

## OPTO SMARTCHART™ DIGITAL ACUITY TESTING SYSTEMS TECHNICAL SPECIFICATIONS

	SmartChart™	SmartChart™ Pro	SmartChart™ Elite
<b>DISPLAY TYPE</b>	15' LCD TFT display 18-bit	19" LCD TFT display 24-bit	22' LCD TFT display 32-bit
<b>BACKGROUND ILLUMINATION</b>	200cd/m2 – na 200cd/m2	200cd/m2 na 200cd/m2	200cd/m2 na 200cd/m2
<b>REFRACTION TEST RANGE</b>	Adjustable 2.0 -7m	Adjustable 2.0 -7m For standard tests, 0.6m for AMD tests with auto shift message	Adjustable 2.0 -7m for standard tests, 0.6m for AMD tests with auto shift message
<b>STANDARD CHART TYPES</b>	Letters Snellen Letters Sloan Snellen E Landolt C Numbers Snellen Numbers Sloan Universal Digital	Letters Snellen Letters Sloan Snellen E Landolt C Numbers Snellen Numbers Sloan Universal Digital HOVT HYVA Crowding Bars	Letters Snellen Letters Sloan Snellen E Landolt C Numbers Snellen Numbers Sloan Universal Digital HOVT HYVA Crowding Bars
<b>OPTOTYPE TYPES</b>	Snellen Snellen Contrast Snellen Modified	Snellen Snellen Contrast Snellen Modified	Snellen Snellen Contrast Snellen Modified

	<p>LogMar</p> <p>ETDRS</p> <p>Red-Green</p> <p>Speech / Hearing Impaired</p>	<p>LogMar</p> <p>ETDRS</p> <p>Bailey-Lovie</p> <p>Red-Green</p> <p>Low Vision Mode (AMD Mode)</p> <p>Speech / Hearing Impaired</p>	<p>LogMar</p> <p>ETDRS</p> <p>Bailey-Lovie</p> <p>Red-Green</p> <p>Low Vision Mode (AMD Mode)</p> <p>Speech / Hearing Impaired</p> <p>Polarized (only in Elite P Version)</p>
<p><b>CHILDREN</b></p> <p><b>OPTOTYPES / TESTS</b></p>	<p>Children Standard</p> <p>Children Sloan</p> <p>Children Pre-School (Hands)</p> <p>Children Lea Symbols</p> <p>Children Cards</p> <p>Pictures</p> <p>Animations</p>	<p>Children Standard</p> <p>Children Sloan</p> <p>Children Pre-School (Hands)</p> <p>Children Lea Symbols</p> <p>Children Cards</p> <p>HOVT</p> <p>Pictures</p> <p>Animations</p> <p>Videos</p> <p>Custom</p>	<p>Children Standard</p> <p>Children Sloan</p> <p>Children Pre-School (Hands)</p> <p>Children Lea Symbols</p> <p>Children Cards</p> <p>HOVT</p> <p>Pictures</p> <p>Animations</p> <p>Videos</p> <p>Custom</p>
<p><b>OPTOTYPE DISPLAY</b></p> <p><b>UNITS</b></p> <p><b>(Metric and Imperial)</b></p>	<p>Snellen Decimal, /6m, /5m, /4m, /3m, /2m</p> <p>Snellen Modified, Snellen /20ft, /10ft, /6ft</p> <p>Variable (VAR)</p> <p>None (absolute)</p>	<p>Snellen Decimal, /6m, /5m, /4m, /3m, /2m</p> <p>Snellen Modified, Snellen /20ft, /10ft, /6ft</p> <p>Variable (VAR)</p> <p>AMD (up to 20/1600)</p> <p>None (absolute)</p>	<p>Snellen Decimal, /6m, /5m, /4m, /3m, /2m</p> <p>Snellen Modified, Snellen /20ft, /10ft, /6ft</p> <p>Variable (VAR)</p> <p>AMD (up to 20/1600)</p> <p>None (absolute)</p> <p>Polarized (only in Elite P Version)</p>

