CD	Includes latest version of foreign language Instructions in PDF and MS-Word	911601

Multi-Language HRR Instruction CD now available in 24 languages!

In order to simplify the HRR product offering, we have included the HRR instructions in all of the following languages plus English on one Multi-Language CD:

Arabic (MSA)	Danish	Hungarian	Portuguese
Bulgarian	Dutch	Italian	Slovak
Chinese: Mandarin	English	Japanese	Spanish
Chinese: Traditional	French	Korean	Swedish
Croatian	German	Malaysian	Thai
Czech	Greek	Polish	Turkish

The CD includes HRR instructions in both PDF and MS-Word format. It also includes the HRR score sheet. The Multi-Language HRR Instruction CD is included with each product shown below:

Multi-Language HRR 4th EdPackage		
Multi-Language HRR Standard	24 plates (archival paper), brush, English instructions and score sheet plus Multi-Language CD	5861R
Multi-Language Laminated HRR	24 Laminated plates, brush, English instructions, score sheet, occluding glasses plus Multi-Language CD	5863R
Multi-Language Laminated HRR "Combo" with Expanded Amsler Grids	24 Laminated plates, Expanded set of 7 Amsler Grids brush, English instructions, score sheet, occluding glasses plus Multi-Language CD	5864R

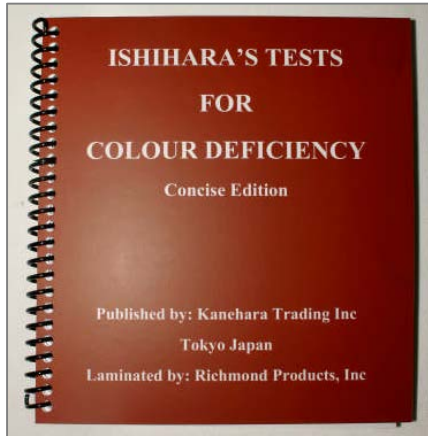
Note: The Multi-Language CD also includes instructions for the Expanded Amsler Grids in English, French, Portuguese, and Spanish

Laminated Ishihara Colour Test Books

The first innovation in Ishihara Colour testing in 100 years!

We've taken a genuine Kanehara-Japan manufactured Ishihara test and laminated the pages to provide protection from fingerprints and other damage. Photo spectrometry tests were then run to insure that the laminating process did not affect the colour.

In some jurisdictions, Ishihara remains the required test despite superior results achieved with the HRR test. Occupational and Paediatric applications can jeopardize the cleanliness and longevity of any colour tests as fingerprints are very damaging to the colour inks. The Laminated Ishihara is intended to address these issues with a protective non-glare coating proven to leave the original ink colours unchanged. This protects the Ishihara colour test for many years of use. Further, we've used the same spiral binding used on our HRR book to permit presentation of 'one plate at a time'.



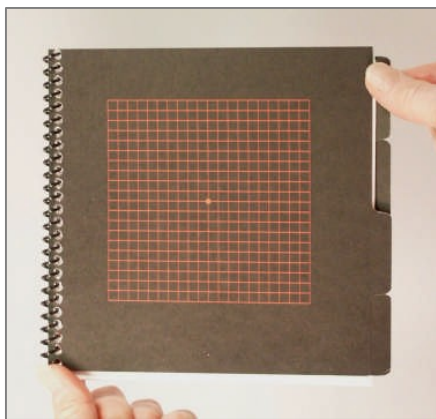
Amsler Grid and Laminated Ishihara Plates

Many protocols require the administration of both a colour test and Amsler Grid. Combining the two tests in one book provides a convenient way to fulfill these protocols.

Includes 7 Amsler Grids: Standard black with White Grid, Standard with Diagonals for Central Scotoma, Black with Red, Black with White Dots, Parallel Lines on Black Parallel Lines with Central Lines, Standard with Small Central Squares, Red on Black is used to diagnose a colour scotoma. The White Dots Grid reveals a scotoma without distortion. The two Parallel Line Grids are used for with patients needing a more simplified Amsler Grid and are presented both horizontally and vertically. Each of the small squares on the Grid with Small Squares approximates 1/2 degree and is used for patients with small, central scotomata.

Printed on very durable styrene and with cut tabs. The coil binding makes it easy to show each page separately thus eliminating any distraction. Instructions and a score sheet are included. The score sheet can be duplicated on a copier or pads of score sheets are available.

Multi-language CD includes instructions in both Spanish and English.

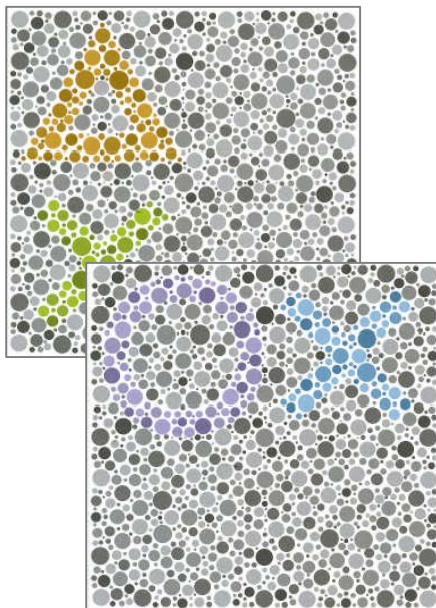


Amsler Grids provide grids including red on black.

Deluxe Version: Ishihara, Amsler and HRR Acquired Colour Plates

This Deluxe option combines the 14 Plate Ishihara, 4 Amsler Grids and 8 Acquired Colour test plates from the HRR 4th Edition - all Laminated. The first two plates of the HRR section demonstrate to the patient how the test works. The next six plates (screening series) present three levels of difficulty of the yellow and blue plates. The first two plates define the subject as having 'normal acquired colour vision'. The subsequent 4 plates (diagnostic series) determine, if needed, the extent (medium or strong) of the tritan defect.

The 24 and 38 plate versions are bound in an 'accordion style' (both unlaminated and laminated). Ishihara 8-plate colour book, unlettered paediatric with CE Mark. Also includes 2 legend cards and is sometimes referred to as the 10 plate paediatric Ishihara test book.

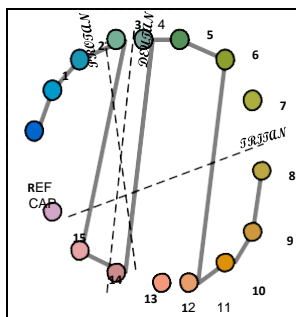


HRR Acquired plates extend Ishihara colour testing to include blue and yellow for detection of acquired defects

Laminated Versions - CE	
5517	Laminated 14 Plate Ishihara
5518	Amsler and Laminated 14 Plate Ishihara
5519	Deluxe Laminated 14 Plate Ishihara with Amsler Grids and HRR Acquired Plates
5565	Laminated Ishihara Test 24 Plates
5566	Laminated Ishihara Test 38 Plates

Unlaminated Versions - CE

Product	P/N	Congenital	Acquired	Range	Technical Papers Published	# Disks	Software Available	Magnetic	Time to administer
Farnsworth D15	FD15	Yes	Limited	Med to Strong	Many	15	Yes	Yes	Moderate
Lanthony D15	LD15	No	Yes	Normal vs Mild	Many	15	Yes	Yes	Moderate
Sahlgrens	4595	No	Yes	Normal vs Mild	Limited	12	No	No	Quick
Lanthony 40	126977	No	Yes	unknown	Limited	40	No	No	Slow
Roth 28	4506R	Yes		Med to Strong	Limited	28	No	No	Slow



Farnsworth D15

Subset of the well-known Farnsworth 100 Hue Test. Intended for occupational evaluation and classification instead of in-depth study of colour vision defects. Contains a reference disc and fifteen numbered discs which make up an incomplete colour circle. Patient arranges the discs and then evaluation of the patient's arrangement separates 'normal' colour perception from moderate and strong defects in deutan, protan or tritan axis colour discrimination. Boxed in a clear plastic container for easy scoring and includes instructions, non-latex gloves and laminated score card.

FD15C	Farnsworth D15 Kit
4428B	Laminated Scorecard
4433R	Replacement Colour Disc
4495	Protective Cloth Pouch
5794R	Score Sheets, stack of 50

Magnetic Farnsworth D15

Same test as Farnsworth D15 except discs are enclosed in a sealed plastic box and arranged by using a magnetic pen. The discs are kept clean and cannot be lost. Kit includes magnetic pen, score sheet and cloth pouch.

4528C	Magnetic D15 Kit
4529	Replacement Magnetic Pen

Lanthony Desaturated Test

Same test as the Farnsworth D-15 except colours are desaturated, which makes the test much more difficult. Separates normal colour vision from any level of defect. Recommended for disease detection. Two Versions: loose disc and magnetic.

LD15C	Lanthony Loose Kit
4540C	Magnetic Lanthony

**Spanish and French Available
see Multi-language Section**

Low Vision Farnsworth D15 Colour Test

Consists of the standard pilot and 15 test caps with the larger stimulus area of 1.3 in (3.3 cm) diameter. The area can be reduced by using the gray restriction rings to standard! 0.47 in (1.2 cm) diameter. Includes acrylic case, storage pouch, recording forms and! instructions. Double set permits matching of colours to simplify test without destroying! validity.

260260	Low Vision D15 Test
260160	Double set Low Vision D15



4965R Red/Red Glasses

Coverlet Adhesive Occluding Patches

These adhesive patches are easy to remove and they are breathable. Uses a light weight elastic cloth for comfort and quality adhesive for secure fit. Contains dry natural rubber compounds. 2in x 3 in (5 cm x 7.5 cm). Non-sterile. Sold in Box of 20.

9008x Coverlet Occluder Paediatric Foam Edged Patches -Non-Latex

These are extremely comfortable due to the foam edging which also insures excellent occlusion. They are durable and can be used over and over with careful cleaning. Fits over either eye. Clear can be used to protect from air flow for Bell's Palsy.



Foam side of Paediatric Foam Edged

Part Number	Size	Colour	Foam
5999R	63 x 44 mm	Black	Non-latex
6000R	63 x 44 mm	Flesh	Non-latex
6001R	63 x 44 mm	White	Non-latex
6002R	63 x 44 mm	Diffuse	Non-latex
4881	60 x 45 mm	Clear	Latex



Kay Magic Patch



Notice how the right lens has been occluded by applying a layer of Kay Magic Patch

Magic Patches are film occluders to be applied to the child's RX. Each layer of film reduces distance visual acuity by 3 to 4 LogMAR sizes. You can use several layers to achieve the occlusion desired.

Simply peel the backing paper and attach to the inside surface of the lens that you wish to occlude. Press the shiny side of the Magic Patch to the outside surface of the appropriate lens and mark the outline of the lens onto the backing paper. Then cut out your Magic Patch shape and peel away the backing paper. Finally, press and smooth Magic Patch firmly onto the inner lens surface. If two or more layers are required, press these together before applying to the spectacles.

The patch can be easily removed and re-attached repeatedly. It may help to moisten the film surface when re-using. Each package includes six 16cm x 6.5cm (6 x 2.5 inches) strips. Includes enough material for up to 30 single layer uses.

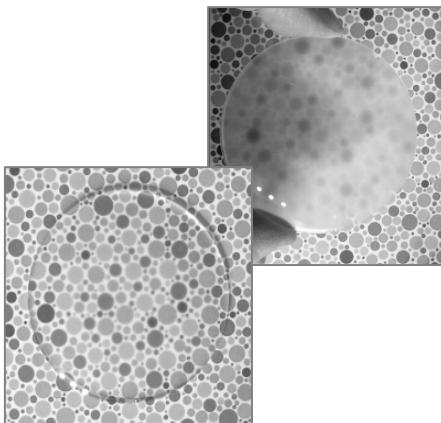
5944 Kay Magic Patch - Package of 6 strips

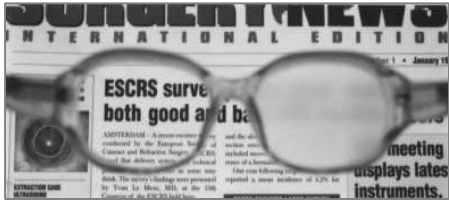
Min Occlusion Lens Blank

The MIN Occlusion lens was developed to permit treatment for intractable diplopia where the use of a patch is not tolerated. Provides a more satisfactory cosmetic look while still providing occlusion to the patient's eye. Furnished as a blank ready to be cut and fit to the patient's frames. It provides occlusion to less than 20/300 while permitting observation of the eye to the viewer.

Recommended for treatment of Paediatric Amblyopia. Blank size is 3" (75mm) overall. Usable occlusion is 2 1/2" (65mm) diameter. Made of CR39. Thickness is 0.080". Sold as a single lens.

4475 MIN Occlusion Blank





Bangerter Occlusion Foils

Foils provide a system of graded foils to equalize the spatial contrast of the dominant eye to that of the amblyopic eye. Can be used for both Prophylactic and Therapeutic applications. In Prophylactic use, the occluder can help prevent Amblyopia, Suppression, and Abnormal Retinal Correspondence. In Therapeutic use, they can be used for Amblyopia treatment, Orthoptic Treatment, Diplopia, and Diplopia in Monocular Aphakia (with <0.1). Designed for easy adhesion to the patient's glasses plus they are disposable for cleanliness.

Note: A Higher number (0.3 to 0.6) yields greater clarity.

Part Number	Acuity
90111.0	20/20
90110.8	20/25
90110.6	20/30
90110.4	20/50
90110.3	20/70
90110.2	20/100
90110.1	20/200
9011LT0.1	$<20/300$
9011LP	Light Perception
901100	No light



Bangerter Occlusion Foils Bar

The occlusion bar can be used to determine the level of occlusion desired. Provides the same 10 levels of occlusion as the foils.

4510 Bangerter Occlusion Bar

Child's Exam Occluding Solutions

Fun Frame Opaque Occluding Glasses

Add fun to your occluding choices with these colourful foam animals. Not for possession by children under 3 years old. Each set includes two frames (left and right occluding) of the same animal.



Frame	Occluder (2 Frames)
Butterfly	4608R
Horse	4609R
Parrot	4610R
Tiger	4611R



Sunflower Occluding Glasses

Bright red frames with Yellow Flower flip up occluding lenses. Use with 3-6 year olds. Supports 55mm to 65mm PD. Solid construction.

5485 Sunflower Occluding

Flip-up Occluding Glasses

Choice of Pink Blossom Bright or Green Happy Froggy Occluding Glasses will help expedite Paediatric exams. Solid construction with quick flip-up on each side. Frame measures 4 5/8 inches (11.5 cm) hinge to hinge. Use with 2 to 6 year olds.



5871R Blossom Bright Flip-up Occluding Glasses

5998R Happy Frog Flip-up Occluding Glasses

Adolescent Occluding Glasses

Larger Frame Glasses come as a set with left and right occluding lenses. Different colours for each makes identification easy for the practitioner. Sturdy construction. Use with 7 + year olds. Supports 65mm to 73mm PD. Solid construction.

5946 Adolescent Occluding Glasses



Paediatric Medical Eye Shields and Visual Field Diffusers

Provides temporary protection or occlusion for the eye. Comes with elastic string. Size: 63 x 44 mm. The size of this new paediatric eye shield is 66% of the Adult Medical Eye Shield shown on the next page.



Part Number	Colour
5716R (pkg of 3)	Black
5717R (pkg of 24)	Flesh
5957R (Pkg of 24)	White
5843R (pkg of 3)	Diffuse



5843R Diffuse Paediatric

Paper Occluders

Paper occluders prevent the need to clean exam occluders between patients. Helps avoid spread of disease. Pad of 50. Dimensions: 6 inch (15.3 cm) long with 2.25 inch (6 cm) round Hiding Heidi face. Glued up as a pad.

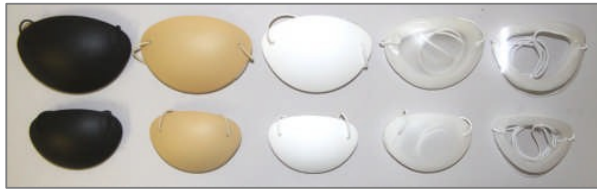
253200 Paper Occluders - Pad of 50



Adult Foam Edged Patches - Non-Latex



These are extremely comfortable due to the foam edging which also insures excellent occlusion. They are durable and can be used over and over with careful cleaning. Fits over either eye. Clear can be used to protect from air flow for Bell's Palsy.



Adult vs Paediatric Foam Edged for comparison

Part Number	Size	Colour	Foam
5949R	77 x 53 mm	Black	Non-Latex
5950R	77 x 53 mm	Flesh	Non-Latex
5958R	77 x 53 mm	White	Non-Latex
5951R	77 x 53 mm	Diffuse	Non-Latex
4880	72 x 50 mm	Clear	Latex

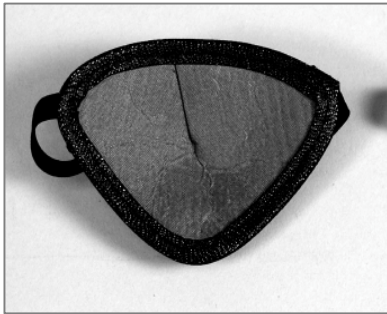
Traditional Edge Banded Patches

We have been selling these Traditional patches for years with consistently excellent feedback. They are more carefully made than the 'chain pharmacy' product that looks similar. These patches have superior materials and attention to details that make them more comfortable to wear. Patches are cupped to avoid contact with eye lashes. The edge band makes them very comfortable around the rim. Will not fray. Available with a wide elastic strap or tie. Comfortable for daily use. Packages of 12.

4735R Traditional, Black, Elastic, Teal Lined 12

4736R Traditional, Black, Tie, Teal Lined 12

4800R Traditional, Black, Tie, Unlined 12



Clip-On Occluders – Leaf or Round

Intended to clip over current frames to provide temporary occlusion. Tabs are flexible to fit frame. Available in two styles: round or leaf. Packages contain 6 pieces each.



Round Shape



Leaf Shape

P/N	Type	Shape	Size	Colour	P/N	Type	Shape	Size	Colour
44LBR	Clip-on	Leaf	44mm	Black	44RBR	Clip-on	Round	44mm	Black
44LFR			44mm	Flesh	44RFR			44mm	Flesh
46LBR			46mm	Black	46RBR			46mm	Black
46LFR			46mm	Flesh	46RFR			46mm	Flesh
48LBR			48mm	Black	48RBR			48mm	Black
48LFR			48mm	Flesh	48RFR			48mm	Flesh
50LBR			50mm	Black	50RBR			50mm	Black
50LFR			50mm	Flesh	50RFR			50mm	Flesh

Adult Medical Eye Shields and Visual Field Diffusers



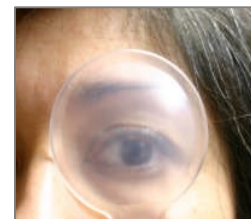
Part Number	Colour
6027R (pkg of 24)	Black
6028R (pkg of 24)	Flesh
5956R (pkg of 24)	White
1660R (pkg of 3)	Diffuse



1660R Adult

Diffuser

Frosted Occluders severely limit what the patient can see, however, permits the examiner to see the patient's eye clearly.



Adult vs Paediatric Shields for comparison



Foam Edged Moisture Chambers

The moisture chambers are clear plastic to permit observation of the condition of the eye. Fits over either eye. Elastic. Adult's are 2 13/16 x 1 15/16 inches (72mm x 50mm) and Children's are 2 3/8 x 1 11/16 inches (6 cm x 4.5cm). Can be used to protect eye from air flow for Bells Palsy.

4880 Adult Chamber

4881 Child's Chamber



Part Number	Description	Length
SINGLE ENDED OCCLUDERS		
4520B	Black Occluder	Long - 9 in
5064B	Black Occluder	Short - 7 in
4521B	White Occluder	Long - 9 in
4795B	Single Pinhole 1 mm Occluder	Long - 9 in
5908B	Single Pinhole 1.5 mm Occluder	Long - 9 in
5909B	Single Pinhole 2.0 mm Occluder	Long - 9 in
5051B	Single Pinhole 1 mm Occluder	Short - 7 in
4817B	17 Pinholes Occluder	Long - 9 in
5062B	17 Pinholes Occluder	Short - 7 in
4785B	49 Pinholes Occluder	Long - 9 in
5063B	49 Pinholes Occluder	Short - 7 in
VERY LIGHTLY FROSTED		
4678B	Very Lightly Frosted Occluder	Long - 9 in
5902R	Very Lightly Frosted Occluder	Short - 7 in
5823B	Lightly Frosted - Red Maddox - 45° orientation	Double
5954B	Lightly Frosted - Green Maddox - 45° orientation	Double
5955B	Lightly Frosted - Clear Maddox - 45° orientation	Double
DOUBLE ENDED OCCLUDERS		
4549B	Occluder - 1 Pinhole - Double Ended	Double
4818B	Occluder - 17 Pinholes - Double Ended	Double
5105B	Occluder - 49 Pinholes - Double Ended	Double
RED LENS		
5057B	Red Lens	Long - 9 in
5056B	Red Lens	Short - 7 in
5060B	Red Lens - Occluder - Double Ended	Double
5058B	Red Lens - Red Maddox - Double Ended	Double
MADDOX		
5053B	Red Maddox - 45° orientation - Single Ended	Long - 9 in
5052B	Red Maddox - 45° orientation - Single Ended	Short - 7 in
5054B	Green Maddox - 45° orientation - Single Ended	Long - 9 in
5115B	Green Maddox - 45° orientation - Single Ended	Short - 7 in
5055B	Clear Maddox - 45° orientation - Single Ended	Long - 9 in
5117B	Clear Maddox - 45° orientation - Single Ended	Short - 7 in
5061B	Red Maddox - 45° orientation - Occluder	Double
5435B	Red Maddox - 45° orientation - One Pinhole	Double
5282B	Red Maddox - 45° orientation - 17 Pinhole	Double
5162B	Red Maddox - 49 Pinhole - Double Ended	Double
5058B	Red Lens - Red Maddox - 45° orientation	Double
5059B	Red Maddox - Red Maddox - Double Ended - One Maddox Filter is oriented at 45° to the handle and the other is parallel to the handle	Double

Additional Occluders



Traditional Lorgnette Occluder for use by the patient or the examiner. Provides excellent occlusion. Slide piece provides 17 pinholes.

5851B Lorgnette Occluder



Reversible Occluding Glasses



High quality metal frames are reversible for easy occlusion during an exam. Temples are spring loaded for durability.

4523C Occluding Glasses



Occluders, Pinholes and other lenses for Trial Frames

6059R Pinhole for Trial Frame (17 pinholes) Plastic

601R Pinhole for Trial Frame (5 pinholes) Aluminum



Occluders and Pinholes etc. mounted in trial rings:

5324R	Black Occluder
5325R	Black with 1mm single pinhole
5326R	Black with 1.5mm single pinhole
5327R	Black with 1mm x 23mm slit
5328R	Black with 1mm x 5mm cross pattern
5329R	Black with 1.5mm 13 pinholes
5330R	Clear lens with cross pattern etched edge to edge
5331R	Frosted Occluder
5332R	Polarized Lens with orientation marked



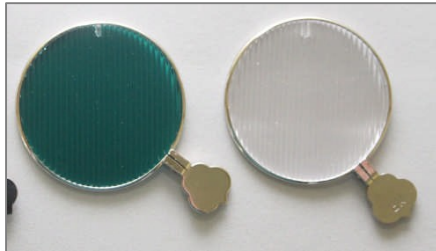
Additional Occluders, Maddox, Red and Pinholes

Maddox and Filters for Trial Frames

Maddox lenses mounted in trial rings. Available as a set with White, Red or Green or individually. Note choices of orientation below.

- 4730R Maddox Red - oriented to handle**
- 4731R Maddox Green - oriented to handle**
- 4732R Maddox White - oriented to handle**
- 4848R Maddox Set - oriented to handle**

- 5012R Maddox Red - oriented 45° to handle**
- 5013R Maddox Green - oriented 45° to handle**
- 5014R Maddox White - oriented 45° to handle**

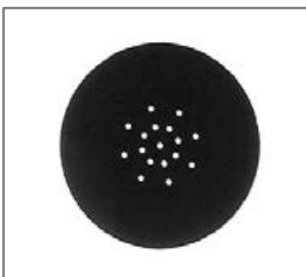


Maddox in Trial Rings with saw kerf index mark at top of Maddox lines and Maddox lines oriented 45 degrees from centre of handle.

- 5561R Maddox Red with saw kerf at top - 45° to handle**
- 5562R Maddox Green with saw kerf at top - 45° to handle**
- 5563R Maddox White with saw kerf at top - 45° to handle**

Filter Lenses

- 5260R Red Lens in trial ring**
- 5261R Green Lens in trial ring**



Pinhole Frame Blanks

These blanks can be cut and mounted in frames to provide pinhole occlusion. Colour is black. Available as 40mm diameter with 49 pinholes

- 4571R 40mm with 49 pinholes**

Occluding Fun Frames



Mounted in your choice of Fun Frames, these Very Lightly Frosted Occluders provide 20/200 occlusion while permitting observation of the occluded eye. Can be used to determine if only one eye is deviating. Also helpful to prevent 'latent nystagmus' which can appear when black occlusion is used. Set includes two frames (left and right occluding) of the same animal. Safely clean with alcohol.

