

SPECIFICATIONS

MiniScan® EZ

MEASUREMENT

Measurement Principle:	Dual-beam spectrophotometer
Geometries:	<ul style="list-style-type: none">• Diffuse/8° (specular component included) OR <ul style="list-style-type: none">• Directional annular 45° illumination / 0° viewing (specular component excluded)
Spectrophotometer:	256 element diode array and high resolution, concave holographic grating
Sphere Diameter:	63.5 mm (2.5 in.) (diffuse/8° models)
Port Diameters/View Diameters	
45°/0° models:	LAV 31.8 mm (1.25 in) illuminated/25.4 mm (1 in) measured
Diffuse/8° models:	LAV 25.4 mm (1 in) illuminated/20.0 mm (0.8 in) measured
Specular Component:	Excluded on 45°/0° models, Included on Diffuse/8° models
Spectral Range:	400 nm - 700 nm
Spectral Resolution:	< 3 nm
Effective Bandwidth:	10 nm equivalent triangular
Reporting Interval:	10 nm
Photometric Range:	0 to 150 %
Light Source:	Pulsed Xenon Lamp
Flashes per Measurement:	1 flash
Lamp Life:	> 1 million flashes
Measurement Time:	< 1 second from button push to measurement 2 seconds from button push to data display
Minimum Interval between Measurements:	3 seconds
Standards Conformance:	CIE 15:2004, ISO 7724/1, ASTM E1164, DIN 5033 Teil 7 and JIS Z 8722 Condition C
Standards Traceability:	Instrument standard assignment in accordance with National Institute of Standards and Technology (NIST) following practices described in CIE Publication 44 and ASTM E259

PERFORMANCE

Inter-Instrument Agreement:	$\Delta E^* \leq 0.15$ CIE L*a*b* (Avg) on BCRA II Tile Set $\Delta E^* \leq 0.25$ CIE L*a*b* (Max) on BCRA II Tile Set
Colorimetric Repeatability: (20 Readings)	$\Delta E^* \leq 0.05$ CIE L*a*b* on white tile

FIRMWARE

Data Views:	Color Data, Color Difference Data, Tristimulus Color Plot, Spectral Data, Spectral Difference Data, Spectral Plot, Spectral Difference Plot
USB Flash Drive Features:	Backup of Setups and Data, Setup Transfer to Multiple Units, Data Export to Excel
Other Features:	Pass/Fail, Average Multiple Readings, Search for Closest Standard
Illuminants:	A, C, D50, D55, D65, D75, F2, F7, F11
Observers:	2° and 10°
Color Scales:	CIE L*a*b*, Hunter Lab, CIE L*C*h, CIE Yxy, CIE XYZ
Color Difference Scales:	$\Delta L^*a^*b^*$, ΔLab , ΔL^*C^*H , ΔYxy , ΔXYZ
Color Difference Indices:	ΔE^* , ΔE , ΔC^* , ΔC and ΔE_{cmc}
Indices and Metrics:	E313 Whiteness and Tint(C/2° and D65/10°), E313 Yellowness (C/2° and D65/10°), D1925 Yellowness (C/2°), Y Brightness, Z%, 457 nm Brightness, Opacity, Color Strength Average and Single Wavelength), Gray Change, Gray Stain, Metamerism Index, Shade Number
Data Storage:	As Standard - 100 spectral or tristimulus with Pass/Fail tolerances as Working, Physical, Numeric and Hitch As Sample - 750 spectral
Languages:	Chinese, English, French, German, Italian, Japanese, Spanish

PHYSICAL / ELECTRICAL

Dimensions:	Height: 13.9 cm (5.5 in.) Width: 10.9 cm (4.3 in.) Depth: 26.7 cm (10.5 in.) Weight: 1 kg (2.2 lbs) with batteries
Display:	5.8 cm x 5.8 cm (2.3 in. x 2.3 in.) backlit LCD, blue monochrome
Interface:	USB 2.0
Power:	Six AA-size alkaline batteries or nickel-metal-hydrate rechargeable batteries
Battery Performance:	With alkaline batteries approximately 4,000 measurements With nickel-metal-hydrate batteries approximately 4,000 measurements when fully charged (varies with battery condition)
Operating Environment:	10° to 40°C (50° to 104° F), 10 % to 90 % RH, noncondensing
Storage Environment:	-20° to 65°C (-5° to 150° F), 10 % to 90 % RH, noncondensing
Standard Accessories:	<ul style="list-style-type: none">• NiMH batteries• Battery charger• Calibrated instrument white tile• Certificate of traceability• Black glass (45°/0° models) or Light trap (diffuse/8° models)• Green diagnostic tile (all instrument standards are contained in a single ergonomic holder)• Dust cover• Carrying case• USB flash drive• MiniScan EZ Users guide

For more information, please contact HunterLab at 703-471-6870, sales@hunterlab.com or visit www.hunterlab.com