SPECIFICATIONS

UltraScan® VIS

Measurement

Measurement Principle:	Dual-beam spectrophotometer
Geometry:	Diffuse d/8° reflectance, d/8° total transmission, d/0° regular transmission
Spectrophotometer:	Two 256 element diode arrays with a high resolution, concave holographic grating
Sphere Diameter:	152 mm (6 in.)
Sphere Coating:	Spectraflect™ for sphere, Duraflect™ for port plate and specular exclusion door
Port Size/Measured Area:	

Port Diameter/View Diameter in RSIN/RSEX reflectance modes

Large Area View (LAV):	25 mm (1 in) illuminated/19 mm (0.75 in) measured
Small Area View (SAV):	9.5 mm (0.375 in) illuminated/6 mm (0.25 in) measured

Port Diameter/View Diameter in TTRAN transmittance modes

Large Area View (LAV):	25 mm (1 in) illuminated/17.4 mm (0.69 in) measured
Small Area View (SAV):	25 mm (1 in) illuminated/10 mm (0.40 in) measured

Port Diameter/View Diameter in RTRAN transmittance mode where lens is field stop for all areas of view

Large Area View (LAV):	17 mm (0.67 in) illuminated/17 mm (0.67 in) measured
Small Area View (SAV):	17 mm (0.67 in) illuminated/17 mm (0.67 in) measured

Lens Switching for LAV/SAV:	Automatic
Specular Component:	Automated Included (RSIN) or Excluded (RSEX) in reflectance
Spectral Range:	360 nm - 780 nm full CIE visible range
Wavelength Resolution:	< 2 nm
Effective Bandwidth:	10 nm equivalent triangular
Reporting Interval:	10 nm
Photometric Range:	0 to 150 %
Photometric Resolution:	0.003 % (0.01 % reported)
Light Source:	Pulsed Xenon lamp, filtered to approximate D65 daylight

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Automatic UV Control:	400 nm cutoff filter for UV control and UV exclusion Optional 420 nm cutoff filter for UV exclusion
Flashes per Measurement:	1 in LAV mode (4 in. SAV mode)
Measurement Time:	< 5 seconds
Transmission Modes:	Total (TTRAN) and Regular (RTRAN)
Transmission Compartment:	Large and open on 3 sides, 10.2 cm D X 35.6 cm W x 16.5 cm H (4 in. D x 14 in. W x 6.5 in. H)
Standards Conformance	
Reflectance:	CIE 15:2004, ISO 7724/1, ASTM E1164, DIN 5033, Teil 7 and JIS Z 8722 Condition C
Transmittance:	CIE 15:2004, ASTM E1164, DIN 5033 Teil 7 and JIS Z 8722 Condition E, G Haze conformance per ASTM D1003 Section 8. Procedure B Spectrophotometer
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

Colorimetric Repeatability: (20 readings range)	< 0.03 ΔE* CIE L*a*b* on certified instrument standard (white) in LAV and SAV modes < 0.05 ΔE* CIE L*a*b* on blue denim tile in LAV and SAV modes
Spectral Repeatability:	Max 0.20 peak-to-peak between 435 nm and 695 nm
Inter-instrument Agreement:	ΔE*< 0.15 CIE L*a*b* (Avg) on BCRA II Tile Set ΔE*< 0.25 CIE L*a*b* (Max) on BCRA II Tile Set

Physical / Electrical

Dimensions:	Height: 27.9 cm (11 in.) Width: 42.0 cm (16.5 in.) Depth: 49.8 cm (19.6 in.) Weight: 20.4 kg (45 lbs)
Power:	100 to 240 VAC, 47 to 63 Hz 60 watts passive, 120 watts maximum
Interface:	RS-232C serial, 19,200 baud, DB9 (female) terminal
Operating Environment:	10° to 40°C (50° to 104° F), 10 % to 90 % RH, noncondensing
Storage Environment:	-21° to 66°C (-5° to 150° F), 10 % to 90 % RH, noncondensing
Standard Accessories:	• Certified Instrument Standard (white) • Certificate of traceability • Black calibration light trap • Transmittance zero calibration plate • Diagnostic Check Standard (green) • Wavelength diagnostic filter • Reflectance sample clamp • LAV and SAV apertures • RS-232C cable • USB-to-Serial adapter • Power cord • EasyMatch QC Software • EasyMatch QC Basic manual

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

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