Frame	Frosted (pair)	Opaque (pair)	Adult Temples (Adjustable)
Butterfly	5609R	4608R	5529R
Horse	5610R	4609R	5555R
Parrot	5611R	4610R	5530R
Tiger	5612R	4611R	5557R



Polarized and Red/Green

Polarized lenses are oriented for use with Stereo Fly polarized stereo tests.



Frame	Polarized	Anaglyph (Red/Green)
Butterfly	4604R	4612R
Horse	4620R	4613R
Parrot	4621R	4614R
Tiger	4607R	4615R

**Do not give Fun
Frames away to
children under 3
years old.**



Retinoscopy Aids

Comes with two frames: occluded on one side with the optic on the other. Choice of power and animal.

Frame	Plus 1.5 Retinoscopy	Plus 2.0 Retinoscopy	Plus 2.5 Retinoscopy	Plus 3.0 Retinoscopy
Butterfly	4978R	4982R	4971R	4986R
Horse	4979R	4983R	4972R	4987R
Parrot	4980R	4984R	4973R	4988R
Tiger	4981R	4985R	4974R	4989R

Paediatric Testing Matrix By Age

Paediatric products for acuity and contrast sensitivity testing organized by age group:

Recommended Age Range	Test Type	Optotypes Available
6 months to 3 years	Acuity	Cardiff, Lea Gratings, Richman, Teller
	Contrast	Cardiff, Hiding Heidi
3 to 5 years	Acuity	Allen, HOTV, Lea Symbols, Cardiff Near, Kay Pix
	Contrast	Lea Symbols
5 and up	Acuity	Lea Numbers, HOTV, Cambridge, McClure
	Contrast	Lea Numbers, HOTV
Low Vision	Acuity	Cardiff, SOSH, Feinbloom, Lea Numbers
	Contrast	Hiding Heidi
Adolescent thru Adult	Acuity	Snellen, Sloan, Lea Numbers, HOTV
	Contrast	Lea Numbers, Sloan

Cardiff Acuity Test

The Cardiff Acuity Test is designed especially for the hard to test age group, 12 months to 3 years. It uses familiar pictures and a procedure in the form of a game to attract and keep the attention of young children. However, the test does not require the child to be able to name or even to recognise the pictures. Instead, it relies on the technique of 'preferential looking' – that is, the observer simply notes the child's eye movements in order to determine whether he or she can see the picture. This means that the test can be used irrespective of a child's developmental stage, making it ideal for testing children and adults with intellectual disabilities. The Cardiff Acuity test was developed by Dr. J. Margaret Woodhouse, at the School of Optometry and Vision Sciences, Cardiff University, UK. It has been rigorously validated, and is now recommended by leading paediatric vision consultants worldwide. The Cardiff Acuity Test has been recently re-launched, and is now available in two versions. The standard version covers a range of visual acuity levels from 6/48 and 6/96 to 6/3.75 and 6/7.5 (at working distances of 1 meter and 50 cm).

TEST PRINCIPLES

The test employs the principle of Vanishing Optotype, in other words the figure (fish, car etc.) blends with the gray background shades at the acuity threshold. Thus resolution, detection and recognition acuity thresholds are all brought together. The target figures are pictures, all of the same overall size, drawn in decreasing widths of white and black lines. Acuity is determined by the narrowest white band for which the target is visible to the child.

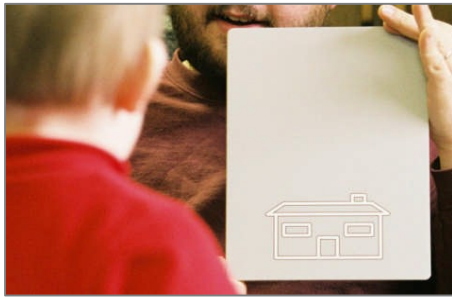
As the examiner shuffles through the cards, the movement of the child's eyes up or down is noted. The Vanishing Optotypes are combined with the principle of 'Preferential Looking' to provide a paediatric test method that provides excellent accuracy of diagnosis. When a card is presented the child will choose to look towards the top or bottom of the card if they have sufficient acuity to recognize the target figure. This works because the child naturally prefers to look at a target figure rather than the blank end of the stimulus. Further, 'Preferential Looking' works when the examiner does not know whether the top or the bottom of the cards contains the target figure. If the child does not show a preference for either the top or bottom of the card, the acuity threshold has been exceeded.

TEST ADMINISTRATION

The Standard Cardiff Acuity Test includes three cards at each acuity level. Cards can be used at either one meter or 1/2 meter. The Cardiff 4740R Standard Card Set includes 36 cards providing 24 acuity levels when used at both distances. Thus they cover acuity levels from 20/320 to 20/12.5 (6/96 to 6/3.75). Cardiff 4741 Low Vision Cardiff Acuity Set incorporates the 9 cards and therefore the combination covers 12 levels when used at both distances and extends acuity levels up to 20/640 (6/192). These nine Low Vision cards are also available separately as item number 4754.

A working distance of 40 inches (one meter) is recommended. At this distance eye movement position judgments are reliable and a range of 20/160 to 20/12.5 (6/48 to 6/3.75) can be measured with the Standard Set. A closer working distance of 20 inches (50 cm) can be used as an alternative to test lower acuity levels or allow closer interaction with the child. The Cardiff Acuity Test employs an up-down positioning of the target figures rather than the right-left separation (as is used in the Teller Acuity Cards™ II) so that the eye movements are easier to discriminate in cases of congenital nystagmus. Further, the Cardiff Test can be used in cases of suspected malingering as the patient's eye movements are involuntary. Administering the Cardiff Acuity Test is relatively quick and easy to learn. On average, an experienced examiner can conduct a complete test in 3-5 minutes. Each set includes cards, carrying case and instructions.

Low Vision Upgrade



PRICING

4740 Cardiff Acuity Test – 36 Cards £888.00

4740CATR Cardiff Acuity Test Reduced - 30 Cards £683.00

4741 Low Vision Test – 36 Cards £846.00

4754 Low Vision Upgrade – 9 Cards £171.00

6698 Cardiff Screening Test - 24 Cards £546.00

Developed by



Cardiff Acuity Test Comparison

Comparison of paediatric acuity tests help position each test in terms of age and pricing.

Other test products used in this age range:

Paediatric Acuity Test	Age Range	Optotype Acuity Range	# of Cards
The New Combined Grating Test	6 months to 3 years	20/16 to 20/1900	18
Cardiff Acuity Test™ - Standard	6 months to 3 years	20/12.5 to 20/160	36
Lea Gratings™	12 months to 2 years	not applicable	6
Cardiff Reduced Acuity Test	12 months to 3 years	20/16 to 20/1900	30
Allen School Figures w/ hand	3 to 5 years	20/30 to 20/100	4
Lea Single Symbol™ Book	19-36 months	10/5 to 10/100	13

• **Teller Acuity Cards™ II** employ a simple grating (various widths of gray stripes) as stimuli whereas the **Cardiff Acuity Test** presents a more interesting figure (car, boat etc). Teller lists 'Market Price' only.

• **Lea Gratings™** (Paddles), is based on the grating level of the moving target as it appears from behind the non-stimuli paddle whereas the

• **Cardiff Acuity Test** and the Teller Acuity Cards™ II do not require movement of the target. Limited acuity levels are supported. Lea Gratings help track visual acuity development but are not intended to be used to convert to optotype acuity values.

• It must be noted that both grating type tests and the Cardiff Preferential Looking Test tend to give a higher acuity level than a letter test simply because the child is required only to resolve the target, not to identify it.

KEY REFERENCES FOR CARDIFF TEST Adoh, T O and Woodhouse J M (1994). "The Cardiff Acuity Test used for measuring visual acuity development in toddlers." *Vision Research* **34**(4): 555-560

Jackson, A J and K J Saunders (1999). "The optometric assessment of the visually impaired infant and young child." *Ophthalmic and Physiological Optics* **19**(1002): S49-S62

Woodhouse, J M Adoh T O et al. (1992). "New Acuity Test for toddlers." *Ophthalmic and Physiological Optics* **12**: 249-251

Developed by:



The New Combined Grating Test

These acuity cards provide a rapid method of determining the visual acuity of infants and young children within a variety of clinical settings. The apparatus forms part of the "acuity card procedure", a technique pioneered in the United States and subsequently used in clinical practice in Europe. The standard procedure is based on infants' known "preference" for patterned stimuli as indicated by their looking behavior.

This test is also being used to test stroke victims.

6966 The New Combined Grating Test (18 cards) £1093.00

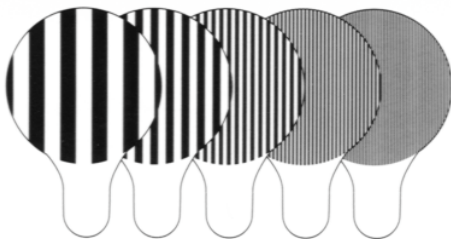
6966C The New Children's Grating Test (10 cards) £584.00

6966I The New Infant's Grating Test (8 cards) £544.00

Lea Grating Paddles

LEA Grating are an easy-to-use tool for measuring grating acuity of pre-verbal children and individuals with multiple disabilities of all ages. These patients cannot be measured with optotype tests because of communication difficulties. An estimate of the function of some parts of visual pathways, however, can be made by using grating acuity measurements. Lea Gratings use paddles to present gratings. When a striped pattern is presented in front of the young patient simultaneously with a gray surface of the same size and luminance, the young patient is likely to look at the striped pattern because there is more to see than on the gray surface. The gratings are defined by the frequency, i.e., the number of pairs of black-and-white stripes or cycles, within one degree of visual angle. The gratings can be defined also as the number of cycles per centimeter of surface. Over time the improvement of visual function can be tracked. The test consists of six 20cm (8 inch) gratings at 0.25, 0.5, 1.0, 2.0, 4.0, 8.0 cpcm (cycles per centimeter of surface) and an additional paddle with solid gray surface. This test consists of four durable, easy-to-clean plastic paddles printed on both sides. Usable from birth to 18 months. This test is sometimes called Square Wave Grating Stimuli Paddles. The instructions include: Presentation to Infants, Helping the Parents, Pre-requisites, Use of 'cycles per degree', Normal vision at various ages, Word Definitions, Scoring at various distances.

253300 LEA Grating Set



Cardiff Acuity Test Comparison - continued

Cardiff Acuity Test norms for typically developing children

Age (months)	Binocular Acuity (Snellen Equivalent)		Monocular Acuity (Snellen Equivalent)	
	Feet (20/)	Metres (6/)	Feet (20/)	Metres (6/)
12-17.9	160-40	48-12	160-50	48-15
18-23.9	80-25	24-7.5	100-25	30-7.5
24-29.9	50-25	15-7.5	63-25	19-7.5
30-36	40-20	12-6	40-20	12-6



Cardiff Contrast Test

This Cardiff test is designed for low contrast measurement in toddlers and young children, and in older children or adults with intellectual impairment. Also used as a naming test for adults.

THE VALUE OF LOW CONTRAST RECOGNITION

Contrast Sensibility is the ability of the visual system to detect large but faint targets. There are some pathological conditions that reduce contrast sensitivity without impairing visual acuity, and the test will help in the identification of these conditions. However, reduced contrast sensitivity and reduced visual acuity often occur together, so that some (by no means all) children with visual impairment also have reduced contrast sensitivity. Tests for the two functions are therefore complementary and obtaining a measure of both will give a fuller description of visual deficits than will one alone.

A child with visual impairment who retains good contrast sensitivity will benefit from enlargement of tasks – he or she sees large faint objects well. A child with an equivalent acuity but with reduced contrast sensitivity has a much more severe impairment, and will not get the same benefit from enlargement. Large objects as well as small objects are difficult to see. So a measurement of contrast sensitivity can help determine appropriate management of a child's impairment.

Treatment for visual deficits (including amblyopia therapies) can result in improved contrast sensitivity sometimes in the absence of increased visual acuity. Contrast sensitivity can therefore be an essential tool in monitoring therapies. Some progressive eye conditions will result in changes in contrast sensitivity, so that monitoring contrast sensitivity alongside visual acuity (and other visual functions) may be essential in determining progress of the condition.

THE TARGETS

Like its 'sister' test, the Cardiff Acuity Test, the Cardiff Contrast Test uses vanishing Optotypes.

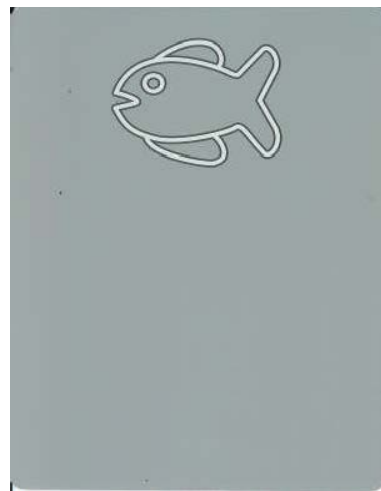
The targets are drawn with a light band bordered by two darker bands, each half the width of the light band, all on a neutral gray background; thus the average luminance of the target is equal to that of the gray background. If the target lies beyond the subject's contrast limit, it merges with the gray background, and simply becomes invisible.

The targets employed by the test are pictures, all of the same overall size, but decreasing in contrast between the light and dark bands. The contrast sensitivity is determined by the faintest bands for which the target is visible. The test covers 12 contrast levels using three cards at each level (36 cards total) using the preferential looking technique. These contrast levels start at 46% and decrease to 1% which equates to sensitivity levels from 2.17 to 100.

When the Cardiff Contrast Test is carried out at a distance of 50 cm (20 inches) the targets represent 1.9 cycles per degree (or 6/90, 20/300) and at a distance of 1 m (3 ft) the targets represent 3.8 cycles per degree (or 6/45, 20/150). At a distance of 25 cm (10 inches) the targets represent 1.0 cycle per degree (or 6/180, 20/600).

Results from the test are presented in a manner that is consistent with scoring of the Pelli-Robson Contrast Test for adults. The test has recently been adapted slightly to make the subject pictured in the drawings more appropriate for use with both children and adults with intellectual impairment.

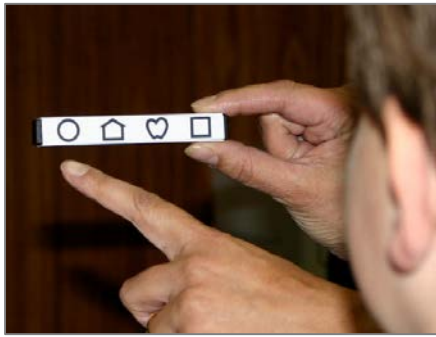
5667 Cardiff Contrast Test for Children and Adults with Intellectual Impairment £846.00



All Cardiff cards are now mounted on 1mm plastic board.

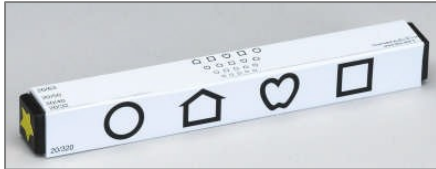
Card	Picture	Contrast	
		%	Sensitivity
A	House	46	2.17
B	Clock	32	3.13
C	Boat	22	4.55
D	Telephone	16	6.25
E	Cup	12	8.33
F	Car	8	12.5
G	Fish	6	16.67
H	Boat	4	25
I	Clock	3	33.33
J	House	2	50
K	Car	1.5	66.66
L	Train	1	100





Box Sticks - Pocket Size Acuity Tests

- These pocket size tests come in your choice of Lea Symbols or Allen School figures.
- Each Box stick is 9/16 inch (15 mm) square and 5 inches (125mm) long with a sticker on each end.
- They also rattle when shaken to get attention.
- The Box Stick concept developed for PA Vision Ltd by J Snow, C.O.



Lea Symbols Box Stick

Large size Lea Symbols Box Stick with Optotype sizes with one line on each side: 20/320, 20/250, 20/160, and one side showing the sizes: 20/63, 20/50, 20/40, 20/32 in ETDRS format. Use at 16 inches (40.6 cm).

4862R Lea Symbols Box Stick



Lea Symbol 'Line at a time' Box Stick

Line-at-a-time LEA Symbol Box Stick shows Optotypes 20/20, 20/30, 20/40, 20/50, 20/60, 20/80 & 20/125. Use at 16 inches (40.6 cm).

5071R Lea Symbol 'Line at a time' Box Stick

Runge Card with Lea Symbols

Easiest to use near card ever! Front has Lea Symbols for 20/500, 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16.

Back has the answers and interpretations for Snellen Feet, and Metres, Letter Size, Jaeger, Printers Points, LogMAR, and Decimal. Use at 16 inches. Includes Pupilometre and metric ruler. CE

FOLLOW THE KEY BELOW AS THE PATIENT READS THE EYE CHART											
Near vision is tested at 16 inches (40cm) with best NEAR correction											
20/500	20/400	20/320	20/250	20/200	20/160	20/125	20/100	20/80	20/63	20/50	20/40
20/32	20/25	20/20	20/16	20/12	20/10	20/8	20/6	20/5	20/4	20/3	20/2
20/1.6	20/1.2	20/1.0	20/0.8	20/0.6	20/0.5	20/0.4	20/0.3	20/0.2	20/0.1	20/0.08	20/0.06
20/0.05	20/0.04	20/0.03	20/0.02	20/0.01	20/0.008	20/0.006	20/0.005	20/0.004	20/0.003	20/0.002	20/0.001
20/0.008	20/0.006	20/0.005	20/0.004	20/0.003	20/0.002	20/0.001	20/0.0008	20/0.0006	20/0.0005	20/0.0004	20/0.0003
20/0.002	20/0.001	20/0.0008	20/0.0006	20/0.0005	20/0.0004	20/0.0003	20/0.0002	20/0.0001	20/0.00008	20/0.00006	20/0.00005
20/0.0004	20/0.0003	20/0.0002	20/0.0001	20/0.00008	20/0.00006	20/0.00005	20/0.00004	20/0.00003	20/0.00002	20/0.00001	20/0.000008
20/0.00006	20/0.00005	20/0.00004	20/0.00003	20/0.00002	20/0.00001	20/0.000008	20/0.000006	20/0.000005	20/0.000004	20/0.000003	20/0.000002
20/0.00001	20/0.000008	20/0.000006	20/0.000005	20/0.000004	20/0.000003	20/0.000002	20/0.000001	20/0.0000008	20/0.0000006	20/0.0000005	20/0.0000004
20/0.000003	20/0.000002	20/0.000001	20/0.0000008	20/0.0000006	20/0.0000005	20/0.0000004	20/0.0000003	20/0.0000002	20/0.0000001	20/0.00000008	20/0.00000006
20/0.0000005	20/0.0000004	20/0.0000003	20/0.0000002	20/0.0000001	20/0.00000008	20/0.00000006	20/0.00000005	20/0.00000004	20/0.00000003	20/0.00000002	20/0.00000001
20/0.00000008	20/0.00000006	20/0.00000005	20/0.00000004	20/0.00000003	20/0.00000002	20/0.00000001	20/0.000000008	20/0.000000006	20/0.000000005	20/0.000000004	20/0.000000003
20/0.00000002	20/0.00000001	20/0.000000008	20/0.000000006	20/0.000000005	20/0.000000004	20/0.000000003	20/0.000000002	20/0.000000001	20/0.0000000008	20/0.0000000006	20/0.0000000005
20/0.000000004	20/0.000000003	20/0.000000002	20/0.000000001	20/0.0000000008	20/0.0000000006	20/0.0000000005	20/0.0000000004	20/0.0000000003	20/0.0000000002	20/0.0000000001	20/0.00000000008
20/0.0000000006	20/0.0000000005	20/0.0000000004	20/0.0000000003	20/0.0000000002	20/0.0000000001	20/0.00000000008	20/0.00000000006	20/0.00000000005	20/0.00000000004	20/0.00000000003	20/0.00000000002
20/0.0000000002	20/0.0000000001	20/0.00000000008	20/0.00000000006	20/0.00000000005	20/0.00000000004	20/0.00000000003	20/0.00000000002	20/0.00000000001	20/0.000000000008	20/0.000000000006	20/0.000000000005
20/0.00000000004	20/0.00000000003	20/0.00000000002	20/0.00000000001	20/0.000000000008	20/0.000000000006	20/0.000000000005	20/0.000000000004	20/0.000000000003	20/0.000000000002	20/0.000000000001	20/0.0000000000008
20/0.000000000006	20/0.000000000005	20/0.000000000004	20/0.000000000003	20/0.000000000002	20/0.000000000001	20/0.0000000000008	20/0.0000000000006	20/0.0000000000005	20/0.0000000000004	20/0.0000000000003	20/0.0000000000002
20/0.000000000002	20/0.000000000001	20/0.0000000000008	20/0.0000000000006	20/0.0000000000005	20/0.0000000000004	20/0.0000000000003	20/0.0000000000002	20/0.0000000000001	20/0.00000000000008	20/0.00000000000006	20/0.00000000000005
20/0.0000000000004	20/0.0000000000003	20/0.0000000000002	20/0.0000000000001	20/0.00000000000008	20/0.00000000000006	20/0.00000000000005	20/0.00000000000004	20/0.00000000000003	20/0.00000000000002	20/0.00000000000001	20/0.000000000000008
20/0.00000000000006	20/0.00000000000005	20/0.00000000000004	20/0.00000000000003	20/0.00000000000002	20/0.00000000000001	20/0.000000000000008	20/0.000000000000006	20/0.000000000000005	20/0.000000000000004	20/0.000000000000003	20/0.000000000000002
20/0.00000000000002	20/0.00000000000001	20/0.000000000000008	20/0.000000000000006	20/0.000000000000005	20/0.000000000000004	20/0.000000000000003	20/0.000000000000002	20/0.000000000000001	20/0.0000000000000008	20/0.0000000000000006	20/0.0000000000000005
20/0.000000000000004	20/0.000000000000003	20/0.000000000000002	20/0.000000000000001	20/0.0000000000000008	20/0.0000000000000006	20/0.0000000000000005	20/0.0000000000000004	20/0.0000000000000003	20/0.0000000000000002	20/0.0000000000000001	20/0.00000000000000008
20/0.0000000000000006	20/0.0000000000000005	20/0.0000000000000004	20/0.0000000000000003	20/0.0000000000000002	20/0.0000000000000001	20/0.00000000000000008	20/0.00000000000000006	20/0.00000000000000005	20/0.00000000000000004	20/0.00000000000000003	20/0.00000000000000002
20/0.0000000000000002	20/0.0000000000000001	20/0.00000000000000008	20/0.00000000000000006	20/0.00000000000000005	20/0.00000000000000004	20/0.00000000000000003	20/0.00000000000000002	20/0.00000000000000001	20/0.000000000000000008	20/0.000000000000000006	20/0.000000000000000005
20/0.00000000000000004	20/0.00000000000000003	20/0.00000000000000002	20/0.00000000000000001	20/0.000000000000000008	20/0.000000000000000006	20/0.000000000000000005	20/0.000000000000000004	20/0.000000000000000003	20/0.000000000000000002	20/0.000000000000000001	20/0.0000000000000000008
20/0.000000000000000006	20/0.000000000000000005	20/0.000000000000000004	20/0.000000000000000003	20/0.000000000000000002	20/0.000000000000000001	20/0.0000000000000000008	20/0.0000000000000000006	20/0.0000000000000000005	20/0.0000000000000000004	20/0.0000000000000000003	20/0.0000000000000000002
20/0.000000000000000002	20/0.000000000000000001	20/0.0000000000000000008	20/0.0000000000000000006	20/0.0000000000000000005	20/0.0000000000000000004	20/0.0000000000000000003	20/0.0000000000000000002	20/0.0000000000000000001	20/0.00000000000000000008	20/0.00000000000000000006	20/0.00000000000000000005
20/0.0000000000000000004	20/0.0000000000000000003	20/0.0000000000000000002	20/0.0000000000000000001	20/0.00000000000000000008	20/0.00000000000000000006	20/0.00000000000000000005	20/0.00000000000000000004	20/0.00000000000000000003	20/0.00000000000000000002	20/0.00000000000000000001	20/0.000000000000000000008
20/0.00000000000000000006	20/0.00000000000000000005	20/0.00000000000000000004	20/0.00000000000000000003	20/0.00000000000000000002	20/0.00000000000000000001	20/0.000000000000000000008	20/0.000000000000000000006	20/0.000000000000000000005	20/0.000000000000000000004	20/0.000000000000000000003	20/0.000000000000000000002
20/0.00000000000000000002	20/0.00000000000000000001	20/0.000000000000000000008	20/0.000000000000000000006	20/0.000000000000000000005	20/0.000000000000000000004	20/0.000000000000000000003	20/0.000000000000000000002	20/0.000000000000000000001	20/0.0000000000000000000008	20/0.0000000000000000000006	20/0.0000000000000000000005
20/0.000000000000000000004	20/0.000000000000000000003	20/0.000000000000000000002	20/0.000000000000000000001	20/0.0000000000000000000008	20/0.0000000000000000000006	20/0.0000000000000000000005	20/0.0000000000000000000004	20/0.0000000000000000000003	20/0.0000000000000000000002	20/0.0000000000000000000001	20/0.00000000000000000000008
20/0.0000000000000000000006	20/0.0000000000000000000005	20/0.0000000000000000000004	20/0.0000000000000000000003	20/0.0000000000000000000002	20/0.0000000000000000000001	20/0.00000000000000000000008	20/0.00000000000000000000006	20/0.00000000000000000000005	20/0.00000000000000000000004	20/0.00000000000000000000003	20/0.00000000000000000000002
20/0.0000000000000000000002	20/0.0000000000000000000001	20/0.00000000000000000000008	20/0.00000000000000000000006	20/0.00000000000000000000005	20/0.00000000000000000000004	20/0.00000000000000000000003	20/0.00000000000000000000002	20/0.00000000000000000000001	20/0.000000000000000000000008	20/0.000000000000000000000006	20/0.000000000000000000000005
20/0.00000000000000000000004	20/0.00000000000000000000003	20/0.00000000000000000000002	20/0.00000000000000000000001	20/0.000000000000000000000008	20/0.000000000000000000000006	20/0.000000000000000000000005	20/0.000000000000000000000004	20/0.000000000000000000000003	20/0.000000000000000000000002	20/0.000000000000000000000001	20/0.0000000000000000000000008
20/0.000000000000000000000006	20/0.000000000000000000000005	20/0.000000000000000000000004	20/0.000000000000000000000003	20/0.000000000000000000000002	20/0.000000000000000000000001	20/0.0000000000000000000000008	20/0.0000000000000000000000006	20/0.0000000000000000000000005	20/0.0000000000000000000000004	20/0.0000000000000000000000003	20/0.0000000000000000000000002
20/0.000000000000000000000002	20/0.000000000000000000000001	20/0.0000000000000000000000008	20/0.0000000000000000000000006	20/0.0000000000000000000000005	20/0.0000000000000000000000004	20/0.0000000000000000000000003	20/0.0000000000000000000000002	20/0.0000000000000000000000001	20/0.00000000000000000000000008	20/0.00000000000000000000000006	20/0.00000000000000000000000005
20/0.0000000000000000000000004	20/0.0000000000000000000000003	20/0.0000000000000000000000002	20/0.0000000000000000000000001	20/0.00000000000000000000000008	20/0.00000000000000000000000006	20/0.00000000000000000000000005	20/0.00000000000000000000000004	20/0.00000000000000000000000003	20/0.00000000000000000000000002	20/0.00000000000000000000000001	20/0.000000000000000000000000008
20/0.00000000000000000000000006	20/0.00000000000000000000000005	20/0.00000000000000000000000004	20/0.00000000000000000000000003	20/0.00000000000000000000000002	20/0.00000000000000000000000001	20/0.000000000000000000000000008	20/0.000000000000000000000000006	20/0.000000000000000000000000005	20/0.000000000000000000000000004	20/0.000000000000000000000000003	20/0.000000000000000000000000002
20/0.00000000000000000000000002	20/0.00000000000000000000000001	20/0.000000000000000000000000008	20/0.000000000000000000000000006	20/0.000000000000000000000000005	20/0.000000000000000000000000004	20/0.000000000000000000000000003	20/0.000000000000000000000000002	20/0.000000000000000000000000001	20/0.0000000000000000000000000008	20/0.0000000000000000000000000006	20/0.0000000000000000000000000005
20/0.000000000000000000000000004	20/0.000000000000000000000000003	20/0.000000000000000000000000002	20/0.000000000000000000000000001	20/0.0000000000000000000000000008	20/0.0000000000000000000000000006	20/0.0000000000000000000000000005	20/0.0000000000000000000000000004	20/0.0000000000000000000000000003	20/0.0000000000000000000000000002	20/0.0000000000000000000000000001	20/0.00000000000000000000000000008
20/0.0000000000000000000000000006	20/0.0000000000000000000000000005	20/0.0000000000000000000000000004	20/0.0000000000000000000000000003	20/0.0000000000000000000000000002	20/0.0000000000						