<p><b>LOW VISION TESTS</b></p>	<p>ETDRS Tests Amsler Tests AMD-Optotypes</p>	<p>ETDRS Tests Amsler Tests AMD-Optotypes Crowding bars Custom</p>	<p>ETDRS Tests Amsler Tests AMD-Optotypes Crowding bars Custom</p>
<p><b>POLARIZING TESTS</b></p>	<p>Not Available</p>	<p>Not Available</p>	<p>ETDRS Polarized Balance Duochrome Balance Horizontal/Vertical Coincidence Polarized Double Panel Masking Phoria Minute Stereo TNO 3-D</p>
<p><b>STEREO TESTS</b></p>	<p>Minute Stereo Stereo 3-D (through Red-Green Glasses)</p>	<p>Minute Stereo Stereo 3-D (through Red-Green Glasses) SIRDS (Single Random Image Dot Stereogram)</p>	<p>Minute Stereo Stereo 3-D (through Red-Green Glasses) SIRDS (Single Random Image Dot Stereogram)</p>
<p><b>CONTRAST SENSITIVITY TEST</b></p>	<p>Threshold Optotype Testing Red-Green Optotype Contrast</p>	<p>Threshold Optotype Testing Red-Green Optotype Contrast Spatial Frequency Testing (SCF)</p>	<p>Threshold Optotype Testing Red-Green Optotype Contrast Spatial Frequency Testing (SCF) Threshold Polarized</p>

<b>COLOUR TEST</b>	Ishihara Test	Ishihara Test Farnsworth Munsell Hue-100	Ishihara Test Farnsworth Munsell Hue-100
<b>RED-GREEN TEST</b>	Worth Schober Duochrome Balance Vertical/Horizontal Coincidence	Phoria Worth Schober Fixation Disparity Duochrome Balance Vertical/Horizontal Coincidence	Phoria Worth Schober Fixation Disparity Duochrome Balance Vertical/Horizontal Coincidence
<b>OTHER STANDARD TESTS</b>	Astigmatism tests Cross Cylinder tests Fixation point tests Street Lamp (driving) tests	Astigmatism tests Cross Cylinder tests Fixation point tests Street Lamp (driving) tests	Astigmatism tests Cross Cylinder tests Fixation point tests Street Lamp (driving) tests
<b>MASKING</b>	Single optotype Line (horizontal) Column (vertical)	Single optotype Line (horizontal) Column (vertical)	Single optotype Line (horizontal) Column (vertical)
<b>RED GREEN MASKS</b>	Available for all standard optotypes and colour adjustable for phoropter filter matching	Available for all standard optotypes and colour adjustable for phoropter filter matching	Available for all standard optotypes and colour adjustable for phoropter filter matching
<b>TEST REPORTING</b>	Not available	Available for all tests	Available for all tests
<b>SAVING PATIENT &amp; TEST DATA</b>	Not available	As .pdf to usb pen drive, and through network	As .pdf to internal hdd, to usb pen drive, and through network

<b>FILE MANAGER</b>	Not available	Copy, Edit, Delete & import files (patient data, video, animations, pictures) from usb pen drive or network	Copy, edit, delete & import files (patient data, video, animations, pictures) through network and usb pen drive
<b>PATIENT EDUCATION</b>	Eye Anatomy Figures	Eye Anatomy Figures Custom Videos Presentations	Eye Anatomy Figures Custom Videos Presentations
<b>MIRROR FUNCTION</b>	Available for all tests	Available for all tests	Available for all tests
<b>SEQUENCE PROGRAMMING</b>	3 user defined programs with up to 30 steps each	3 user defined programs with up to 60 steps each	3 user defined programs with up to 90 steps each
<b>RANDOM SEQUENCING</b>	Available for all optotype tests	Available for all optotype tests	Available for all optotype tests
<b>AUTOMATIC POWER OFF FUNCTION</b>	Adjustable 0.5 – 4hr Adjustable 4 -10min auto suspend off	Adjustable 0.5 – 4hr Adjustable 4 -10min auto suspend off	Adjustable 0.5 – 4hr Adjustable 4 -10min auto suspend off
<b>REMOTE CONTROL</b>	IR	IR	IR with 3 frequency selections
<b>DIMENSIONS</b>	366W x 291H x 50D mm	443W x 368H x 122D mm	520W x 360H x 120D mm
<b>WEIGHT</b>	3.5kg	6kg	7.5kg
<b>POWER REQUIREMENTS</b>	90-240 vac 50/60hz	90-240 vac 50/60hz	90-240 vac 50/60hz
<b>POWER CONSUMPTION</b>	19W (max)	60W (max)	70W (max)