LANG Fixation Cubes



Choice of a red stick or a white stick. Each comes with 4 colourful figures. Ask the children for their stories for each figure. Printed in 4 colours, 6 x 0.5 x 0.5 in (15 x 1.2² cm). Not sold as a pair. White Cube has cat, car, elephant and sailboat. Red Cube has horse, tea cup, duck and teddy bear.

4480 Lang Cube White

5262 Lang Cube Red



Flashing Light Fixations



Flashing Fixation Stars with long lasting Lithium batteries. Stars strobe red then blue. They can be hand held or attached with tape or magnet to any object. Set includes three (3) Flashing Stars with 9mm magnetic disks and double sided tape for mounting. Can attached to Retinoscopes! or! Ophthalmoscopes. Just twist to turn on/off.

4890R Fixation Stars (3)



Flashing Fan

Fan with colour changing light patterns to maintain fixation.

This hand-held Flashing Fan has soft plastic blades with changing colour patterns to maintain interest during vision testing of infants and young children. Therefore, the fan could be an interesting target at near or distance fixation for prolonged viewing, such as during cycloplegic retinoscopy.

Three AAA batteries are included with the fan. They are not intended to be given to children to play with.

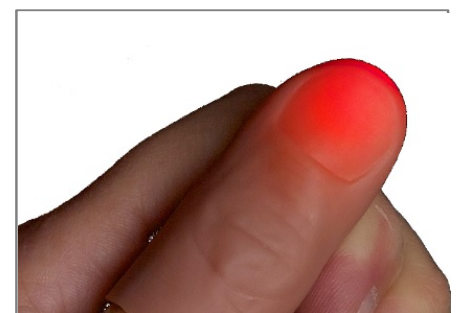
Flashing Fan

Fingerlights



These Fingerlights for fixation fit smoothly over a finger or thumb. They are soft and comfortable to wear and look very much life-like. The red light is activated by touch which can be useful to test peripheral visual fields by the confrontation method.

Each pack contains two Fingerlights in either a small or larger size, plus they come with a long lasting lithium battery.



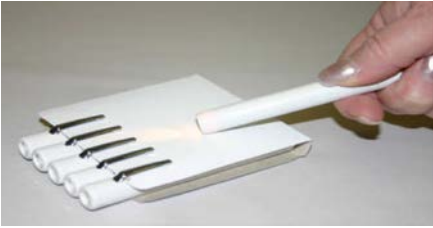
Fingerlights



Allen Box Sticks - Pocket Size

Line-at-a-time Allen Figures Box Stick. Includes Optotypes 20/20, 20/30, 20/40, 20/50, 20/60, 20/80 & 20/125. Use at 13 inches (33 cm).

5070R Allen Box Stick



Disposable Penlights

Disposable Penlights come in a Package of 6. Press the pocket clip to turn on.

5475R Penlights - Package of 6



Kay Picture Test Linear Crowded Book

The Kay Picture Test Linear Crowded Book with distance LogMAR sizing at three metres from 0.70 to -0.20. It also includes a near testing and matching card. The pictures are presented in a row of five boxes to provide consistent crowding. There are four different arrangements of the picture optotypes at each acuity size. The test is suitable for naming and matching from an age of 30 months+.

The test is packaged in a frosted PVC wallet with flap closure for safe storage in between uses.

KPTLINEAR Kay Picture Test Linear Crowded Book

Kay Picture Test Single Crowded Book

The Kay Picture Test Single Crowded Book with comprehensive distance LogMAR sizing at three metres from 1.00 to -0.10. It also includes a near test at 33cm and a matching card. The test is suitable for naming and matching with children aged 18 months+.

Instructions with diagrams and a scoring table are printed inside the book.

The test is packaged in a frosted PVC wallet with flap closure for safe storage in between uses.

KPTSINGLE Kay Picture Test Single Crowded Book

Kay Picture Test Screening Chart

This book combines the accuracy of a linear test and LogMAR sizing with the ease of naming or matching pictures. Intended for pre-reader children. Key card can be used to prompt shy or uncooperative children. Ideal for children 3 years to 6 years. Uses eight pictures in groups of four. Each eye can be tested with a different arrangement of the pictures for excellent comparison. The size index identifies the acuity size in LogMAR and Snellen. The range for LogMAR is 1.0 to -0.1 and Snellen 10/100 to 10/8 ft. (3/30 to 3/2.4 Metres). Optotype sizes are: 1.0 (3/30 or 10/100), 0.90 (3/24 or 10/80), 0.80 (3/19 or 10/63), 0.70 (3/15 or 10/50), 0.60 (3/12 or 10/40), 0.50 (3/9.5 or 10/32), 0.40 (3/7.5 or 10/25), 0.30 (3/6 or 10/20), 0.20 (3/4.8 or 10/16), 0.10, (3.3.8 or 10/12.5), 0.00 (3/3 or 10/10), and -0.10 (3/2.4 or 10/8).

The laminated Key card includes the 8 optotype pictures and measure 8" x 10" (20cm x 26cm). Crowded Near Point card has reduced size pictures and covers LogMAR sizes 0.8 to 0.0 with Snellen equivalents shown.

KPTCHART3M Kay Picture Test Screening Chart

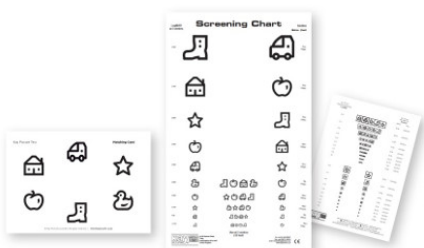
Kay Picture Test Screening Book

The Kay Picture Test Screening Book is a compact A5 size book comprising an abridged single crowded and linear crowded picture vision testing option for vision screening. In addition, it comprises distance LogMAR sizing from 1.0 to -0.10 at three metres, plus it includes a single crowded near vision test card and a matching card.

There is a choice of three or four single crowded picture optotypes at each acuity size (apart from at 1.0, which are uncrowded). Further, sizes 0.3 to -0.1 have both single crowded and a linear row of five pictures per page to suit all ages from as young as 18 months to school age.

The test is packaged in a frosted PVC wallet with flap closure for safe storage in between uses.

KPTSCREEN Kay Picture Test Screening Book



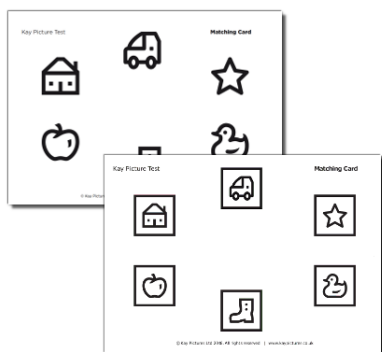


Kay Picture Test New Low Vision Book

The new Kay Picture Test Low Vision Book is specifically targeted at testing those with poor vision.

It provides uncrowded picture visual acuity testing at three metres and near. Our Low Vision Book comprises fourteen acuity sizes from LogMAR 1.3 to 0.0. At each acuity size you will find three or four picture options. The size notation is shown on the side index and on the page facing the tester. These are LogMAR, Snellen Metres and Feet.

5523 Kay Picture Test New Low Vision Book



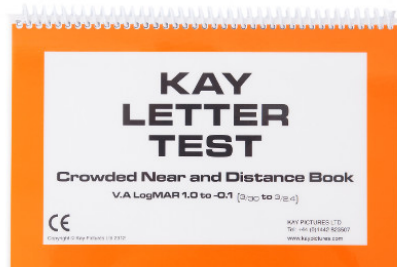
Kay Picture Test Matching Card

The Kay Picture Test Matching Card is for use with any of our new picture optotype visual acuity tests. This includes our iSight Test app and licensed digital products from other suppliers.

The matching card is printed on both sides, showing either crowded or uncrowded arrangements of the six Kay Picture optotypes.

The card is A5 (21 * 15 cm) in size and fully encapsulated in plastic for easy cleaning.

KPTKC Kay Picture Test Matching Card



Kay Letter Test

The Kay Letter Test is a linear letter acuity test comprising eight Sloan letters that are recommended British and US Standard test letters.

It contains comprehensive LogMAR sizing at three metres from sizes 1.00 to -0.10, plus near testing with LogMAR letters and high frequency words. Additionally, Snellen equivalent sizes in metres and feet are also given.

This system uses a Crowded LogMAR test and fully complies with the recommendations for School-Entry vision screening prescribed by the UK National Screening Committee and Public Health England. Full instructions are printed on the inside cover.

The Kay Letter Test book measures 26cm x 17.5cm and all its pages can be wiped clean in compliance with infection control guidelines. In addition, the test book covers are encapsulated with robust plastic and the internal pages are matt laminated.

The test is packaged in a frosted PVC wallet with flap closure for safe storage in between uses.

KLTD Kay Letter Test



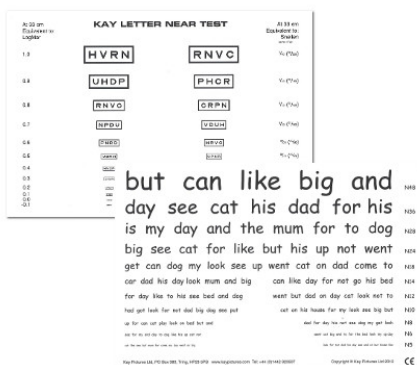
Kay Letter Test Near Test Card

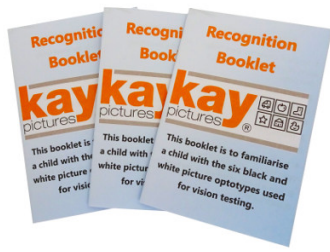
The Kay Letter Test Near Test Card is an A5 size laminated card with two columns of reduced size letters from 1.0 to -0.1 LogMAR (6/60 to 6/4.8 Snellen) at 33cm testing distance.

There are four letters in a row within a crowding box at each size. On the reverse side is reading text suitable for young readers. It has high frequency words in print sizes from N48 to N5. The same card is included in the Kay Letter Test.

The card is packaged in a handy plastic wallet for safe storage between uses.

KPTN1 Kay Letter Test Near Test Card





Kay Picture Test Recognition Booklet

Our DIY Kay Picture Test Recognition Booklet provides a fun way for a child to learn the Kay Picture optotypes. The booklet aims to increase familiarity and improve confidence with the pictures prior to testing.

The booklets are made from a single A4 sheet. This is then to be folded into a six-page book showing each optotype and a coloured drawing. Making and colouring the booklet is all part of the fun!

We have developed the Recognition Booklet in response to copyright requests for permission to give parents a photocopy of the matching card, which we do not allow.

Our Kay Picture Test Recognition Booklet is delivered in packs of 100 A4 sheets.

KPYR100 Kay Picture Test Recognition Booklet

LEA Mailbox

The test is used to assess visual perception of line orientation. Two components test for 1) information of the hand movements in the parietal lobe and 2) picture perception in the inferior temporal lobe. To observe the first function, the child is asked to drop a card through the slot of the LEA Mailbox. The child should demonstrate perception of the orientation of the slot by turning the card to the correct position before moving it half the distance to the slot (dorsal stream function). A ventral stream function can be observed through interactive play using the LEA Mailbox. If a child cannot visually perceive the orientations of the lines, drawing them may be difficult, and drawing angles will make no sense. Includes instructions.

254700 LEA Mailbox £45.00

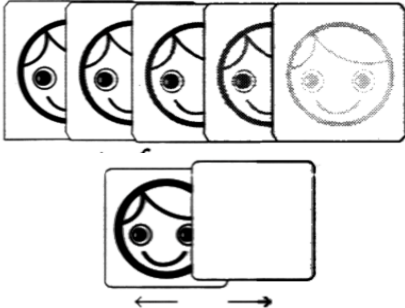




LEA Rectangle Game

This educational toy is a modified version of Effron's Rectangles and is used to assess size perception. The LEA Rectangle Game contains two groups of rectangles. The total surface area of each rectangle is the same. A child with normal eyesight can distinguish between the longer and the shorter rectangles - often before the age of three years. If the child has difficulty making this distinction or does not understand the instructions, the LEA Rectangles Game can help determine whether or not the child has a specific visual acuity problem. Set includes instructions and 10 coloured rectangles (5 black, 5 gray) in 5 sizes with a total surface area of 4 square inches (10 cm²) each.

254600 LEA Rectangle Game



Hiding Heidi™ Low Contrast Face Test

Hiding Heidi™

Visual communication is the most important communication method during the first years of life. The ability to detect objects of low contrast is an important component of the visual system. For example, facial expressions are mediated by faint shadows and changes in the contours of the mouth and eyes. Determining the levels of contrast that an infant can detect helps provide baseline data for evaluating future changes. For example, deviations from usual behavior may indicate disorders that leave vision at high-contrast levels unaffected. Product consists of four cards printed on both sides in the following contrast levels: black, 25%, 10%, 5%, 2.5%, 1.25%. Cards are 9" square (23 cm square). Includes instructions.

253500 Hiding Heidi Contrast Face Test

Small and Medium Fixation Paddles

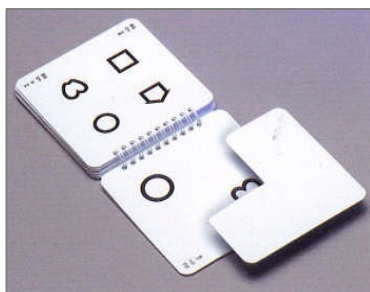


The small paddle is 2" (5 cm) diameter and is based on studies by Robert Franz. This paddle shows a smiling face on one side and gratings on the reverse side. Also shows a small picture of a bunny and a giraffe, pupilometre and corneal diameter.

The medium paddle is 5" (13 cm) diameter. Useful for assessing children with severe disabilities to determine the distance at which the child responds to a high contrast facial figure.

253100 Medium 5 inch Paddle

253000 Small 2 inch Paddle



Single Symbol Book (10 Feet, 3 Metres)

This Single Symbol book is ideal for situations in which the child/adult cannot perform when tested with a line test. This book can help determine the best resolution of the visual pathway in a child or adult with amblyopia or impaired vision. Single optotype line sizes from 20/200 to 20/8 (6/60 to 6/2.4) equivalent. Includes isolating mask, response key, flash cards and instructions. 13 pages, 5" x 5" (13 x 13 cm).

250600 Single Symbol Book



Crowded Symbol Book (10 Feet, 3 Metres)

Variant of the line test for children (or adults who have difficulty concentrating on a chart), the centre symbol is surrounded on four sides by symbols of the same size. The interaction between the centre symbol and the surrounding symbols is approximately the same as in a line test. The test size is convenient and easy to administer during screenings, home visits, and unique testing situations. Often, this is the first line test that can measure visual acuity of a young child with amblyopia by producing the affect of crowding. Line sizes from 20/63 to 20/16 (6/19 to 6/4.8) equivalent. Includes response key, flash cards and instructions. 16 pages, 5" x 5" (13 x 13 cm).

250700 Crowded Symbols



Distance Vision Screener Flip Chart (10 Feet, 3 Metres)

This test is designed for amblyopia testing or screening. The background is gray with the exception of a white rectangle spaced at 50% surrounding each line of symbols. Line sizes from 20/80 to 20/16 (6/24 to 6/4.8) equivalent. Includes instructions printed on inside cover, response key and flash cards. Pages are offset for easy flipping. 10 pages, 3.25" x 9" (8.25 x 22.9 cm) .

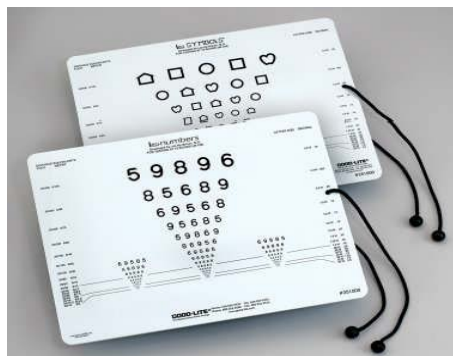
259900 Amblyopia Distance Flip Chart



50% Spaced Crowding Bars (10 Feet, 3 Metres)

This book features 50% spaced contour interaction bars to provide single optotype acuity with the proper crowding effect. Optotype line sizes from 20/100 to 20/16 (6/30 to 6/4.8) equivalent. Includes response key, flash cards and instructions. 30 cards per set. 4" x 4" (10 x 10 cm).

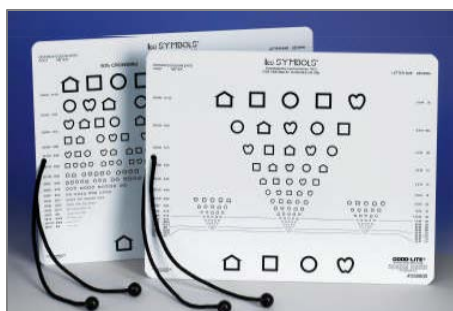
259200 Spaced Crowding



Near Card with LEA Symbols™, LEA Numbers™ and Cord

Combines a LEA Symbols™ line test on one side and a LEA Numbers™ line test on the opposite side. Useful for children from 3 to 8+ years. Proportionally spaced lines for 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5, and 20/10 (6/120 to 6/3 equivalent). Response key printed on the test card. flash cards, instructions and 16 in (40 cm) cord are included. Styrene card measures 8" x 10" (20.3 x 25.4 cm).

251000 Combined Lea Card



LEA Symbols™ Near Card

This test assesses a child's functional vision at near distance. Can be used to familiarize child with the testing procedure before introducing a distance test. One side is proportionally spaced with more tightly spaced LEA Symbols™ on the opposite side. Line sizes 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, to 20/10 (6/120 to 6/3 equivalent). Response key printed on the test card. flash cards, instructions and 16 inch (40 cm) cord are included. Styrene card measures 8" x 10" (20.3 cm x 25.4 cm).

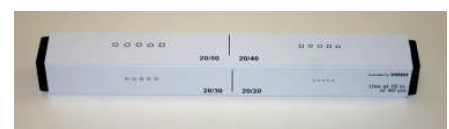
250800 Lea Symbols™ Near Card

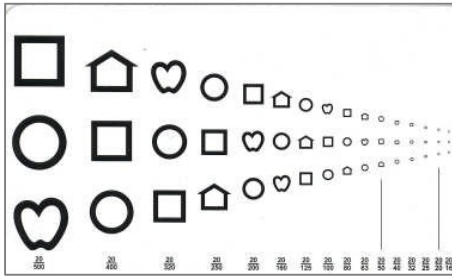


LEA Symbols™ Box Sticks: Crowded and Uncrowded

LEA Symbols™ Pocket Box Sticks show 20/125, 20/100, 20/80, 20/50, 20/40, 20/30 and 20/20 lines. Each is 9/16" (1.4 cm) square and 4.5" (11.5 cm) long.

4862R Uncrowded LEA Box Stick
5071R Crowded LEA Box Stick





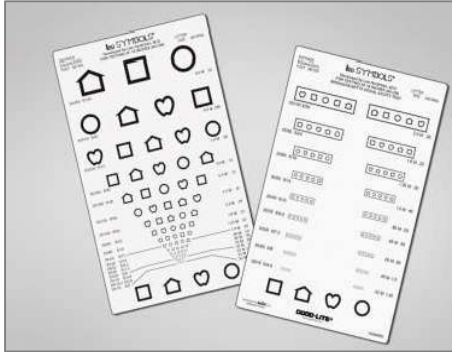
Runge Lea Symbols™ Pocket Near Card

LEA Symbols® with line sizes 20/500, 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20 and 20/16. Back has the answers and interpretations for Snellen Feet, and Metres, Letter Size, Jaeger, Printers Points, LogMAR, and Decimal. Use at 16 inches. Includes Pupilometre and Metric Ruler. Runge also available with Lea Numbers™ and Sloan Letters.

756200 LEA Symbol® Runge

756100 LEA Number® Runge

2124 Sloan Letters Runge



LEA Symbols™ Pocket Near Card

Use this small pocket card to quickly determine whether a child's visual acuity is within normal range. Proportionally spaced lines on one side and 50% spaced rectangle (Massachusetts Visual Acuity Test format) on the reverse. Line sizes 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 12/12.5, and 20/10 (6/120 to 6/3 equivalent). Shows Snellen in Feet and Metres, Letter size and Decimal. Measures 3.75" x 6.25" (9.5 x 16 cm).

250900 LEA Symbols® Pocket Card

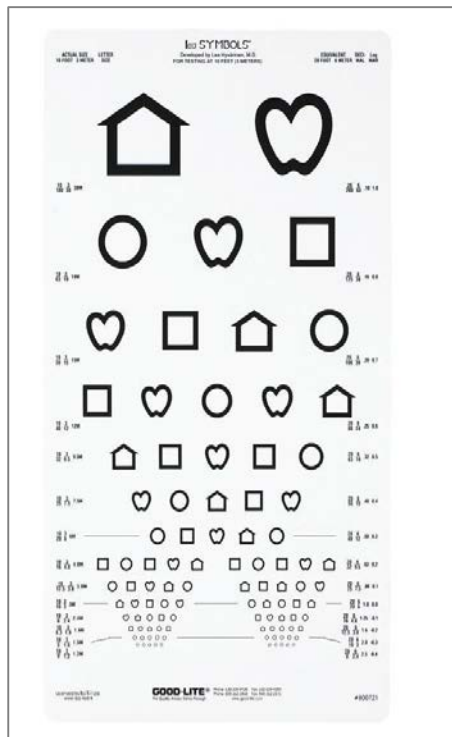


LEA Symbols™ Near Amblyopia Screener

This test is designed for near amblyopia testing or screening. The background is gray with the exception of a white rectangle spaced at 100% surrounding each line of symbols. Line sizes from 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16 (6/120 to 6/4.8) equivalent. Printed on two sides as shown. Response key is printed on the test card. Includes flash cards and instructions. Screener measures 8" x 10" (20 x 25 cm).

252000 LEA Symbol® Near Screener with Cord

Professional Cabinet Charts



LEA Symbols™ Set or Chart (10 or 20 Feet, 3 or 6 Metres)

Proportionally spaced lines, line sizes 20/200, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5, 20/10, 20/8 (6/63 to 6/2.4) equivalent. Set includes response key, flash cards and instructions. Charts are 10" x 18" (25 x 46 cm).

Choice of 10 Ft (3 M) or 20 Ft (6 M) chart.

800722 10 Ft LEA Symbols Set

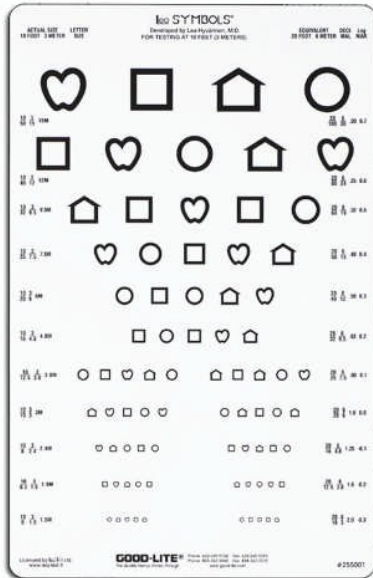
800721 10 Ft LEA Symbol Chart only

800724 20 Ft LEA Symbols Set

800723 20 Ft LEA Symbol Chart only

Quantum Series. Model A+. and Model A Translucent Charts

Chart size 9" x 14" (23 cm x 36 cm)



LEA Symbols™ Linear Chart (10 Feet, 3 Metres)

Linear-spaced lines, line sizes 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5, to 20/10 (6/30 to 6/3) equivalent. Set includes response key, flash cards and instructions. Chart is 9" x 14" (23 x 36 cm) .

255000 LEA Symbol® Linear Set (includes 255001 Chart)

255001 Linear Chart only

LEA Symbols™ Proportionally Spaced Chart (10 Feet, 3 Metres)

Proportionally-spaced lines, line sizes from 20/125 to 20/8 (6/38 to 6/2.4) equivalent. Set includes response key, flash cards and instructions. Chart is 9" x 14" (23 x 36 cm).

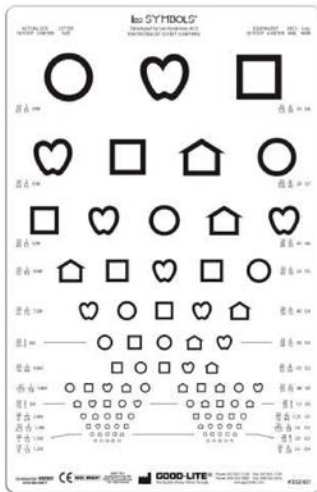
250400 LEA Symbol® Proportion Set

250401 Proportion Chart only

Same chart with both 10 Ft and 20 Ft notations:

250411 LEA Symbol® Proportion Set

250412 Proportion Chart only



LEA Symbols™ Proportional Chart (10 Feet, 3 Metres)

Proportionally spaced lines, line sizes from 20/125 to 20/8 (6/38 to 6/2.4) equivalent with repetitive left eye and right eye groups. Set includes response key, flash cards and instructions. Chart is 10" x 18" (25 x 46 cm). (*not shown*)

252400 Proportion Left/Right Set

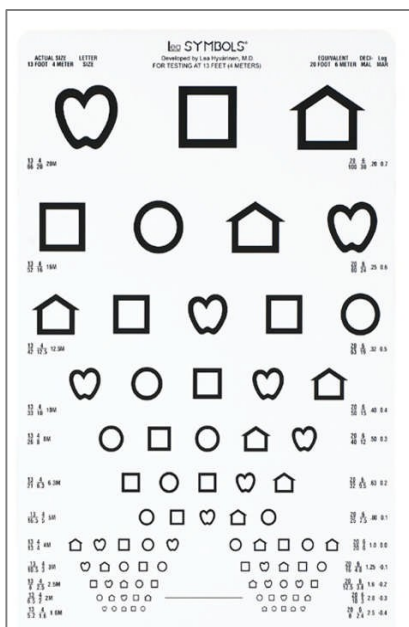
252401 Proportion Left/Right Chart only

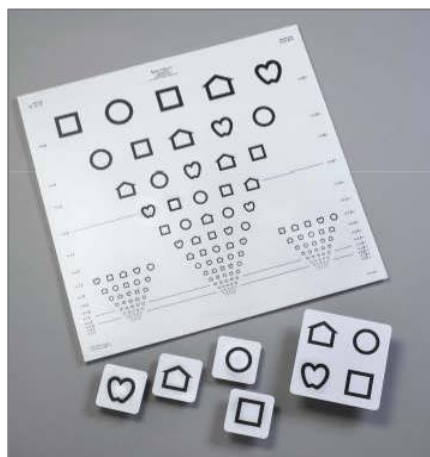
LEA Symbols™ Proportional Chart (13 Feet, 4 Metres)

Proportionally spaced lines, line sizes 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5, to 20/10 to 20/8 (6/30 to 6/2.4) equivalent with repetitive left eye and right eye groups. Set includes response key, flash cards and instructions. Chart is 9" x 14" (23 x 36 cm).

255100 Lea Symbols™ 13 Ft Proportional Set

255101 Lea Symbols™ 13 Ft Proportional Chart only





LEA Symbols™ ETDRS Format Chart (10 Feet, 3 Metres)

LEA Symbols® distance visual acuity test for the ETDRS Illuminated Cabinet. Proportionally spaced lines, line sizes range from 20/200 to 20/8 (6/60 to 6/2.4) equivalent. Includes response key, flash cards and instructions. Chart is 24.5" x 25.5" (62 x 65 cm).

250300 LEA Symbols™ in ETDRS Format Chart Set

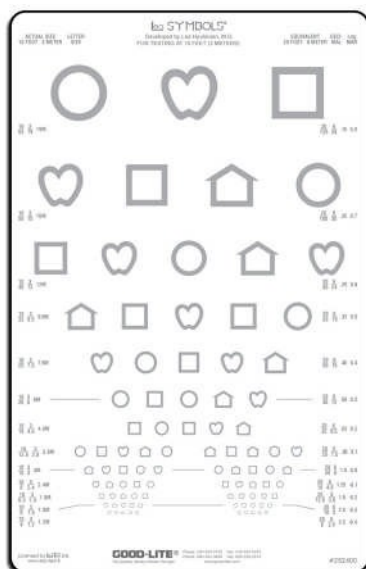
LEA Symbols™ Contrast Flip Chart (10 Feet, 3 Metres)

Now it is easy to measure, record, and detect visual changes that occur only at low contrast levels. Includes 6 contrast levels: black, 25%, 10%, 5%, 2.5%, and 1.25%. Pages offset for easy flipping. Scrambled version simply provides a different sequence of LEA Symbols® for variety.

Each set includes response key, flash cards and instructions. Chart Set is 3.25" x 9" (8.25 cm x 22.9cm).

251100 LEA Symbols™ Contrast Flip Chart Unscrambled

251200 LEA Symbols™ Contrast Flip Chart Scrambled



LEA Symbols™ Contrast Chart Series (10 Feet, 3 Metres)

Testing is identical to the measurement of visual acuity at high contrast level; i.e. to measure the smallest size of the optotypes that an individual can recognize correctly. The 2.5 % test is the most practical in clinical use. Available in 5 contrast levels: 25%, 10%, 5%, 2.5%, and 1.25%. Each chart includes response key, flash cards and instructions. Charts measure 9" x 14" (23 x 35.6cm).

253700 LEA Symbols™ Contrast Chart 1.25%

253800 LEA Symbols™ Contrast Chart 2.5%

253900 LEA Symbols™ Contrast Chart 5%

254000 LEA Symbols™ Contrast Chart 10%

254100 LEA Symbols™ Contrast Chart 25%

Note: Can be used with the Quantum Series Illuminated Cabinets or hung on the wall.

LUVIS Light Box for Pelli Robson Charts

This illuminated cabinet was invented especially for the original Pelli Robson contrast charts. The LUVIS enables you to illuminate any vision chart homogenously. Simply place magnet strips on the back of the chart and place it in the LUVIS. Light bulbs on the inside illuminate the chart. With manual. Five leg caster base and Pelli Robson charts can be ordered separately, or in a set with LUVIS.

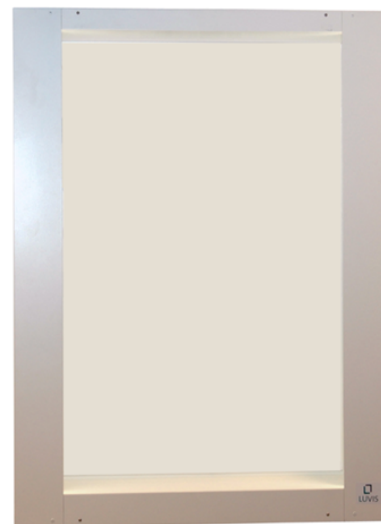
82070 LUVIS with Stand and Pelli Robson Set £1,528.15

81412 LUVIS with Stand £1,392.70

82071 LUVIS with Pelli Robson Set £1,289.60

81411 LUVIS £1,077.35

81413 Stand for LUVIS £313.00



LEA Symbols® Low Vision



LEA Symbols® Low Vision Set (Near and Distance)

Designed for testing of severely visually impaired children and adults. This complete book includes testing for 10 Ft (3M), 5 Ft (1.5 M) and near vision at 16" (40 cm). Distance sizes at 10 Ft are: 20/800, 20/630, 20/500, 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16 (6/480 to 6/4.8) equivalent. Near Vision sizes 20/800, 20/630, 20/500, 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16 (6/240 to 6/4.8) equivalent. Available bound on either left side or top. Fun Frame and Adult metal frame occluding glasses included. Overall size is 10" x 13" (25 x 33 cm).

5274R Low Vision Lea Symbols™ Set - Left SideBound

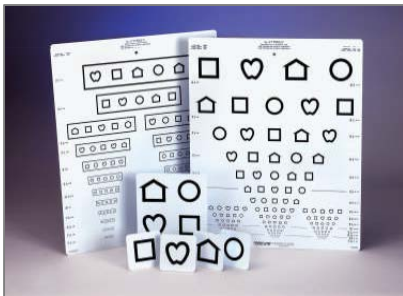
5275R Low Vision Lea Symbols™ Set - Top SideBound



LEA Symbols® Low Vision Chart (40 inches, 1 Metre)

This low vision test is designed for testing of severely visually impaired children and adults. The largest symbols are 50M in size, corresponding to 1/50 (20/1000, 6/300, 0.02). The smallest symbols are 1M in size corresponding to 1/1 (20/20, 6/6, 1.0) at a distance of one metre. The test comes with attached cord to maintain the proper distance. Cord ends with Lorgnette Occluder. Includes response key, flash cards and instructions. Design courtesy of August Colenbrander, MD. Chart is 16" x 21.5" (40.7 x 54.6 cm) and folds to 16" x 10.75" (40.7 x 27.3 cm)

258000 Low Vision Lea Symbols™ Folding ChartSet



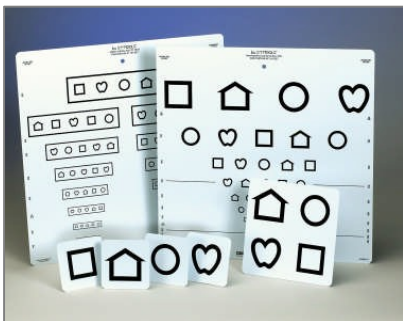
LEA Symbols ® 15-line Chart (10 Feet, 3 Metres)

For screening and testing children ages 4 years and older. Proportionally-spaced. Line sizes range from 20/200 to 20/8 (6/60 to 6/2.4) equivalent. 50% spaced rectangle (Massachusetts Visual Acuity Test format) with line sizes from 20/100 to 20/8 (6/30 to 6/2.4) equivalent. Includes response key, flash cards and instructions. Charts are 17" x 21" (43 x 54 cm).

Folding version also available. Measures 17" x 10.5" (43 x 27 cm) folded (*not shown*) and is black on the reverse.

257000 Lea Symbols™ 15-line 10Ft

250150 Lea Symbols™ 15-line 10 Ft Folding Chart Set

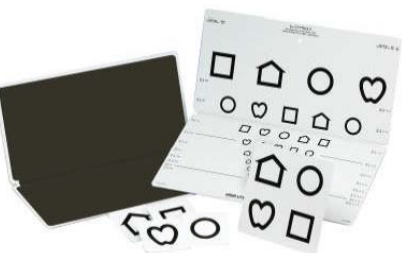


LEA® Symbols 10-line Chart (10 or 20 Feet, 3 or 6 Metres)

For screening children beginning at age 3 years. Proportionally-spaced. Line sizes range from 20/200 to 20/16 (6/60 to 6/4.8) equivalent. 50% spaced rectangle (Massachusetts Visual Acuity Test format) with line sizes from 20/80 to 20/16 (6/30 to 6/4.8) equivalent. Includes response key, flash cards, instructions and hole to hang the chart on the wall. Chart is 16" x 16" (41 x 41 cm).

256000 Lea Symbols™ 10-line 10 Ft ChartSet

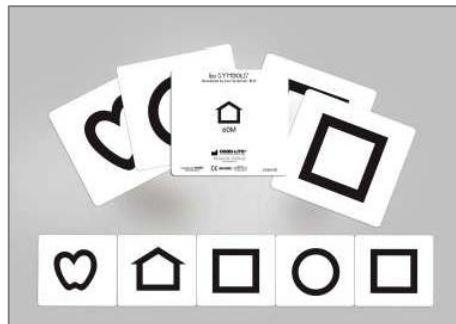
256011 Lea Symbols™ 10-line 10 Ft and 20 Ft Chart Set



LEA Symbols ® 10-line Folding Chart (10 Feet, 3 Metres)

Most commonly used for screening in healthcare of children age 3 to 5 and in amblyopia screening. Proportionally-spaced. Line sizes range from 20/200 to 20/16 (6/60 to 6/4.8) equivalent. The 20/160 (6/48) and 20/100 (6/30) have been omitted. Includes response key, flash cards, instructions and a hole to hang the chart on the wall. Chart is 16" x 16" (41 x 41 cm) opened and 16" x 8" (41 x 20 cm) folded.

250250 Lea Symbols™ 10-line 10 Ft Folding Chart Set



LEA Symbols® Cards, 40M and 60M

These five LEA Symbols Cards can be used for presentation as single optotypes or arranged in a row as a line test. When the cards are next to each other, the space between the symbols is equal to the width of the symbols. To determine the visual acuity use the following formula:

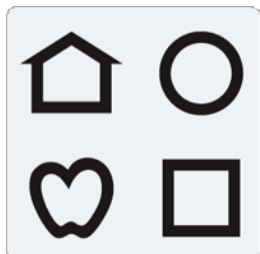
$VA = \text{Viewing Distance Used (metres)} / M\text{-value}$
 60M cards are approx. 8.6" x 8.6" (21.9 x 21.9 cm).
 40M cards are approx. 6" x 6" (15.25 x 15.25 cm).

256100 Lea Symbols™ Cards, 40M and 60M

Lea Symbols™ and HOTV Replacement Components

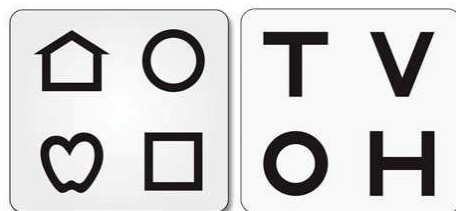
LEA Symbol® Response Key

251700 LEA Symbol® Key



LEA Symbol® Flash Cards

251800 LEA Symbol® Flash Cards

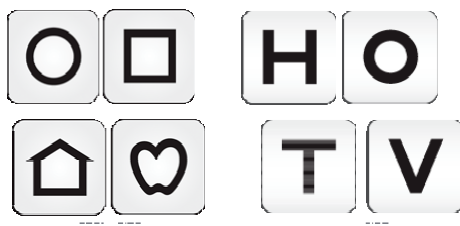


Front

Back

Combination LEA Symbol® and HOTV Response Key

700030 Combination Response Key



Combination LEA Symbol® and HOTV Flash Cards

700031 Combination Flash Cards

HOTV Response Key

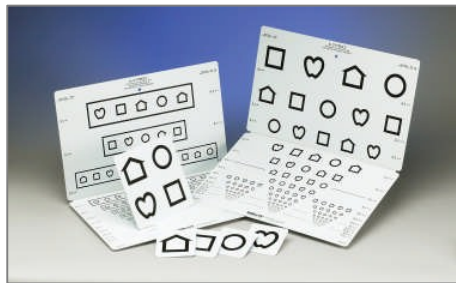
700523 HOTV Response Panel



HOTV Flash Cards

700515 HOTV Flash Cards

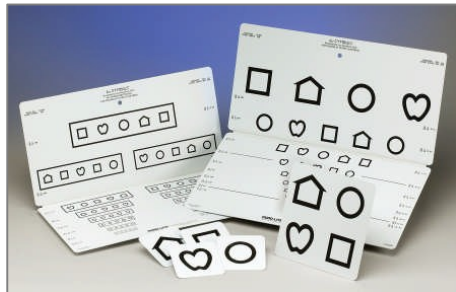




LEA Symbols® 15-line Distance Chart (10 Feet, 3 Metres)

For screening and testing children ages 3 years and older. Proportionally-spaced. Line sizes range from 20/200 to 20/8 (6/60 to 6/2.4) equivalent. Reverse side shows 50% spaced rectangle (Massachusetts Visual Acuity Test format) with line sizes from 20/100 to 20/8 (6/30 to 6/2.4) equivalent. Includes response key, flash cards, instructions and a hole to hang the chart on the wall. Chart Set is 17" x 21" (43 x 54 cm). Folds to 17"x 10.5" (43 x 27 cm).

250100 Lea Symbols™ 15-line Folding



LEA® Symbols 10-line Distance Chart (10 or 20 Feet, 3M or 6M)

For screening and testing children ages 3 years and older. Proportionally-spaced. Line sizes range from 20/200 to 20/16 (6/60 to 6/4.8) equivalent. The 20/160 (6/48) and 20/100 (6/30) lines have been omitted. Reverse side shows 50% spaced rectangle (Massachusetts Visual Acuity Test format) with line sizes from 20/80 to 20/16 (6/24 to 6/4.8) equivalent. Includes response key, flash cards, instructions and a hole to hang the chart on the wall. Chart Set is 16" x 16" (41 x 41 cm). Folds to 16"x 8" (41 x 22.3 cm).

250200 Lea Symbols™ 10-line Folding

250211 Lea Symbols™ 10 Ft and 20 Ft Folding Chart



LEA Symbols® MassTest Flip Chart (10 Feet, 3 Metres)

This new test is designed for amblyopia testing or screening. 50% spaced rectangle (Massachusetts Visual Acuity test format) with line sizes from 20/80 to 20/16 (6/24 to 6/4.8) equivalent. Companion to 252000 on page 44 for near amblyopia testing. Pages are offset for easy flipping. Includes response key, flash cards and instructions. 10 pages, 3.25" x 9" (8 x 23 cm).

258700 MassTest Flip Chart



MassTest Protocol Flip Chart (10 Feet, 3 Metres)

This test is designed specifically for the new Massachusetts Preschool Vision Screening Protocol. One practice card, two lines size of 20/40 for 3 year olds and two lines of 20/32 for 4+ year olds. Includes response key, flash cards, and a copy of the Massachusetts Vision Screening Protocol. Pages are offset for easy flipping. 4 pages, 3.25" x 9" (8.25 x 22.9 cm).

600304 HOTV 10 Ft MassTest



LEA Symbols Massachusetts 10 Ft 3M Flip Chart

This test is designed specifically for the Massachusetts Preschool Vision Screening Protocol. Includes one practice card, two line sizes of 20/40 for 3 year olds, two line sizes of 20/32 for 4+ year olds, response key, flash cards, and Massachusetts Vision Screening Protocol.

Pages are offset for easy flipping. Use at 10 feet (3 metres) screening distance. 4 pages, 3.25" x 9" (8.25 cm x 22.9 cm).

259500 LEA Symbols™ 10Ft 3M Massachusetts Screening Flip Chart



Crowded HOTV Set or Chart (10 Feet, 3 Metres)

Crowded line sizes from 20/100 to 20/16 (6/30 to 6/4.8) equivalent. Set includes chart, response key, flash cards and instructions. Charts measure 9" x 14" (23 cm x 35.6cm). *(not shown)*

- 600001** HOTV Crowded Set
- 600724** HOTV Crowded Chart

HOTV Set or Chart (10 Feet, 3 Metres)

Linear spaced line sizes 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20 and 20/16 equivalent. Set includes chart, response key, flash cards and instructions. Charts measure 9" x 14" (23 cm x 35 cm).

- 600017** HOTV 10 Ft Linear Set
- 600717** HOTV 10 Ft Linear Chart

HOTV Proportional Set or Chart (10 Feet, 3 Metres)

Proportionally spaced line sizes from 20/125 to 20/8 (6/38 to 6/2.4) equivalent. Set includes chart, response key, flash cards and instructions. Charts measure 9" x 14" (23 cm x 35.6cm). *(not shown)*

- 600018** HOTV 10 Ft Proportional Set
- 600736** HOTV 10 Ft Proportion Chart



HOTV Test Set or Chart (20 Feet, 6 Metres)

Crowded line sizes from 20/80 to 20/16 (6/24 to 6/4.8) equivalent. Set includes chart, response key, flash cards and instructions. Charts measure 9" x 14" (23 cm x 35.6cm).

- 600006** HOTV 20 Ft Crowded Set
- 600731** HOTV 20 Ft Crowded Chart

Professional Series Cabinet HOTV Distance

Chart size 10" x 18" (25 cm x 46 cm)



HOTV Crowded Chart (10 Feet, 3 Metres) 10 x 18 in

Crowded line sizes from 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20 and 20/16 (6/48 to 6/4.8) equivalent. Set includes chart, response key, flash cards and instructions. Chart measures 10" x 18" (26 x 46 cm).

800004 HOTV Crowded Set

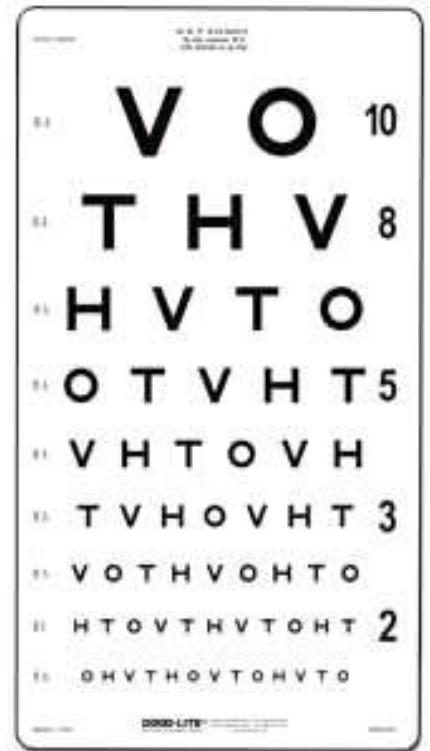
800726 HOTV Crowded Chart

HOTV Translucent Chart (20 Feet, 6 Metres)

Uncrowded HOTV chart with line sizes 20/100 to 20/16 (6/30 to 6/4.8) equivalent. Response key and flash cards NOT included. Chart measures 10" x 18"

(26 x 46 cm).

800704 Uncrowded Chart



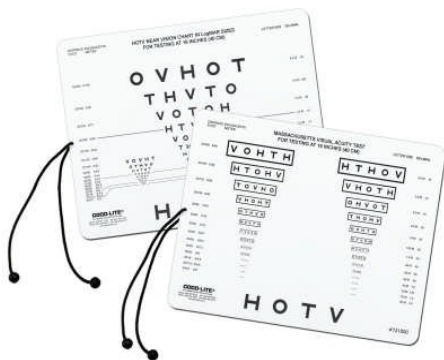
HOTV Near Vision Cards



HOTV Near Vision Cards 16-inch (40 cm)

Crowded line sizes from 20/125, 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, and 20/20 (6/38 to 6/6) equivalent in 9 lines. Shows Snellen in feet and metre and decimal notations. Instructions printed on the reverse. Includes two paper isolating masks. Card measures 5.5" x 8" (14 x 20.3 cm).

726000 HOTV Crowded Near Card



Two Sided HOTV Near Card 16-inch (40 cm)

This double spaced card combines proportionally spaced lines on one side and 50% spaced rectangle (Massachusetts Visual Acuity Test Format) on the reverse. Sizes range from 20/400 to 20/10 (6/120 to 6/3) in 17 lines on the proportionally spaced side and 20/200 to 20/10 (6/60 to 6/3) in 14 lines on the 50% spaced side. Attached 16-inch (40 cm) measuring cord ensures proper screening distance. Includes response key, flash cards and instructions. Card measures 8" x 10" (20 x 26 cm).

731000 Two Sided HOTV Near Card

LEA Numbers® Explained

Lea Numbers™ was developed for international studies in occupational and school health. Letters like the Sloan letters are used almost exclusively in the western world and former colonies of western empires. Numbers, on the other hand, are used to test visual acuity in most parts of the world. The numbers 5, 6, 8, and 9 are used, because they can be designed to blur equally at threshold. The Lea Numbers™ font was designed by Dr Lea Hyvarinen in 1993 and calibrated with the Landolt C.



15-line Folding Distance Chart (10 Feet, 3 Metres)

Proportionally-spaced. Line sizes range from 20/200 to 20/16 (6/60 to 6/4.8) equivalent. One

centred hole for hanging the chart on the wall.

Chart is 18" x 20" (46 cm x 51 cm). Fold to 18" x 10" (46 x 25.4 cm).

271100 15-line 10 Ft Lea Numbers™ Folding Chart

Single LEA Number® Flip Chart (10 Feet, 3 Metres)

The Single LEA Number® Book is ideal for situations in which the child or adult cannot perform when tested with a line test. This book can help determine the best resolution of the visual pathway in a child or adult with amblyopia or impaired vision. Single optotype line sizes from 20/200 to 20/8 (6/60 to 6/2.4) equivalent. Includes isolating mask and instructions. 13 pages. Set measures 5" x 5" (13 x 136 cm).



274000 Single Number Book

Low Contrast Flip Chart (10 Feet, 3 Metres)

Measure, record, and detect visual changes that occur only at low contrast levels. Includes 6 contrast levels: black, 25%, 10%, 5%, 2.5%, and 1.25%. Pages offset for easy flipping. Scrambled version simply provides a different sequence of LEA Symbols® for variety. Each set includes response key, flash cards and instructions. Chart Set is 3.25" x 9" (8.25 x 22.9 cm).

270400 Lea Numbers™ Contrast Unscrambled Flip

270500 Lea Numbers™ Contrast Scrambled Flip

Lea Numbers® Near Point Cards

LEA Numbers® Near Card 16 inch (40 cm)

Proportionally space lines on one side and tightly spaced lines on the other. Line sizes from 20/400 to 20/10 (6/120 to 6/3) equivalent. Response key printed on the bottom of each the test card. Includes cord for proper distance measurement. Card measures 8" x 10" (20 x 25.4 cm).

270900 Lea Numbers™ Near Card with Cord

LEA Numbers® Pocket Card 16 inch (40 cm)

Proportionally spaced lines on one side and more tightly spaced lines on the reverse. Line sizes 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 12/12.5, and 20/10 (6/120 to 6/3 equivalent). Card 3.75 x 6.25 inches.

271000 Pocket Lea Numbers™ Card





756100 LEA Number® Runge



251000 Combined Lea Card



Intermediate Distance Chart - One Metre

Includes marking on chart for one metre and separate sheet indicating Acuity for 1/2 metre.
Shows Snellen in Feet and Metres plus M notations.

272300 Intermediate Distance Chart

LEA Numbers® for Low Vision



LEA Numbers® Low Vision Set (Near and Distance)

Designed for testing of severely visually impaired children and adults. This complete book includes testing for 10 ft (3M), 5 ft (1.5 M) and near vision at 16" (40 cm). Distance sizes at 10 ft are: 20/800, 20/630, 20/500, 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16 (6/480 to 6/4.8) equivalent. Near Vision sizes 20/800, 20/630, 20/500, 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16 (6/240 to 6/4.8) equivalent. Available bound on either left side or top. Fun Frame and Adult metal frame occluding glasses included. Overall size is 10" x 13" (25 x 33 cm).

5131R Low Vision Lea Numbers™ Set - Left Side Bound

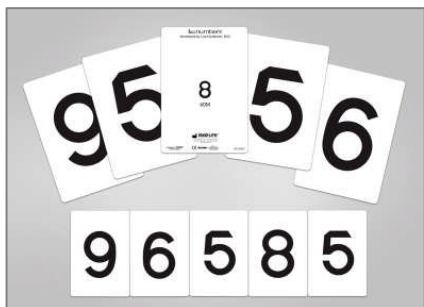
5273R Low Vision Lea Numbers™ Set - Top Side Bound



LEA Symbols® Low Vision Chart (40 inches, 1 Metre)

This low vision test is designed for testing of severely visually impaired children and adults. The largest symbols are 50M in size, corresponding to 1/50 (20/1000, 6/300, 0.02). The smallest symbols are 1M in size corresponding to 1/1 (20/20, 6/6, 1.0) at a distance of one metre. The test comes with attached cord to maintain the proper distance. Cord ends with Lorgnette Occluder. Includes response key, flash cards and instructions. Design courtesy of August Colenbrander, MD. Chart is 16" x 21.5" (40.7 x 54.6 cm) and folds to 16" x 10.75" (40.7 x 27.3 cm) CE

272100 Low Vision Lea Numbers™ Chart



LEA Numbers® Cards, 40M and 60M

These five LEA Numbers Cards can be used for presentation as single optotypes or arranged in a row as a line test. 60M cards are approximately 6" x 9" (15.25 cm x 22.9 cm). 40M cards are approximately 4" x 6" (10.2 cm x 15.25 cm). Very useful for Low Vision exams.

272400 Lea Numbers™ Cards, 40M and 60M

ETDRS Translucent Distance and Low Contrast Wall Charts

Chart Size: 24.5" x 25.5" (62 cm x 65 cm)

Original and 2000 Series ETDRS Translucent Charts

(13 Feet, 4 M or 10 Feet, 4 M)

Proportionally-spaced (geometric progression) lines. Line sizes range from 20/200 to 20/10 (6/60 to 6/3) equivalent. Standardized format used in the National Eye Institute clinical studies and in low vision evaluations that require accurate and repeatable visual acuity measurements. 2000 Series is the revised Edition of the Original ETDRS. Designed to be used with ETDRS Illuminated Cabinets. May also be wall hung. Chart Size: 24.5" x 25.5" (62 cm x 65 cm).



500013 Original Chart 'R'

500014 Original Chart '1'

500015 Original Chart '2'

500016 2000 Series Chart '1'

500017 2000 Series Chart '2'

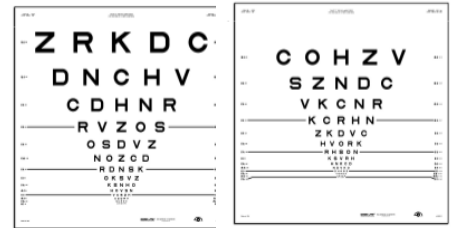
500018 2000 Series Chart '3'

10 Feet (3 Metres)

500010 10 Ft Chart '1'

500011 10 Ft Chart '2'

500012 10 Ft Chart '3'



ETDRS Low Contrast Charts (13 Feet, 4 Metres)

Proportionally-spaced (geometric progression) lines. Line sizes range from 20/200 to 20/10 (6/60 to 6/3) equivalent. .

500023 ETDRS Contrast 25%

500019 ETDRS Contrast 10%

500020 ETDRS Contrast 5%

500021 ETDRS Contrast 2.5%

500022 ETDRS Contrast 1.25%



Professional Cabinet Charts Chart Size: 10" x 18" (26 cm x 46 cm)

Sloan Letter Chart Linear or Proportioned 10 Ft, 3 M

Linear Spaced chart lines sizes 20/160, 20/125, 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20, and 20/16 (6/48 to 6/4.8) equivalent. Proportionally spaced line in the same sizes 20/160 to 20/8 (6/48 to 6/2.4).

Charts measure 10" x 18" (26 x 46 cm).

800713 Linear Spaced

800735 Proportional

Sloan Folding Chart (10 Feet, 3 Metres)

Proportionally-spaced. Line sizes 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5, to 20/10 (6/60 to 6/3) equivalent. Has a hole for hanging the chart on the wall. Chart is 18" x 18" (46 cm square). Fold to 18" x 9" (46 cm x 23 cm).



735000 Sloan Folding

Quantum Series, Models A+ and A Charts

Chart Size: 9 x 14 inches (22.9 x 35.6 cm)

Sloan Letter - Linear Chart (10 Ft. 3 M or 20 Ft. 6 M)

Linear Spaced chart; lines 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20 and 20/16 (6/30 to 6/4.8) equivalent. Lines are labeled with 10 ft and 20 ft notations only. Chart is recommended by the Texas Department of Public Health. Chart measures 9" x 14" (23 x 36 cm).

600723 Linear Sloan Spaced

Sloan Letter - Proportional

- **600705** - Proportionally spaced line sizes range from 20/160 to 20/10 (6/48 to 6/3).
- **600711** is the same as 600705 but the lines are labeled with 10 ft and 20 ft notations only.

Both charts measure 9" x 14" (23 x 36 cm)

600705 10 Ft Proportional

600711 10 Ft and 20 Ft Sloan Proportional



Sloan Letter Chart (20 or 13 Feet, 6 or 4 Metres)

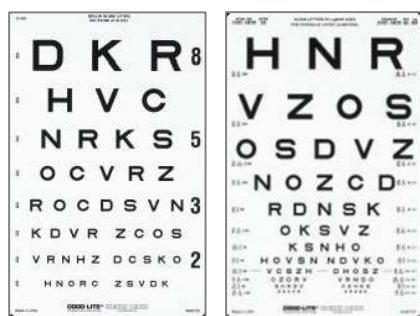
- **600725** - Linear Spaced chart has line sizes range from 20/80 to 20/16 equivalent.
- **600737** - Proportionally spaced line sizes range from 20/80 to 20/10. 600725 and 600737 are labeled with 20 ft notations only.
- **600739** 13 Ft (4 M) Chart, proportionally spaced line sizes range from 20/125 to 20/10 (6/38 to 6/3) equivalent.

Charts measure 9" x 14" (23 x 36 cm)

600725 20 Ft Sloan Linear

600737 20 Ft Sloan Proportional

600739 13 Ft Sloan Proportional



600725 20 Ft

600739 13 Ft

Professional Cabinet Charts

Chart Size: 10" x 18" (26 cm x 46 cm)

Sloan Letter Chart (13 Feet, 4 Metres)

Proportionally spaced line sizes range from 20/160 to 20/10 (6/48 to 6/3). Charts measure 10" x 18" (26 x 46 cm)

800738 13 Ft Proportional Sloan



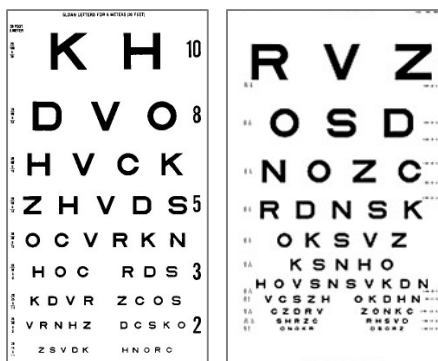
Sloan Letter Chart (20 Feet, 6 M)

- **800733** - Linear Spaced chart version has line sizes range from 20/100 to 20/16 (6/30 to 6/4.8) equivalent.
- **800739** - Reversed proportionally spaced chart lines range from 20/100 to 20/16 (6/30 to 6/4.8).
- **800740** - Proportionally spaced line sizes range from 20/100 to 20/10 (6/30 to 6/3).

800733 20 Ft Linear Sloan

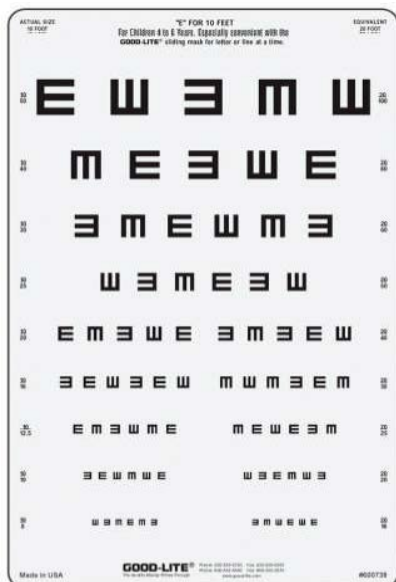
800739 20 Ft Reversed Proportional

800740 20 Ft Proportional Sloan



Professional Cabinet Charts

Chart Size: 10" x 18" (26 x 46 cm)



10 Ft Tumbling E Chart

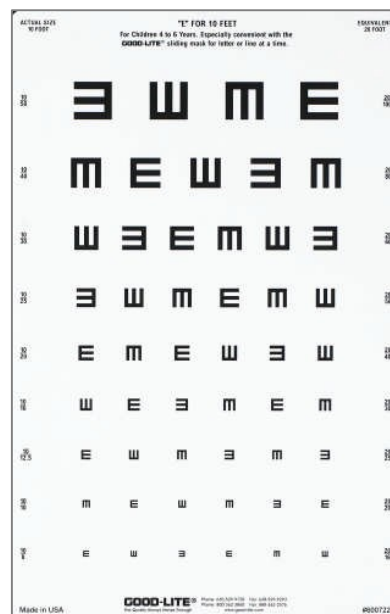
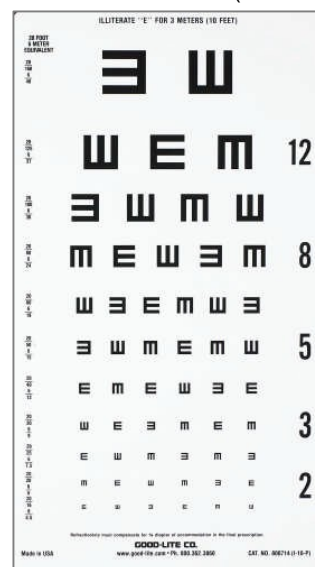
Linear spaced line sizes range from 20/100 to 20/16 equivalent. Lines are labeled with 10 ft and 20 ft notations only. Lines are 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20 and 20/16. Charts measure 9" x 14".

600738 10 Ft Linear 'E'

10 Ft Tumbling E Chart

Linear spaced line sizes range from 20/160 to 20/16 (6/48 to 6/4.8) equivalent. Lines are 20/160, 20/125, 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20 and 20/16. Charts measure 10" x 18" (26 x 46 cm)

800714 10 Ft Linear Spaced



10 Ft Tumbling E Chart

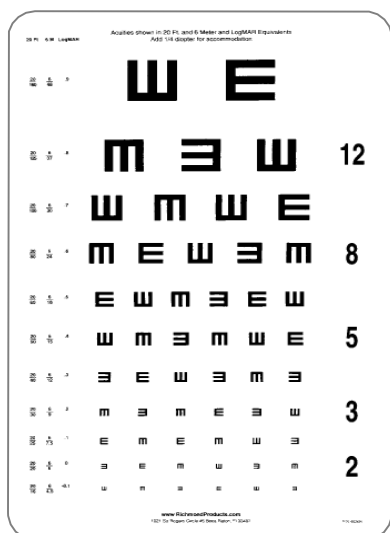
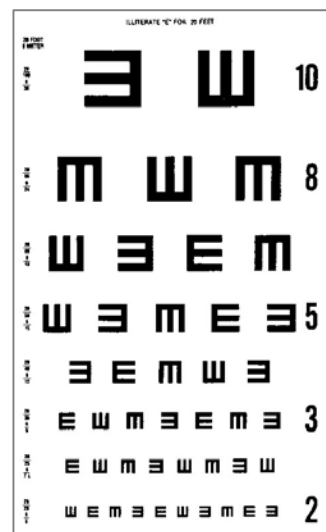
Wide spaced line sizes range from 20/100 to 20/16 equivalent. Lines are labeled with 10 ft and 20 ft notations only. Chart recommended by the Texas Department of Public Health. Lines are 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20 and 20/16. Chart measures 9" x 14" (23 x 36 cm).

600722 10 Ft Wide Spaced

20 Ft Tumbling E Chart

Linear spaced line sizes range from 20/100 to 20/20 (6/30 to 6/6) equivalent. Lines are 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25 and 20/20. Charts are 10" x 18" (26 x 46 cm)

800729 20 Ft Linear Spaced



10 Ft Tumbling E

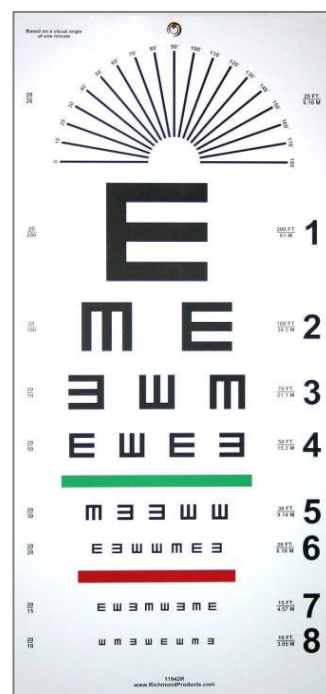
This Tumbling E chart has 11 lines from 20/16 up to 20/160 equivalents. Lines are 20/160, 20/125, 20/100, 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20 and 20/16. Chart is 11x18 inches (28 x 45.8 cm).

4636R 10 Ft Tumbling E

20 Ft Astigmatic Directional E

Styrene chart includes Astigmatic Dial and red and green bars with 11 lines from 20/10 to 20/200. Use at 20 Ft (6 M). Lines are 20/200, 20/100, 20/70, 20/60, 20/50, 20/30, 20/20, 20/15 and 20/10. Chart is 11 x 24 inches (27.5 x 60 cm).

11942R Astigmatic 'E'



Quantum Series for Models A+ and A Charts

20 Ft Tumbling E Chart

Linear spaced line sizes range from 20/80 to 20/16 equivalent. Lines are labeled with 20 ft notations and 6 Metre. Lines include 20/80, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20 and 20/16. Chart measures 9" x 14".

600735 20 Ft Linear Spaced

20 Ft Tumbling E Chart

Wide spaced line sizes range from 20/100 to 20/16 equivalent. Lines are labeled with 20 ft notations only and include 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16. Chart measures 9" x 14".

600728 20 Ft Wide Spaced

5 x 4 Inch Plastic Letter 'E'

This "E" can be used with children to let them rotate as a means to 'match' each letter on any Tumbling 'E' chart as that optotype is identified. This sturdy Letter is Black ABS plastic
Size: 5 inches high and 4 inches wide.

5885R Black Letter E

Near E and C Cards

Near Point 'E' and Landolt C

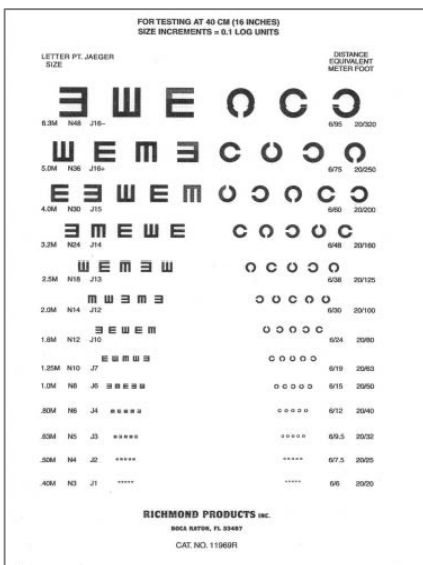
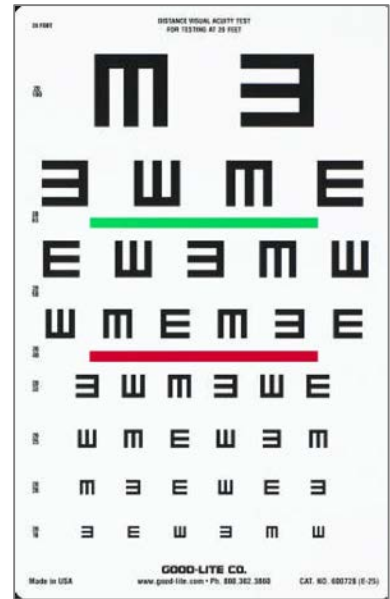
Directional 'E' and Landolt 'C' Near Point Card shows Letter Size, Point Size, Jaeger and Snellen in Metres and Feet. Covers J 16 ++ to J1 (20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, and 20/20 to 20/20). Use at 16 inches (40 cm). Use with 5885R Five Inch Letter E. Card measures 5 1/2" by 8" (140 x 205 mm).

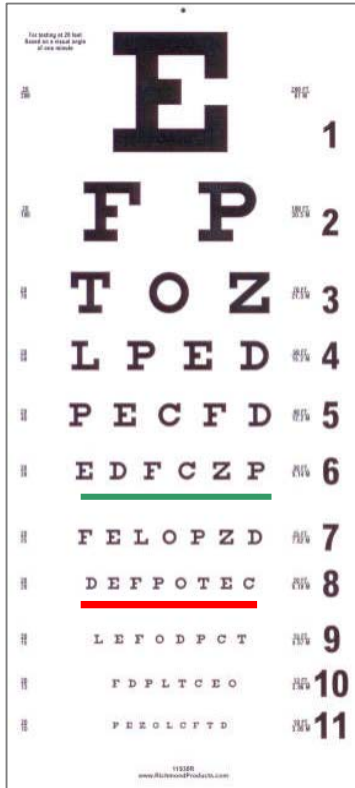
11969R Near 'E' and 'C' Test

Near Point 'E' and Landolt C

Combination Tumbling E and Landolt C near vision card with proportionally-spaced lines; sizes range from 20/400 to 20/10 (6/120 to 6/3). Lines are 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5 and 20/10 with a 16 inch (40 cm) measuring cord for accurate distance. Card measures 7" x 9" (17.8 cm x 22.9 cm).

728000 C and E Near Card





20 Ft. Snellen and Reverse

Standard Snellen Chart on styrene, includes lines for 20/10, 20/13, 20/15, 20/20, 20/25, 20/30, 20/40, 20/50, 20/70, 20/100, and 20/200. Includes 20 Ft Snellen and M notations. Green bar at 20/30 and red bar at 20/20. Reverse has 10 ft Chart. Was partnumber 11930R. 11x23 inches (27.5 x 60 cm).

5887R 20 Ft. Snellen

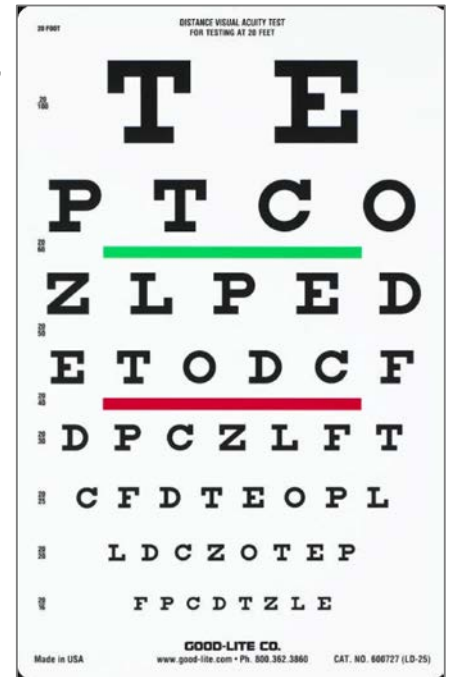
Reverse Chart is the same as 11930R except reversed for use with a mirror has 11 lines from 20/10 to 20/200. Use at 20 Ft (6M). All black. Chart is 11x24 inches (27.5 x 60 cm).

11920RR 20 Ft. Reverse Snellen

20 Ft Snellen Letter

Linear Spaced lines range from 20/100 to 20/16 (6/30 to 6/4.8) equivalent. Lines are labeled with 20 Ft notations only and include 20/100, 20/60, 20/50, 20/40, 20/30, 20/25, 20/20, and 20/16. Chart measures 9" x 14" (23 x 36 cm).

600727 20 Ft Snellen





ESV1018 LED Professional Illuminated Cabinet

Larger than Model A and A+, the professional holds 10" x 18" (26 x 46 cm) charts and uses LED lights to provide uniform illumination for standardized testing. Includes wireless remote control. Charts sold separately. CE and CSA listed. Hinged Wall bracket accessory allows cabinet to swing from wall or door. Cabinet size 46 x 25.7 x 7.6 cm (10.125" W x 18.125" H x 3" D).

ESV1018 Cabinet

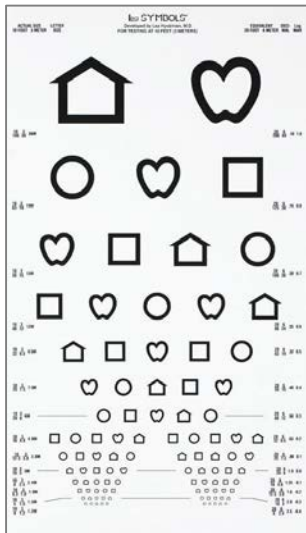
ESV1018 Accessories

914003 Rechargeable battery pack for ESV3000 (and other) Cabinets

700009 Hinged Wall Bracket

800540 Replacement Fluorescent Bulb

706000 Adjustable Wall Mount



800722 LEA Symbols®

LEA Symbols® or Numbers® (10 Feet, 3 Metres)

LEA Symbols® or LEA Numbers® distance visual acuity charts for the Professional Cabinet. Proportionally spaced lines, sizes range from 20/200, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5, 20/10, and 20/8 (6/60 to 6/2.4) equivalent. Sets include response key, flash cards and instructions. Charts measure 10" x 18" (26 cm x 46 cm).

800722 LEA Symbols® Set

800721 LEA Symbols® Chart

800737 LEA Numbers® Chart

LEA Symbols®

800724 20 Feet, 6 Metres Proportionally Spaced Set

800723 20 Feet, 6 Metres Proportionally Spaced Chart only

Tumbling E see pages 60-61

10 Feet, 3 Metres

800714 'E' Linear Spaced

20 Feet, 6 Metres

800729 'E' Wide Spaced

Note:

1. All charts, except the low contrast charts, can be hung on the wall or used with the appropriate illuminated cabinet.
2. Power Plug adapter for the Cabinets with Universal power supplies may be needed for outlets outside the United States.



800726 Crowded HOTV

Crowded HOTV Chart (10 Feet, 3Metres)

Crowded line sizes 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20 and 20/16 (6/48 to 6/4.8) equivalent. Sets include response key, flash cards and instructions. Charts measure 10" x 18" (26 x 46 cm).

800004 10 Ft Crowded HOTV Set

800726 10 Ft Crowded HOTV Chart only

800704 20 Feet or 6 Metres Linear Spaced Chart only

LEA Numbers®

800701 (20 Feet, 6 Metres) Proportionally Spaced Chart only

Sloan Letters

800713 10 Feet, 3 Metres Linear Spaced

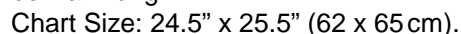
800735 10 Feet, 3 Metres Proportional

800733 20 Feet, 6 Metres Linear Spaced

800740 20 Feet, 6 Metres Proportionally Spaced

800739 20 Feet, 6 Metres Reversed Proportional

ETDRS Translucent Charts - (13 Feet, 4 M or 10 Feet, 3 M)



ETDRS Charts for 10 Feet (3 Metres)

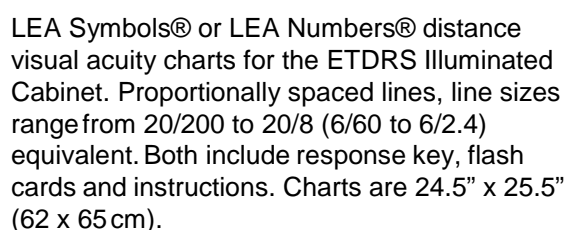
500010 10 Ft Chart '1'

500011 10 Ft Chart '2'

500012 10 Ft Chart '3'

000012 Left Chart 3

LEA Symbols® or LEA Numbers® ETDRS Charts



270200 LEA Numbers® for use at 13 Ft (4M)
ETDRS Set



Proportionally spaced (geometric progression) lines with line sizes from 20/200 to 20/10 (6/60 to 6/3) equivalent. Designed to be used with ETDRS Illuminated Cabinets. Chart Size: 24.5" x 25.5" (62 cm x 65 cm).

Note: All charts, except the low contrast charts, can be hung on the wall or used with the appropriate illuminated cabinet.

500020 ETDRS Contrast 5%

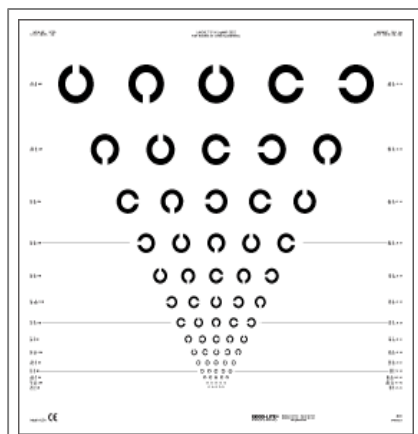
500019 ETDRS Contrast 10%

500023 ETDRS Contrast 25%



This Landolt 'C' chart is in the ETDRS style similar to the ETDRS Series 1 Letter Charts. The chart is intended for Paediatric testing at 13 Ft. (4M). It may be hung on wall or used with ESV3000 or similar ETDRS Illuminated cabinet. The Landolt 'C' Optotypes are proportional spaced in geometric progression with 14 line sizes from 20/200 to 20/10 (6/60 to 6/3) equivalent. Standardized format used in National Eye Institute sponsored studies. Chart measures 24.5"Height x 25.5"Width (62 x 65 cm).

500037 Landolt C ETDRS Chart, Proportionally Spaced



Sloan letters with line sizes 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16, 20/12.5 and 20/10. Continuous text on the reverse with line sizes 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, and 20/16. Shows Snellen in Feet and Metres plus Letter Size and Decimal. Card measures 3.75" x 6.25" (9.5 x 16 cm).



This test is designed for contrast sensitivity measurement in toddlers and young children, and in older children or adults with intellectual impairment. Like its 'sister' test, the Cardiff Acuity Test, the Cardiff Contrast Test uses vanishing Optotypes.

5667 Cardiff Combined Contrast Test £846.00

Hiding Heidi Low Contrast Preferential Looking Test 6 months-3 yrs

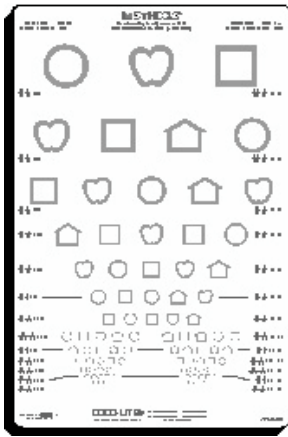


251100 LEA Symbols® Contrast Flip Chart Unscrambled

251200 LEA Symbols® Contrast Flip Chart Scrambled

270400 LEA Numbers® Unscrambled Flip

270500 LEA Numbers® Scrambled Flip



Translucent Contrast Charts - Lea Symbols - 3 to 5 Years

Testing is identical to the measurement of visual acuity at high contrast level, i.e., measure the smallest size of the optotypes that the person can recognize. The 2.5% test is the most practical test in clinical use. These charts for use with ESV1200 and 1500 illuminated Cabinets or can be hung on a wall. For 10 foot (3 metre) testing. Size: 9"x14" (22.9 cm x 35.6cm).

253700 Translucent Low Contrast 9x14 Chart - Lea Symbols (1.25%)

253800 Translucent Low Contrast 9x14 Chart - Lea Symbols (2.5%)

253900 Translucent Low Contrast 9x14 Chart - Lea Symbols (5%)

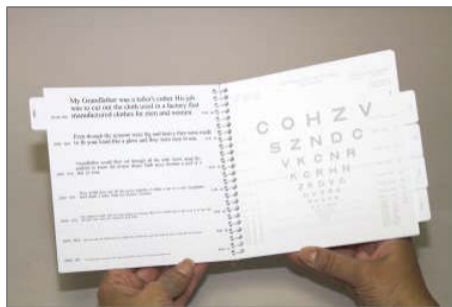
254000 Translucent Low Contrast 9x14 Chart - Lea Symbols (10%)

254100 Translucent Low Contrast 9x14 Chart - Lea Symbols (25%)

Adult Near Contrast Test Booklet

Key Features:

- Contrast Levels 100%, 25%, 10%, 5% and 2.5%
- Both ETDRS Letters and Continuous Reading Examples
- 20/400 to 20/10 in 17 increments
- Shows Snellen in Feet, Metres LogMAR, Decimal and Letter Size
- Pages tabbed at each contrast level
- Includes instructions, Score Card and Recording Form



Adult Near Contrast Letter Test Recording Form
Use this sheet to interpret the raw scores from the Letter Charts on the score sheet.
Make copies as needed.

Patient Name: _____ Date: _____

Note: Use separate symbols for each eye:
Mark OD point total with 'R' in the appropriate scale for each contrast level
Mark OS point total with 'L' in the appropriate scale for each contrast level

Snellen Acuity	LogMAR	Total Points	Contrast Level				
			100%	25%	10%	5%	2.5%
20/400	1.3	5					
20/320	1.2	10					
20/250	1.1	15					
20/200	1.0	20					
20/160	0.9	25					
20/125	0.8	30					
20/100	0.7	35					
20/80	0.6	40					
20/63	0.5	45					
20/50	0.4	50					
20/40	0.3	55					
20/32	0.2	60					
20/25	0.1	65					
20/20	0.0	70					
20/16	-0.1	75					
20/12.5	-0.2	80					
20/10	-0.3	85					

Richmond Products 4400 Silver Ave SE Albuquerque, NM 87108 USA
Part Number 511534

Recording form illustrates decreasing contrast sensitivity in the right eye.

Adult Near-Contrast Test Booklet provides contrast sensitivity levels of 100, 25, 10, 5 and 2.5 percent using Michelson measures. These are printed on high-quality styrene plastic for long term durability. Each contrast level has ETDRS style letters and Continuous Reading Examples.

The ETDRS style lettering provides excellent repeatability and is an objective measure useful for medical insurance submission. The continuous text at each contrast level provides a 'real world' example to help patients recognize any decline in low contrast acuity. Use of the test booklet near (at 16 inches or 40 cm) is much quicker than repositioning a patient to use a distance contrast test such as the Pelli-Robson. Since both full contrast and other contrast levels are presented under the same conditions, the illumination is identical. This permits accurate comparison of the results at the various contrast levels.

ETDRS style lettering shown at 17 levels from 20/400 to 20/10. Acuity measure equivalents are shown in Snellen feet and metres, LogMAR, decimal and letter size. Pages are tabbed at each contrast level. A score card, recording form and comprehensive instructions are also provided to support plotting a graph of the patient's results indicating the relationship of visual acuity and low contrast sensitivity. Normal ratios are also indicated to permit comparison.

5877R Adult Near Contrast Test

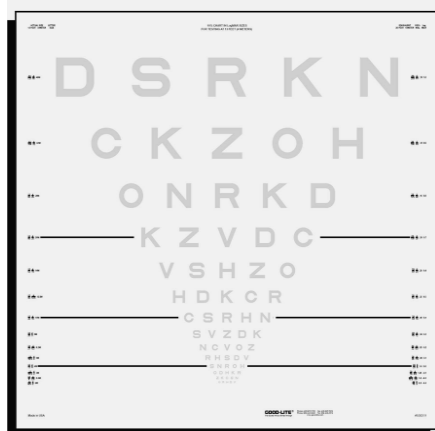


Low Contrast Flip Charts- Various Age Groups

These Low Contrast Flip charts make it easy to measure, record, and detect visual changes that occur only at low contrast levels. Each includes 6 contrast levels: black, 25%, 10%, 5%, 2.5%, and 1.25%. Pages offset for easy flipping. Scrambled version simply provides a different sequence to avoid memorization by the patient. Chart sets are 3.25" x 9" (8.25 x 22.9cm)

736000 Sloan Letters - Unscrambled Contrast Flip Chart

737000 Sloan Letters - Scrambled Contrast Flip Chart



ETDRS Low Contrast Charts - (13 Feet or 4 Metres)

Proportionally spaced (geometric progression) lines with line sizes from 20/200 to 20/10 (6/60 to 6/3) equivalent. Designed to be used with ETDRS Illuminated Cabinets. May also be wall hung. Chart Size 24.5" x 25.5" (62 x 65 cm).

500022 ETDRS Contrast 1.25%

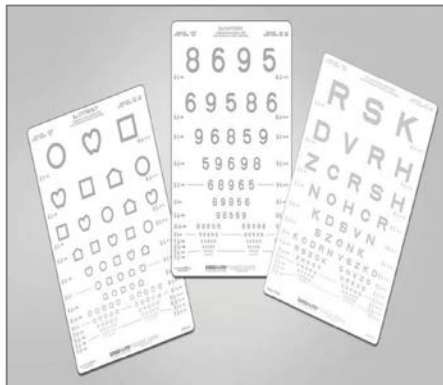
500021 ETDRS Contrast 2.5%

500020 ETDRS Contrast 5%

500019 ETDRS Contrast 10%

500023 ETDRS Contrast 25%

Quantum Series Low Contrast Charts



Testing is identical to the measurement of visual acuity at high contrast level; i.e., to measure the smallest size of the optotypes that an individual can recognize correctly. The 2.5 % test is the most practical in clinical use. Available in 5 contrast levels: 25%, 10%, 5%, 2.5%, and 1.25%. Both LEA sets include response key, flash cards and instructions. **Can be used with the Quantum Series Illuminated Cabinets or wall mounted.** Charts measure 9" x 14" (23 x 35.6 cm).

LEA Numbers®

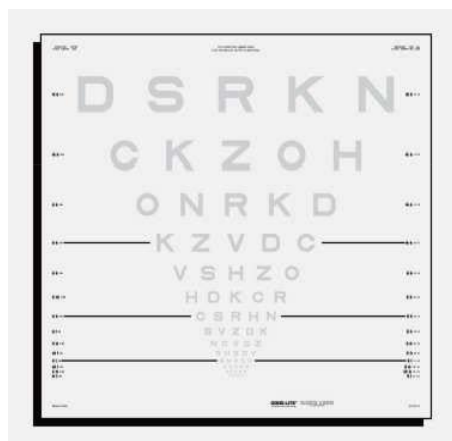
271500 Contrast Chart	1.25%
271600 Contrast Chart	2.5%
271700 Contrast Chart	5%
271800 Contrast Chart	10%
271900 Contrast Chart	25%

Lea Symbols®

253700 Contrast Chart	1.25%
253800 Contrast Chart	2.5%
253900 Contrast Chart	5%
254100 Contrast Chart	25%

Sloan Letters

600754 Contrast Chart	1.25%
600753 Contrast Chart	2.5%
600752 Contrast Chart	5%
600750 Contrast Chart	25%



ETDRS Low Contrast Charts - (13 Feet or 4 Metres)

Proportionally spaced (geometric progression) lines with line sizes from 20/200 to 20/10 (6/60 to 6/3) equivalent. Designed to be used with ETDRS Illuminated Cabinets. May also be wall hung. Chart Size: 24.5" x 25.5" (62 x 65 cm).

500022 ETDRS Contrast 1.25%

500021 ETDRS Contrast 2.5%

500020 ETDRS Contrast 5%

500019 ETDRS Contrast 10%

500023 ETDRS Contrast 25%



Low Contrast Flip Charts - Various Age Groups

These Low Contrast Flip Charts make it easy to measure, record, and detect visual changes that occur only at low contrast levels. Each includes 6 contrast levels: black, 25%, 10%, 5%, 2.5%, and 1.25%. Pages offset for easy flipping. Scrambled version simply provides a different sequence to avoid memorization by the patient. LEA Symbols® are recommended for children 3 to 5 years old. LEA Numbers® recommended for children 5+ years old. Both LEA sets include response key, flash cards and instructions. Chart sets are 3.25" x 9" (8.25 x 22.9cm).

251100 LEA Symbols® Contrast Flip Chart Unscrambled

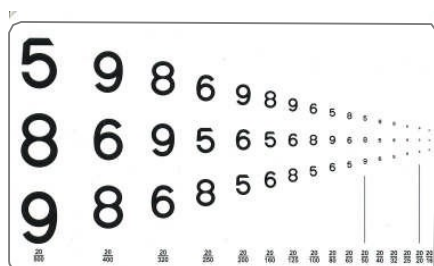
251200 LEA Symbols® Contrast Flip Chart Scrambled

270400 LEA Numbers® Unscrambled Contrast Flip Chart

270500 LEA Numbers® Scrambled Contrast Flip Chart

736000 Sloan Letters - Unscrambled Contrast Flip Chart

737000 Sloan Letters - Scrambled Contrast Flip Chart

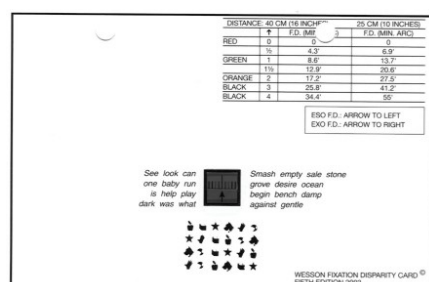


Runge Card - Lea Numbers and Letters

Easiest near card to use! Front has Optotype sizes 20/500, 20/400, 20/320, 20/250, 20/200, 20/160, 20/125, 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20 and 20/16. Back has the answers and interpretations for Snellen Feet, and Metres, Letter Size, Jaeger, Printers Points, LogMAR, and Decimal. Use at 16 inches. Includes Pupilometre and Metric Ruler.

756100 Runge Lean Number

2124 Runge Sloan Letter Card

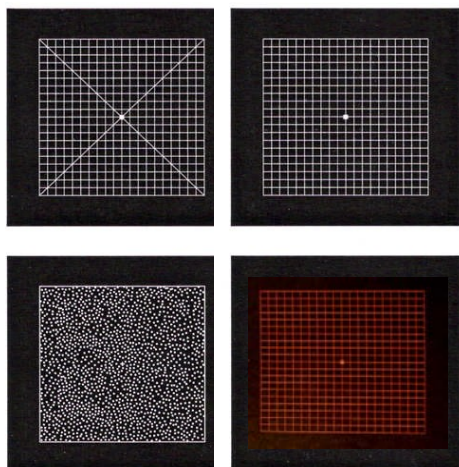


Wesson Card For Fixation Disparity, Accommodative Lag

The Wesson Fixation Disparity Card© is used to measure Fixation Disparity or Accommodative Lag. Yields clinically accurate estimates of key parameters involved in measurements of these functions. Testing is quick and extensive use has shown the results to be reliable over time.

Measures both horizontal and vertical disparity. With prisms, the Card can also be used to measure a forced vergence fixation disparity curve. Can be used for adults and pre-reader children. Measures Accommodative Lag using either the MEM method, the Nott method or the DOG method. Provides a Gaussians Waveform required for the DOG method. Includes Polarized Glasses. Car is punched for Phoropter mounting. For use at 40 or 25 CM.

4624 Wesson Fixation Card

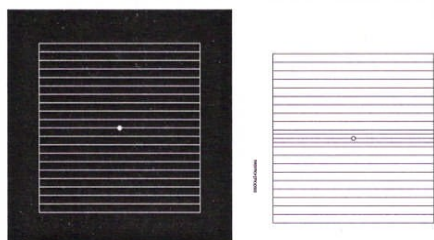
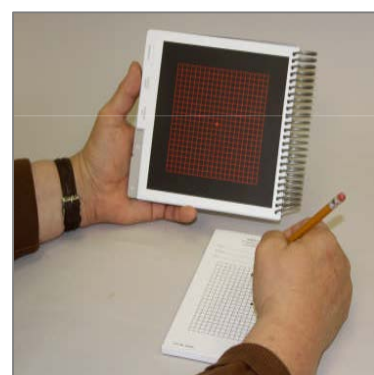


Amsler Booklet

Includes the full range of Amsler Grids:

- Standard black with White Grid
- Standard with Diagonals for Central Scotoma
- Black with Red Grid
- Black with White Dots
- Parallel Lines on Black
- Parallel Lines with Central Lines
- Standard with Small Central Squares

This is an expanded version of our popular Amsler Grid Book and provides 7 Amsler Grids and a score sheet. In addition to the 4 grids we've always included, this expanded booklet adds the White Dots, Parallel Line and Parallel Line with Central Line Grids. In addition to the Standard Grid, the Red on Black is used to diagnose a





Amsler Viewer - Forces patient view Amsler Grid monocularly!

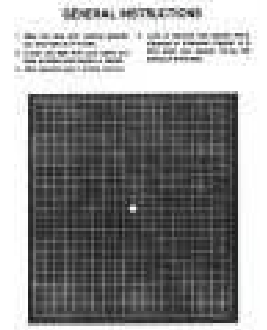
Provides an Amsler grid in a simple black key chain viewer. Insures monocular viewing. Cost low enough to give to patients for home use. Better than Amsler 'tear off sheets' or Amsler Refrigerator Magnets as the viewer insures monocular viewing.

5633R Amsler Viewer Single
5634R Set of 5 Amsler Viewers



Combined Amsler/Near Point Card

11978R Combined Near Point Continuous Reading and Amsler Grid (on reverse) shows Letter Size, Point Size, Jaeger and Snellen in Feet. Covers J 16 to J2 (20/200, 20/100, 20/60, 20/40, 20/30, and 20/25). Use at 16 inches (40 cm). Use 14001R score pads for scoring Amsler. 5 1/2" x 8 1/4" (135 x 215 mm).

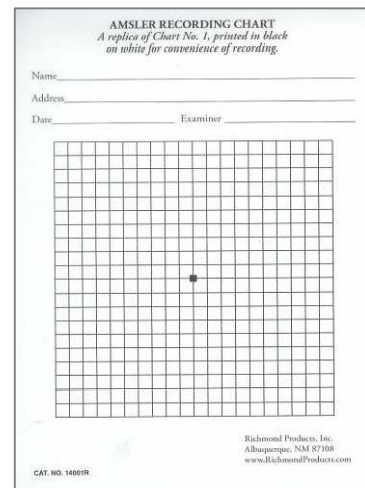
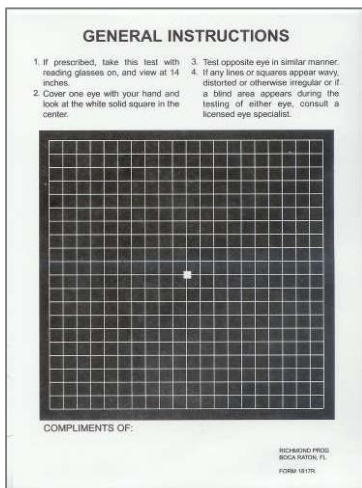


11978R Combined Amsler/Near

Amsler Recording Charts

White grid with black lines to be used by patient to sketch location of aberrations. Pad of 50.

14001R Amsler Recording Charts



Amsler Grid for Macular Degeneration

Supports assessment of macular degeneration in the vision of older adults. Contains standard Amsler Grid patterns, including a Red Amsler Grid and a Juxta-Central Amsler Grid printed on very durable styrene. Also includes blind spot markers to ensure the examiner is holding the test card at the proper testing distance. Feedback from these markers verifies that one eye is focused at the centre of the Amsler Grid while the other is covered. Six cards with instructions. Size is 9.5 x 5.75 inches (24 x 15 cm).

730010 Amsler Grid Set with Blind Spot

Amsler Manual

PA Vision ring bound Amsler book. From the original maker of Amsler Charts produced exclusively for PA Vision. Containing 50 easily detachable Amsler recording charts, Amsler instructions, Procedure and questions 1 – 6 and Standard charts 1 – 7.

Amsler Manual Complete book with grids and recording charts £89.00

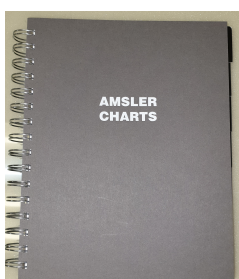


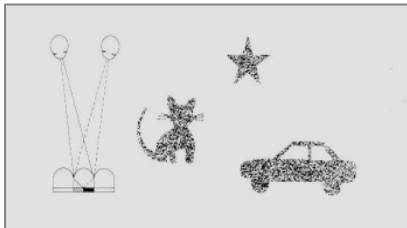
Chart of Stereo Tests

These tests are described individually in the next few pages.

Test Name	Type	Seconds of Arc detected	Intended	P/No.
Stereo Butterfly with Lea Symbols	Polarized	20 to 4800	All Ages	5280xx
Stereo Fly with Lea Symbols	Polarized	20 to 4800	All Ages	5279xx
Random Dot tests with Lea Symbols	Polarized	12.5 to 500	All Ages	5277xx
Worth 4 Dot Flashlight	Red/Green	No longer available		
Worth 4 Dot Attachment	Red/Green	No longer available		
Three Character Worth 4 Dot	Red/Green	No longer available		
TNO Stereotest	Red/Green	15 to 480	Paediatric	6035
Frisby Stereotest	Direct View	20-800	Paediatric	5476x
Lang Stereo Test I	Direct View	550 to 1200	Paediatric	5966x
Lang Stereo Test II	Direct View	200 to 600	Paediatric	5967x
Random Dot E - Standard	Polarized	500 to 52	All Ages	5278xx
Random Dot E - Low Vision	Polarized	500 to 52	All Ages	5300xx

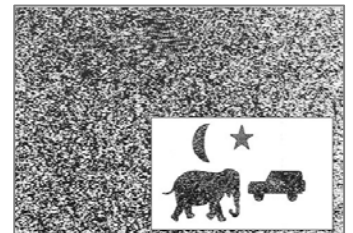
Lang I and II Stereotests

Created to simplify stereopsis screening in children. Based on two principles: random dots and cylindrical gratings. Random dots of Julez when seen monocularly, they do not provide clues, whereas in binocular vision stereoscopic forms are recognized thus avoiding the need to use Red/Green or Polarized Glasses. Lang I measures 600, 1200 and 550 seconds of arc. The Lang Stereotest II is a further development and measures 200, 400 and 600 seconds.



5966x Lang Stereotest I

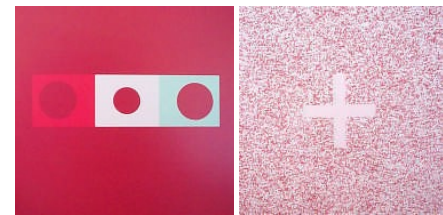
5967x Lang Stereotest II



TNO Anaglyph (Red/Green) Stereo Test

Suitable for testing very small children (2 1/2 to 5 years) as well as adults. Three plates for screening, 3 for diagnostic. Kit includes seven plates and red/green glasses. Also works with our Fun Frame glasses. Special Order

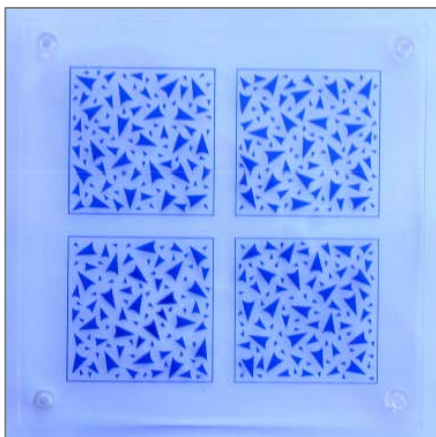
6035 TNO Stereotest Book



Frisby Stereo Plate Test

Consists of three test plates which permit stereo acuity measurement in the range 600-20 seconds depending upon viewing distance. Each plate is printed with four random texture patterns and hidden in one of these is a circular shade. The patient has to decide in which plate has an image that 'rises' or is 'different'. Selection can only be accomplished successfully if stereopsis is present. The key advantage of this test is that it can be used with very young children as they only need to indicate which quadrant is 'different'. They do not need to name the image. Another advantage of the Frisby Stereo Plate Test is that it is a "natural" test, meaning that the patient does not have to wear Red/Green or Polarized Glasses. Set includes three plates; 6mm, 3mm, and 1.5 mm.

5476x Frisby Stereo Plate Test



Polarized Stereo Tests with LEA Symbols™

These new Polarized Stereo tests have been developed and tested by the same team that has long published the various insect Polarized tests, however, these new versions have some very important new features as shown. They each come with both adult and paediatric stereo glasses.

Stereo Fly Test with LEA Symbols™

Stereo Fly and Butterfly tests are designed to rapidly access Amblyopia and Strabismus using gross through fine stereopsis

New Features:

- Now tests down to 20 seconds of arc.
- Employs familiar LEA Symbols™ for basic 400, 200 and 100 levels.
- Answer key cannot be lost - printed on the back cover.
- **Spanish and French available, see the Multi- language Section.**

Still Includes:

- Tests for 4800 to 20 sec of arc.
- No Monocular Clues.
- Includes both Adult and Paediatric Polarized glasses.

5279xx Fly with LEA - English Instructions

5280xx Butterfly with LEA - English Instructions



Random Dot Test with LEA Symbols™

Used for early non-readers and non-verbal children. Both tests offer

- Graded Circle now tests down to 12.5 seconds of arc.
- Answer key printed on the back cover so it cannot be lost.
- No Monocular Clues.
- Both Adult and Paediatric Polarized glasses.

Random Dot offers four levels of Random Dot LEA Symbols™ to cover 500, 250, 125 and 63 Sec of arc.

Random Dot 2 offers simplified Random Dot LEA Symbols™ with 3 instead of 4 levels (500, 250, 125 seconds of arc).

5277xx Random Dot with four levels

5556xx Random Dot 2 with three levels



Adult - Durable Replacement Polarized Glasses

Good- Plastic Frame Polarized Glasses

Hard Plastic Polarized lenses in sturdy plastic frames. Does not include a case.

5281R Adult Polarized Stereo Glasses

Better - Polarized Glasses

Stereo Glasses with Polarized Lenses in Metal Frame with spring loaded temples. Uses Linear Polarizing Laminated Sheet Plastic. Includes fabric pouch.

4935R Metal Frame Polarized Glasses



Best - Polarized Glasses - Polycarbonate

These POLYCARBONATE Polarized Lenses in Metal Frames are our best Polarized Glasses for long term durability. Mounted in a sturdy metal frame with spring loaded temples. Includes fabric pouch.

4465 Polycarbonate Polarized

Paediatric Polarized - Fun choices

Paediatric Polarized Glasses

Hard Plastic Polarized lenses in sturdy plastic frames.

5283R Paediatric Polarized Glasses

Paediatric



Adolescent



Adolescent Polarized Glasses

Hard Plastic Polarized lenses in sturdy plastic frames.

5715R Adolescent Polarized Glasses



Polarized Fun Frame Glasses

Fun Frame	Polarized
Butterfly	4604R
Horse	4620R
Parrot	4621R
Tiger	4607R



Stereo Flippers

Both Polarized and Red/Green for efficiency!

- Combined polarized and red/green stereo lenses in one flipper. Use the Red/Green for anaglyph test then flip to Polarized lenses for Stereo Fly.

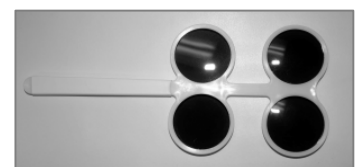
Reversing Stereo Flippers

- Red/Green on top and Green/Red on the bottom.
- Alternating Polarized lenses. Use for Vectograms and Tranaglyphs to reverse BI/BO demands.

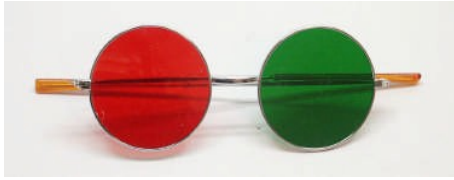
4884R Polarized & R/G Stereo Flippers

4943R Reversing R/G Flippers

4944R Reversing Polarized Flippers



Red/Green Anaglyph Glasses



Metal Frame Red/green Glasses

P/N 955R Red/Green Anaglyph glasses are durable metal frames with spring loaded temples and come with a soft storage case. Intended for Adults. These are not the thin breakable plastic frames furnished with most Anaglyph products.

955R Adult Red/Green Glasses



Red/green Diplopia Goggles

4956R Red/Green goggles work with Anaglyph tests.

Adjustable strap. Cannot be used with existing prescription eyewear. Provides total coverage of visual field.

4956R Diplopia Goggles

Prisms: Loose, Bars and Sets Comparison

Product Name	Size	Packaging	Powers
Horizontal Prism Bar	16 segments	Leathette case	1, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45 PD
Vertical Prism Bar	15 segments	Leathette case	1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30 PD (all on the bar)
Combined Vertical and Horizontal	2 bars above	same	see above
Loose or Stick Prism Set	16 prisms	Fitted Metal Case	.5, 1, 2, 4, 6, 8, 10, 12, 15, 20, 25, 30, 35, 40, 45, and 50 PD plus Red Lens
Loose or Stick Prism Set	22 prisms	Fitted Metal Case	.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50, plus Red
Fresnel Prisms 2 thru 10 diopter	7 trial rings	Plastic Case	2, 3, 4, 5, 6, 8, and 10.
Fresnel Prisms 12 thru 40 diopter	7 trial rings	Plastic Case	12, 15, 20, 25, 30, 35, and 40
Fresnel Prisms 2 thru 10 no handle	7 trial rings	Plastic Case	2, 3, 4, 5, 6, 8, and 10.
Fresnel Prisms 12 thru 40 no handle	7 trial rings	Plastic Case	12, 15, 20, 25, 30, 35, and 40
20 PD Rotary Risley Prism	.-20D to 0 to + 20D	Leathette case	.-20D to 0 to + 20D
30 PD Rotary Risley Prism	.-30D to 0 to + 30D	Leathette case	.-30D to 0 to + 30D
Prism Flippers	individual or set	Flipper	2D to 8D - see Flipper Section
Set of Prisms in Trial Rings	5 pairs of prisms	Set	Pairs: .5, 1, 2, 4, 5 and Adult trial frame
Reduced Aperture Prisms in Trial Rings	9 pairs of prisms	Set	Pairs: .5, 1, 2, 3, 4, 5, 6, 8, and 10 w with Handle
Reduced Aperture Prisms in Trial Rings	9 pairs of prisms	Set	Pairs: .5, 1, 2, 3, 4, 5, 6, 8, and 10 w with NO Handle

Loose Prism Sets - in Boxes

37mm square loose prism sets and your choice of metal or wooden boxes. The 16 piece set includes: Red, plus 0.5, 1, 2, 4, 6, 8, 10, 12, 15, 20, 25, 30, 35, 40, 45 and 50 diopters. The 22 piece set includes: 0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50 diopters plus Red.

- 4449R Metal box with Set of 16**
- 5672R Wooden box with Set of 16**
- 4445R Metal Box with Set of 22**
- 5671R Wooden Box with Set of 22**

Stick Mounted Prisms - in Boxes

Stainless Stick mounted prism sets and your choice of metal or wooden boxes. The 16 piece set includes: Red, plus 0.5, 1, 2, 4, 6, 8, 10, 12, 15, 20, 25, 30, 35, 40, 45 and 50 diopters. The 22 piece set includes: 0.5, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45, 50 diopters plus Red.

- 4671R Metal Box with Set of 16 Sticks**
- 5674R Wooden Box with 16 Sticks**
- 5248R Metal Box with Set of 22 Sticks**
- 5673R Wooden Box with 22 Sticks**

Individual Loose and Stick Prisms

We can provide individual prisms to replace any that may have become damaged or missing.
To order Individual Stick Prisms or Individual Loose Prisms:
call or email sales@pavisionuk.com



Prism Bars - Horizontal And Vertical



The Horizontal Bar includes 1, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30, 35, 40, 45 PD.

The Vertical Bar has 1, 2, 3, 4, 5, 6, 8, 10, 12, 14, 16, 18, 20, 25, 30 PD with all on the bar (none are loose).

Choice of Leatherette or metal case. The standard prism bars come with feet on the back so the back surface is not scratched when placed on a table.

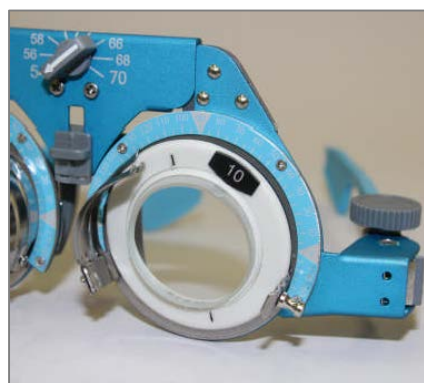
The 'no feet' versions permit the use of the bars 'back to back' in order to show simultaneous horizontal and vertical adjustment to the patient.



	With Feet	Without Feet
Type	Part Number	Part Number
Horizontal in Leatherette	6717R	6719R
Vertical in Leatherette Case	6718R	6720R
Both Prisms in Leatherette cases	6742R / 6090	6940R
Both Prism Bars in Black Plastic Box	6939R	6938R

Special Prism Sets

Reduced Aperture Prism Trial Rings without Tabs



Metal Box with 2 each of 0.50, 1.00, 2.00, 3.00, 4.00, 5.00, 6.00, 8.00 and 10.00 diopter Plastic Rimmed Trial Lens Prisms *with or without tabs*. Lenses are Standard 38mm OD, with 24mm lens- es. Prisms without tabs permit 360° rotation in trial frames. Foam lined box.

Need Individual Prisms without tabs?
Call or email: sales@pavisionuk.com



5741R Reduced Aperture Prism Set in Trial Rings with Tabs

5740R Reduced Aperture Prism Set without Tabs

Fresnel Prisms for Trial Frame



Prisms fit standard trial frames. Made of optical quality lightweight acrylic. Includes a storage box. Advantage: Patient can wear the prism with the trial frame while in the office to adapt to the use of the prism. Patient feedback is much better compared to getting a quick reaction to the loose prisms. Each piece measures 38mm outside with a 31mm prism. The 'NH' series eliminates the handle to permit greater freedom of rotation. 4000 Series includes: 2, 3, 4, 5, 6, 8 and 10 diopters. 5000 series includes: 12, 15, 20, 25, 30, 35 and 40 diopters.

4000 Seven Rings 2 to 10D
4000NH No handles 2 to 10D
5000 Seven Rings 12 to 40D
5000NH No handles 12 to 40D



Vergence Facility Prism

Quick screen for binocular vision. Use to get the patient to cycle between the two prisms up to 15 cycles per minute. Use with near card at 16 inches (40cm) with 20/30 near point line. Prisms are 12D BO and 3D BI and 1 1/2 inch high (38mm). Available loose or mounted on stainless stick.

4777R Vergence Prism

5208R Vergence on Stainless Stick

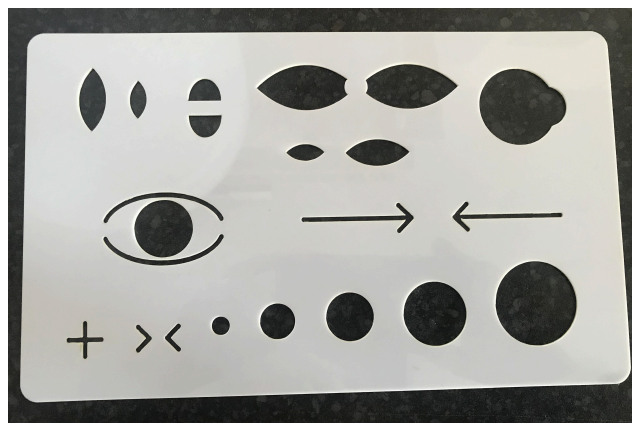


Eye Template

Eye Template used to illustrate ocular conditions directly on the patient's record. Includes 14 ocular figures plus several office symbols such as <, >, and +. Conditions include: corneal abrasions, dry eye syndrome, ptosis, proptosis, punctal plug locations and trichiasis.

Dimensions: 8 1/12 x 5 1/2 inches (21.5 x 14 cm)

5868R Eye Template £11.00



Measure Phoria Near and Distance

These Thorington Cards and Charts provide a very quick measurement of Heterophoria. The Near Cards helps diagnose Uncrossed or Crossed Diplopia and RhypoP, LhyperP, RhyperP and LhypoP. Includes a 1 mm hole in centre for the fixation light and is used with a Maddox Rod. They are self-aligning to the light for easy set-up. Scoring reveals if the patient has normal alignment when fusion is broken or if the patient has abnormal alignment.

Adult Near Thorington Cards

On the Near Adult Card, each Optotype represents one Prism Diopter, and measures ± 12 Diopters. The card is 5.75 x 4.75 inches (147 x 121 mm).

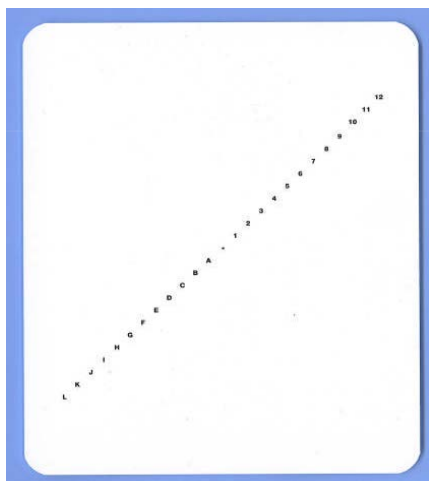
There are two types of Near Cards: One for use with a Transilluminator or most penlights. The second uses our push-button central fixation LED light that turns on with a simple touch.



Adapter to attach to a Trans-illuminator from the back

4893R Adult Near Thorington Card with Trans-illuminator Adapter

5558R Adult Near Thorington with push-button LED light



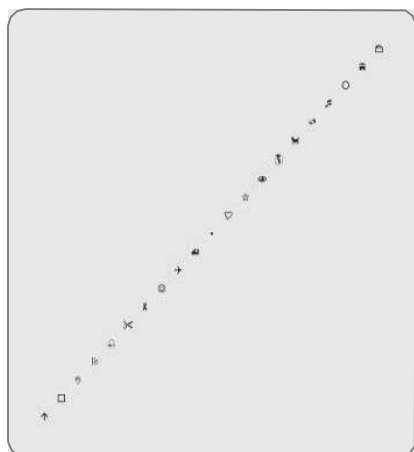
Adult Thorington Near Card measures vertical and horizontal Phoria

Paediatric Near Thorington Cards

On the Near Paediatric card, each Optotype represents 2 Diopters of Phoria and measures ± 20 Diopters. Card is 7.5 inches (19 cm) square. Paediatric Thorington also includes a matching card so that the child does not have to name the figures. Again, there are two types of Near Cards: One for use with a Transilluminator or most penlights. The second uses our push-button central fixation LED light that turns on with a simple touch.

5390R Paediatric Thorington for transilluminator and matching card

5559R Paediatric Near Thorington with push-button LED light



Paediatric Thorington Card measures Phoria by naming the object or by matching



Push-button LED light for centre fixation

Paediatric Card includes a matching card

Phoria Measuring Devices

Maddox Wing

Quick and efficient test for Near Heterophoria horizontal and vertical deviations plus Cycdophoria.

Special Order.

4859 Maddox Wing



Optokinetic Products



OKN Optokinetic Flag Red and White

Used to produce involuntary Optokinetic Nystagmus (OKN) physiologic jerk in a patient's eyes. Elicited when the patient attempts to fixate on moving stripes in the field of vision. The slow phase of nystagmus is in the direction of the movement of the flag while the fast phase is in the opposite direction. Can also be used vertically. Weighted ends. Size: 9.5 cm x 71.12 cm.

5474R OKN Flag Red and White 28 inch



OKN Optokinetic Flag Black and White

This optokinetic flag is used to produce optokinetic nystagmus (OKN) physiologic jerk in a patient's eyes. This is elicited when the patient attempts to fixate on moving, alternative, contrasting squares that are moved in the field of vision.

Comes with instructions and OKN Flag is 28" (71.12 cm) long.

6077 OKN Flag Black and White 28 inch

Retina, Cataract and Cornea Surgery Clear Pupilometre



This Clear Pupilometre came as a suggestion from a Neuro-Ophthalmologist and it works great! Pupil sizes from 1.5 to 10 mm in 0.5 mm increments are easily measured. Can be used vertically or horizontally. The reverse side has a mm scale for measurement of PD. Ruler is printed on clear semi-rigid plastic.

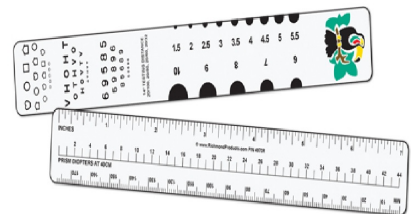
5660R Pupilometre with Transparent Ruler



Toucan Fixation PD Rule

Toucan fixation and PD rule with near optotypes, including LEA SYMBOLS®, LEA NUMBERS®, and HOTV optotypes for 20/32, 20/60, 20/80 and 20/100. Includes inch/mm rules and diopter scale plus pupilometer in half mm increments. 6" long.

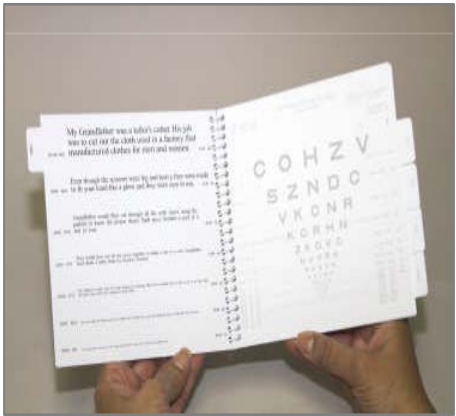
4970 Toucan Fixation PD Rule



Adult Near Contrast Test Booklet

Key Features:

- Contrast Levels 100%, 25%, 10%, 5%, 2.5%.
- Both ETDRS Letters and Continuous Reading Examples.
- 20/400 to 20/10 in 17 increments.
- Shows Snellen in Feet/ Metres, LogMAR, Decimal and Letter Size.
- Pages tabbed at each contrast level.
- Instructions, Score Card and Recording Form.



Adult Near Contrast Letter Test Recording Form
Use this sheet to interpret the raw scores from the Letter Charts on the score sheet.
Make copies as needed

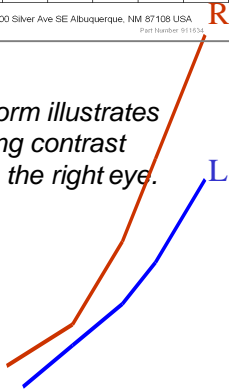
Patient Name: _____ Date: _____

Note: Use separate symbols for each eye:
Mark OD point total with 'R' in the appropriate scale for each contrast level
Mark OS point total with 'L' in the appropriate scale for each contrast level

Snellen Acuity	LogMAR	Total Points	Contrast Level				
			100%	25%	10%	5%	2.5%
20/400	1.3	5					
20/320	1.2	10					
20/250	1.1	15					
20/200	1.0	20					
20/160	0.9	25					
20/125	0.8	30					
20/100	0.7	35					
20/80	0.6	40					
20/63	0.5	45					
20/50	0.4	50					
20/40	0.3	55					
20/32	0.2	60					
20/25	0.1	65					
20/20	0.0	70					
20/16	-0.1	75					
20/12.5	-0.2	80					
20/10	-0.3	85					

Richmond Products 4400 Silver Ave SE Albuquerque, NM 87108 USA
Part Number 911034

Recording form illustrates decreasing contrast sensitivity in the right eye.



Near Contrast testing can provide an efficient means to detect or track ocular pathologies, including glaucoma, ARMD, diabetic retinopathy, cataract, and keratoconus. Low contrast acuity loss measurement can also be helpful in demonstrating to patients and their families the need for intervention such as cataract surgery or occupational and lifestyle changes. The new Adult Near-Contrast Test Booklet provides contrast sensitivity levels of 100, 25, 10, 5 and 2.5 percent using Michelson measures. These are printed on high-quality styrene plastic for durability. Each contrast level has ETDRS style letters and Continuous Reading Examples. This new test provides additional capabilities compared to the Holladay Functional Acuity Contrast Test (F.A.C.T.™), which has been unavailable for some time.

The ETDRS style lettering employed in the test provides excellent repeatability and is an objective measure useful for medical insurance submission. The continuous text at each contrast level provides a 'real world' example to help patients' recognize any decline in low contrast acuity. Use of the test booklet at near (16 inches or 40 cm) is much quicker than repositioning a patient to use a distance contrast test such as the Pelli-Robson. Since both full contrast and other contrast levels are presented under the same conditions, the illumination is identical. This permits accurate comparison of the results at the various contrast levels.

Features include ETDRS and text shown at 17 levels from 20/400 to 20/10. Acuity measure equivalents are shown in Snellen feet and metres, LogMAR, decimal and letter size. Pages are tabbed at each contrast level. A score card, recording form and comprehensive instructions are also provided to support plotting of a graph of the patient's results indicating the relationship of visual acuity and contrast sensitivity. Normal ratios are also indicated to permit comparison.



Low Vision Distance Chart Competitive Comparison

Product	Type	Range	Construction	Near Point
Lea Numbers Low Vision Set	Lea Numbers	20/800 to 20/16	Styrene	Included
Lea Symbols Low Vision Set	Lea Symbols	20/800 to 20/16	Styrene	Included
Feinbloom Distance Chart Set	non-standard#s	10/700 to 10/10	Styrene	Extra cost
SOSH Low Vision Set	non-standard#s	10/700 to 10/10	Lam'ted paper	Included

Low Vision Chart Sets - Lea Numbers™ and Lea Symbols™

Lea Low Vision Chart Set uses the Lea Symbols™ and Numbers™ which have been clinically tested for efficacy. The main advantages are:

- Uses Clinically tested Optotypes which provide a narrow acuity threshold Distance and Near vision cards included in one binding.
- Testing distance and Snellen measurement shown on each page.
- Use at 3 or 1.5 M (10 or 5 ft) and near at 16 inches (40 cm).
- Shows both metric and English measures.
- Choice of top for hanging or left side binding for book like presentation.

Provides 14 Low Vision charts: 20/800 - 2 Optotypes, 20/630 - 2 Optotypes, 20/500 - 4 Optotypes, 20/400 - 4 Optotypes, 20/320 - 4 Optotypes, 20/250 - 6 Optotypes 20/200 - 9 Optotypes, 20/160 - 9 Optotypes, 20/125 - 12 Optotypes 5 each for 20/100, 20/80, 20/63, 20/50, 20/40 and 20/32, 2 lines of 5 each for 20/25, 20/20, 20/16. Plus one chart with 5 symbols or numbers each for near point at 20/800, 20/630, 20/500, 20/400, 20/320, 20/350, 20/200, 20/160, 20/125 and 2 lines of 5 each for 20/100, 20/80, 20/63, 20/50, 20/40, 20/32, 20/25, 20/20, 20/16.

Each Set is 10 x12 inch, two sided, printed on styrene, with covers front and back and coil binding. Each set also includes Metal Frame Adult Occluding Glasses and Fun Frame Paediatric Occluding Glasses.

5131R Lea Numbers, Left side binding Chart Set

5273R Lea Numbers, Top binding Chart Set

5274R Lea Symbols, Left side binding Chart Set

5275R Lea Symbols, Top binding Chart Set



Low Vision Lea Symbols™ Folding Chart

Low Vision Chart uses large Lea Symbols 50M in sizes corresponding to 1/50 (20/1000, 6/300, 0.02), 1/40, 1/30, 1/25, 1/20, 1/16, 1/12, 1/10, 1/8, 1/6, 1/5, 1/4, 1/3, 1/2.5, 1/2, 1/1.6, 1/1.25, to the smallest Symbols at 1M in size corresponding 1/1 (20/20, 6/6, 1.0) all at a distance of one metre. Includes attached cord to maintain the proper testing distance, Lorgnette Occluder and instructions, response key and flash cards. Chart measures 16" x 21.5" (40.7 cm x 54.6 cm). Folds to 16" x 10.75" (40.7 cm x 27.3 cm).

258000 Low Vision Lea Symbol Folding Chart

Low Vision Lea™ Folding Numbers Chart

This Lea Numbers™ Low Vision Chart is designed for examining children 5 years and up and adults with severe visual impairments. The largest numbers are 50M in sizes corresponding to 1/50 (20/1000, 6/300, 0.02), 1/40, 1/30, 1/25, 1/20, 1/16, 1/12, 1/10, 1/8, 1/6, 1/5, 1/4, 1/3, 1/2.5, 1/2, 1/1.6, 1/1.25, to the smallest Symbols at 1M in size corresponding 1/1 (20/20, 6/6, 1.0) at a distance of one metre. Includes measuring cord, occluder and instructions. Designed with August Colenbrander, MD.

Chart is 16" x 21.5" (40.7 cm x 54.6 cm). Folds to 16" x 10.75" (40.7 cm x 27.3 cm).

272100 Lea/Colenbrander Numbers Low Vision Folding Chart





All Cardiff cards are now mounted on 1mm plastic board.

Cardiff Acuity Test For Low Vision

The Cardiff Acuity Test for Low Vision is aimed specifically at young children (aged 1-3 years) and at older children and adults with intellectual impairment. It therefore allows evaluation of visual impairment at an early age when diagnosis and management are crucial, and in otherwise hard-to-test patients. Cardiff Acuity Test for Low Vision Set supports testing at 15 levels (45 cards) from 20/320 to 20/25 (6/96 to 6/7.5). Intended for test distances of 1 metre or 50 cm. Cards measure 7 3/4 x 10 1/2 in (20 x 27 cm) and are labeled by acuity level equivalents in decimal, metres, feet, Snellen and LogMAR for both test distances. (See pages 27-29 for complete description of the Cardiff Test Strategy.) If you already own a Standard Cardiff Acuity Set, P/N 4754R is a set of nine cards to supplement the Standard set to the Low Vision Cardiff Set. Set includes 3 cards each of level A (Fish), LVB (Sock), LVA (Apple) plus two dividers).

4741 Low Vision Cardiff (36 cards) £846.00

4754 Low Vision Upgrade (9 cards) £171.00



All Cardiff cards are now mounted on 1mm plastic board.

Cardiff Contrast Sensitivity Adult Intellectual Disabilities

Contrast sensitivity is the ability of the visual system to detect large but faint targets. There are some pathological conditions that reduce contrast sensitivity without impairing visual acuity, and the test will help in the identification of these conditions. However, reduced contrast sensitivity and reduced visual acuity often occur together, so that some patients with visual impairment also have reduced contrast sensitivity. Tests for the two functions are therefore complementary and obtaining a measure of both will give a more complete description of visual deficits than one alone.

The test covers 12 Contrast levels using three Cards at each level (36 cards total).

Contrast levels start at 46% and decrease to 1% (Sensitivity levels from 2.17 to 100.)

Scoring is aligned with the Pelli-Robson test, and study suggests comparable results. Recently been adapted slightly to make the subject pictured in the drawings appropriate for use with both children and adults with intellectual impairment.

5667 Cardiff Contrast Sensitivity Test for Children or Adults with Intellectual Impairment £846.00

Developed by:





Trial Lens Set in Traditional Chrome Rims - Full Aperture

This trial lens set provides the full complement of 252 lenses packaged in an attractive lockable briefcase. Space is provided for your choice of trial frame (sold separately). Standard 38mm lens size.

Full Set includes:

Sphere lenses in Pairs (+/-) (152 count) dioptors as follows: 0.12, 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 3.75, 4.00, 4.25, 4.50, 4.75, 5.00, 5.25, 5.50, 5.75, 6.00, 6.50, 7.00, 7.50, 8.00, 9.00, 10.00, 11.00, 12.00, 13.00, 14.00, 16.00, 18.00 and 20.00.

Cylinder lenses in Pairs (+/-) (76 count) dioptors as follows: 0.12, 0.25, 0.50, 0.75, 1.00, 1.25, 1.50, 1.75, 2.00, 2.25, 2.50, 2.75, 3.00, 3.25, 3.50, 4.00, 4.50, 5.00 and 6.00.

Prism lenses in Pairs (14 count): 0.50, 1.00, 2.00, 3.00 and 4.00, Singles: 5.00, 6.00, 8.00 and 10.00.

Auxiliary lenses (10 count): 0.50 (+/-) Jackson Cross Cylinder, Red Lens, Green Lens, Plano Lens, Clear Lens, 1.00 mm Pinhole, 1.50 mm Pinhole, 1.00 mm Slit, Maddox Lens and Occluder.

4493 Full Trial Lens Set Full Aperture with Case



Trial Lens Set with Red and Black Rims - Ophthalmology

This full aperture trial lens set provides the same full complement of 252 lenses and case shown above, however the rims are plated for quick identification; The Red = minus, Black = plus.

5920 Full Trial Lens Set with Red(-) and Black(+) Rims, Full Aperture

Trial Lens Set with Reversed Red/Black Rims - Optometry

This Special Order set provides the same full aperture complement of 252 lenses and case shown above however the colours are reversed such that Red = plus and Black = minus.

5921 Full Trial Lens Set Reversed Red(+) and Black(-), Full Aperture

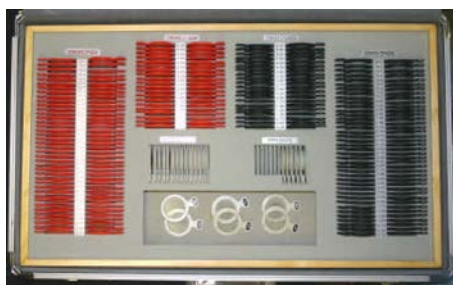


Missing Some Trial Lenses? We can help!

We offer individual Trial Lenses with Chrome Rims also Plastic Rims in Red / Black.

We can help you fill in any missing lenses in your set. Call or e-mail a list of the powers you need and we'll send a quote.

Tell us what type of mounting you need and we'll see if we can provide lenses in the rims to your specification.



MRI Compatible Trial Lens Full Set

This trial lens set provides the full complement of lenses in plastic rims (no metal). Comes with durable fitted case. Space is provided for your choice of trial frame. Standard 38 mm (nominal) OD. Lens size is 24 mm. The Red = minus, Black = plus.

5222 MRI Compatible Reduced Aperture Trial Lens Set

5205 MRI Compatible Adult Trial Frames (see page 124)

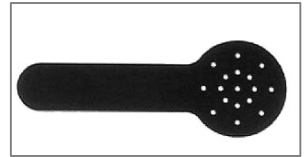
5221 MRI Compatible Children's Trial Frames (page 125)



Pinhole Occluder for Trial Frames

4817B Pinhole for Trial Frame (17 pinholes)

601R Pinhole for Trial Frame (5 pinholes)



Occluders, Pinholes and Prisms in Trial Rings

5324R Black Occluder

5325R Black with 1 mm Single Pinhole

5326R Black with 1.5 mm Single Pinhole

5327R Black with 1 mm x 23 mm Slit

5328R Black with 1 mm x 5 mm Cross Pattern

5329R Black with 1.5mm 13 Pinholes

5330R Clear lens with Cross Pattern etched edge to edge

5331R Frosted Occluder

5332R Polarized Lenses (pair)

34670x Bagolini Lenses in Trial Rings (pair)



Maddox and Filters for Trial Frames

Maddox lenses mounted in trial rings. Available as a set with White, Red or Green or individually. Note choices of orientation below.

4848R Maddox Set oriented to handle

4730R Maddox Red oriented to handle

4731R Maddox Green oriented to handle

4732R Maddox White oriented to handle

5012R Maddox Red 45° to handle

5013R Maddox Green 45° to handle

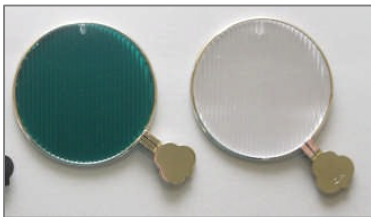
5014R Maddox White 45° to handle



Filter only:

5260R Red Filter in trial ring

5261R Green Filter in trial ring



Maddox in Trial Rings with saw kerf index mark at top of Maddox lines and Maddox lines oriented 45 degrees from centre of handle.

5561R Maddox Red with saw kerf at top - 45° to handle

5562R Maddox Green with saw kerf at top - 45° to handle

5563R Maddox White with saw kerf at top - 45° to handle



Set of Prisms in Trial Rings

Set of Prisms in trial rings (pair each of .5, 1, 2, 3, 4 and 5) with Adult Adjustable trial frame. Can be used for stroke therapy.

5472 Prism Set in Trial Rings

Adult Trial Frames

Oculus UB4 Trial Frame



This ultimate Trial Frame is fully adjustable including nose piece height, temple length, and PD adjustable (50 to 80mm). Holds 5 lenses on each side. Includes vertex distance scale. Adjustable for:

- Temple angle (panoscopic and retroscopic)
- Temple length 4 1/3" to 5 1/3" (110 to 135mm)
- Nose bridge height 0-20 mm and nose angle 0-360°
- PD adjustable 23 to 41mm on each side, separately (46mm to 82mm total both eyes)
- Lens rotation is full 360 °
- Non allergic materials
- Nose piece height and angle for patient comfort

6213 Oculus UB4 Trial Frame

Universal Trial Frame



This quality frame accommodates three 38mm lenses in front and one behind the frame per side. Clear, precisely printed scales. Nose bridge is foam covered. Weight is 2.8 oz (80 grams).

Adjustable for:

- Temple angle
- Temple length 4 1/8" to 5 1/2" (98 to 135mm)
- Nose bridge height 0-14mm and nose angle 0 ° to 30 °
- PD adjustable 24 to 40mm on each side (48mm to 80mm total both eyes)
- Axial calibration on each lens:
- Left - 120° to 0 ° to 135 °,
- Right - 45 ° to 180 ° to 60 °
- Lens rotation is full 360 °

7117R Trial Frame

Spring Cell Trial Frame



Fully adjustable Trial frame

SGR256S Spring Cell Trial Frame

Refraction Trial Frame Set for Adolescents and Adults

6 trial frames (Ø 38 mm) with fixed PD, in the following sizes:

58, 60, 62, 63, 66, 68 mm. Improved quality, good fitting.

57015-B Refraction Set for Adolescents and Adults





Drop Cell Half Eye Trial Frames

Holds three pairs of trial lenses. Adjustable PD from 59 to 67mm, adjustable temples with fixed bridge. Drop Cell style does not hold the trial lenses tightly. Also available with an Adjustable nose rest as listed. Weight: 1.0 oz (29 grams).

42580 Adult Drop Cell with Fixed nose rest

42588 Adult Drop Cell w/ Adjustable nose rest



Adjustable nose rest



Oculus Precision Adjustable Frame

Fully Adjustable including nose piece height, temple length, and PD (50 to 80mm).

Axis and inclination also adjustable. Holds 5 lenses on each side. Includes vertex distance scale. *Warning: Do not clean with alcohol.* Weight 2.2 oz (58 grams)

Adjustable for:

- temple angle
- temple length 4" to 5 1/4" (100 to 130 mm)
- nose bridge height 0-20mm and nose angle: 0 to 360°
- PD adjustable 25 to 40mm on each side, separately (50mm to 80mm total both eyes)
- Axial calibration on each lens:
 - left 140° to 0° to 130°
 - right 40° to 180° to 55°
- Lens rotation is full 360°

42180 Oculus Precision Adjustable Adult Trial Frame

Paediatric Trial Frames

Lightweight Paediatric Frame



This lightweight frame supports PD adjustable 54 to 70mm. The nose pad adjusts with a slide bar. Temple length adjusts and temples are slightly sprung to help keep them on the patient. Lenses can be rotated for Astigmatism. Accommodates up to four standard trial lenses on each side. Lightweight
1.8 oz (50 grams)

57046-A Lightweight Pediatric Frame

Refraction Trial Frame Set



4 Trial Frames with fixed PD in the following sizes; PD50, 52, 54, 56 mm.

57015-A Refraction set for Children

Flexible Paediatric Frames



These simple trial frames are made of flexible plastic and hold two 38mm trial lenses on each side. Holds lenses reasonably well when tipped to the side. Employs a soft elastic strap to provide comfortable snug fit. The baby size supports 51 mm PD. The Toddler size is 56 mm PD. Weight: 0.8 oz (21 grams).

4723R Baby Size Frame

4724R Toddler Size Frame

MRI Compatible Trial Frames - Paediatric

Soft plastic frames with trial lens holders. Accommodates one or two lenses on each side. Soft plastic temples can easily be formed to the patient's needs with warm water or hair dryer. Non-metallic strap holds frames securely. Frames are very comfortable. Available in adult or children's size.

5221 MRI Compatible Children's Trial Frames

Children's Drop Cell Half Eye Trial Frames



Holds three pairs of trial lenses. Adjustable PD from 59 to 67mm fixed bridge. Temples adjust. Drop Cell style does not hold the trial lenses tightly. Also available with an adjustable nose rest as listed. Child versions have adjustable PD from 54 to 58mm. Weight: 1.0 oz (29 grams).

42480 Child Drop Cell with Fixed nose rest

42488 Child Drop Cell with Adjustable nose rest

Jackson Cross Cylinders

Used to determine orientation of Astigmatism correction, the power of the Astigmatism correction and the axis. Lenses are 35mm with axis markings. Handles are 70mm long.

4844R Cylinder 0.25 only

4845R Cylinder 0.50 only

4975R Cylinder 0.75 only

4846R Cylinder 1.00 only





Two Paddle Retinoscopy Rack

This two paddle version has one paddle with plus lenses and a second paddle for the minus lenses. Optics on both are 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 12.0, and 15.0. Lenses are 16mm (1/2 inch nominal) diameter and are recessed to help prevent scratching. Lenses are glass for greater accuracy and durability. Comes with nylon sheath. Each stick is approximately 11 in (28 cm) long and 1 3/4 inch (5 cm) wide.

5065R Two Paddle Rack



Large Aperture Retinoscopy Rack

Larger Aperture Retinoscopy Rack Set lenses are 25mm in diameter, almost 50% larger than the two paddle (Part Number 5065R) version Ret Rack. There are 6 plastic paddles, 3 plus and 3 minus. Increments are 0.25, 0.5, 0.75, 1.0, 1.25, 1.5, 1.75, 2.0, 2.25, 2.5, 2.75, 3.0, 3.5, 4.0, 5.0.

All lenses are glass and recessed in rack to help prevent scratching. The storage case is made of wood with a felt interior. Each stick is approximately 11 in (28 cm) long and 1 5/16 inch (34 mm) wide.

5299R Large Aperture Retinoscopy Rack Set



Flipper Rack Sets - Coloured sets of 6 Flippers

The set use the same colours for the same power flippers. That way you can immediately identify the flipper you need, regardless of which set you have at each station. Flippers are marked with diopter power and have a durable handle. Plus lenses on the top and the minus lenses on the bottom. Includes an acrylic holder.

Six Flipper Set has +/- 0.25, 0.50, 0.75, 1.00, 1.50 and 2.00.

7121R Set of 6 Flippers

Individual Flippers



7077.025R	Flipper with Glass Lenses with + and - 0.25 lenses
7077.050R	Flipper with Glass Lenses with + and - 0.50 lenses
7077.075R	Flipper with Glass Lenses with + and - 0.75 lenses
7077.100R	Flipper with Glass Lenses with + and - 1.00 lenses
7077.125R	Flipper with Glass Lenses with + and - 1.25 lenses
7077.150R	Flipper with Glass Lenses with + and - 1.50 lenses
7077.175R	Flipper with Glass Lenses with + and - 1.75 lenses
7077.200R	Flipper with Glass Lenses with + and - 2.00 lenses
7077.225R	Flipper with Glass Lenses with + and - 2.25 lenses
7077.250R	Flipper with Glass Lenses with + and - 2.50 lenses
7077.275R	Flipper with Glass Lenses with + and - 2.75 lenses
7077.300R	Flipper with Glass Lenses with + and - 3.00 lenses
7077.400R	Flipper with Glass Lenses with + and - 4.00 lenses

Other powers and combinations by special order. Please call or e-mail us your specifications.



Prism Flippers - Sets and Seperates

6 Prism Flippers in 1, 2, 3, 4, 6 and 8 diopters with base in and base out.

6927R Prism Flipper Set

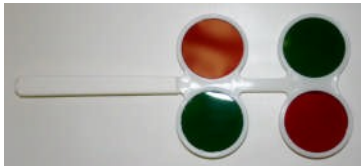
5016R 6 Slot Prism Stand

Other powers, combinations and orientations by special order. Please call or e-mail us your specifications.



Part Number	Description	Lens Power	Total Vergence Facility	Orientation
6928-1.0R	Prism Flipper	1 diopter	2 diopters	Base in and Base out
6825-2.0R	Prism Flipper	2 diopter	4 diopters	Base in and Base out
6825-3.0R	Prism Flipper	3 diopter	6 diopter	Base in and Base out
6825-4.0R	Prism Flipper	4 diopter	8 diopter	Base in and Base out
6825-6.0R	Prism Flipper	6 diopter	12 diopters	Base in and Base out
6825-8.0R	Prism Flipper	8 diopter	8 diopters	Base in and Base out

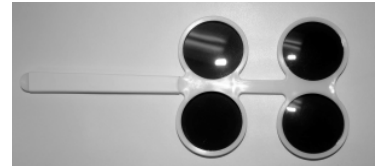
Reversing Red/Green or Polarized



Red/Green on top and Green/Red on the bottom. Or, Alternating Polarized lenses. Use for Vectograms and Tranaglyphs to reverse BI/BO demands.

4943 Reversing R/G Flippers

4944R Reversing Polarized Flippers



Stereo Flippers both Polarized and Red/Green

Combined polarized and red/green stereo lenses in one flipper. Use the Red/Green for anaglyph tests then flip to Polarized lenses for Stereo Fly.

4884R Stereo Flippers

Screening and Occluding Flippers

Screening flipper with Top: +2.00 diopter on right and occluder on the left, Bottom: occluder on the right and +2.00 on the left. Very useful for quick screening assignments. Occluding flipper has only the occluding lens top right and bottom left.

5889R +2.00 Screening Flipper

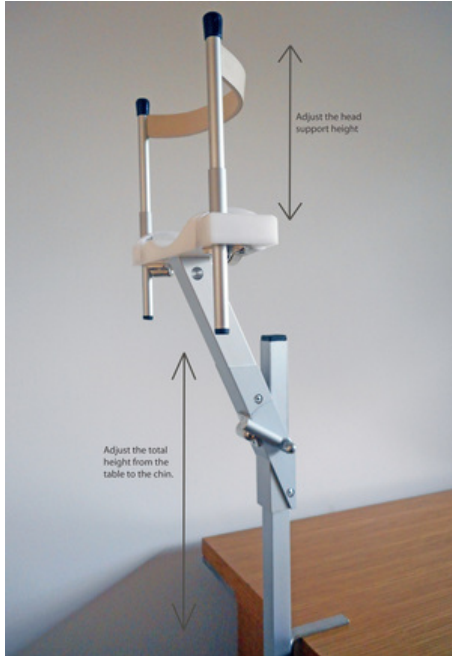
5157R Occluding Flipper



Custom Flippers

Any combination Confirmation Flippers using available optics

Any combination using Prism optics **Call or e-mail sales@pavisionuk.com**



Head and Chin Rest

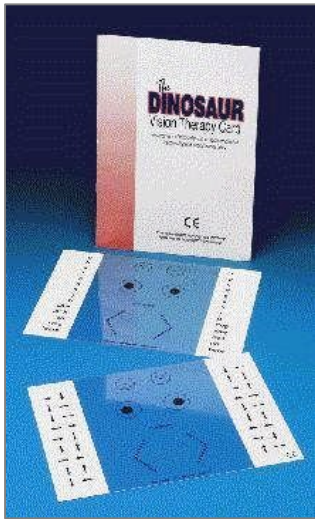
The chin rest is adjustable in height and can be adapted individually. It is made of a light and stable aluminium/plastic construction and can be fixed to a table with a screw clamp. The aluminium/plastic design makes it very easy to clean.

HCR Head and Chin Rest with Screw Clamps



Stick Prisms Stay Clean Of Fingerprints

Mounted on a sticks for easy presentation. Stick Prisms are more sanitary.



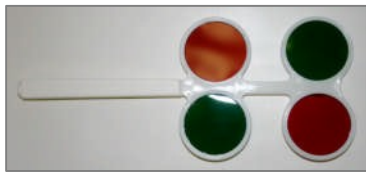
Dinosaur Stereogram Cards

These transparent plastic cards have been designed to help with home training of monocular and binocular vision skills.

The multi-purpose card has three grades of stereogram and exercises for convergence, jump versions, focusing, fixation, saccades and directionality. The cards come with comprehensive instructions and are available in packs of three or ten. The cards are 18 x 13 cm (7 x 5 inch) semi- rigid plastic.

5984 Dinosaur Stereogram Cards Pack of 3

5985 Dinosaur Stereogram Cards Pack of 10

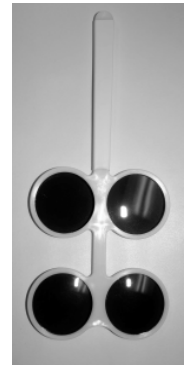


Reversing Red/Green or Polarized

Red/Green on top and Green/Red on the bottom. Or, Alternating Polarized lenses. Use for Vectograms and Tranaglyphs to reverse the image to convex and concave

4943R Reversing R/G Flippers

4944R Reversing Polarized Flippers



Brock Strings

Consists of a white string 10 or 12 feet in length with three (3) small wooden beads of different colours. Alternate models are 6 or 12 ft with 5 beads. These are used for treatment of convergence insufficiency and other anomalies of binocular vision as well as to disrupt suppression of one of the eyes. During therapy, the end with the stick is held near the tip of the nose while the other end with the loop is hung to a fixed point like a door knob. Pack sizes are 3 and 12 sets with instructions.



Length	Number of Beads	3 Pack Brock String	12 Pack Brock String	3 Pack Brock String	12 Pack Brock String
	Per Unit	Part Number	Part Number	Price	Price
10 Ft	3	PAV103-3	PAV103-12	£11.00	£37.00
12 Ft	3	PAV123-3	PAV123-12	£12.00	£42.00
12 Ft	5	PAV125-3	PAV65-12	£14.00	£50.00
6 Ft	5	PAV65-3	PAV65-12	£9.00	£35.00



Near Point Dot: Accommodation Cards

These double sided dot and letter cards are used to measure the near point of convergence and accommodation. They can also be used for home exercises. The range is 6 cm to 24 cm. Full, clear instructions for the practitioner to teach the patient are included.

Comes as a - Pack of 50

5524 Near Point Dot: Accommodation Cards

