## **SPECIFICATIONS**



## Measurement

**Measurement Principle:** Dual-beam spectrophotometer

Geometry: Tt/0° or Td/0° per ASTM

Spectrophotometer: 256 element diode array and high resolution, concave holographic grating

Sphere Diameter: 76 mm (3 in) **Sphere Coating:** Spectralon™

Port Size/Measured Area: 18.5 mm (0.73 in) illuminated/9.8 mm (0.39 in) measured

Spectral Range: 400 nm - 700 nm

**Wavelength Resolution:** < 3 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:** Full spectrum LED array

Flashes per Measurement: 4 flashes

Lamp Life: 5 years unlimited use

**Measurement Time:** < 2.5 seconds Measurement Time with Haze: < 5 seconds **Measurement Interval:** < 3 seconds Measurement Pathlenath: Up to 100 mm

**Transmission Modes:** Total (TTRAN) and Regular (RTRAN) and HAZE

**Standards Conformance** 

Colorimetric: CIE 15:2004, ASTM E1164, DIN 5033 Teil 7 and JIS Z 8722 Condition E, G

Haze: ASTM D1003

## Performance

Colorimetric Repeatability:  $< 0.02 \Delta E^*$  on air

(30 readings max)

**Spectral Repeatability:** Standard deviation within 0.1 %

**Inter-instrument Agreement:**  $\Delta E^*$  (D65/10) < 0.15 (Avg) (Transmission Filter Set)

 $\Delta E^*$  (D65/10) < 0.25 (Max) (Transmission Filter Set)

± 0.30% at 10% TH (HAZE)



**Firmware** 

**Illuminant:** D65, C, A, D50, D55, D75, F02, F07, F11, TL84, ULT30, ULT35

**Observer:** 2° and 10°

**Color Scales:** CIE L\*a\*b\*, Hunter Lab, CIE LCh, CIE Yxy, CIE XYZ

Color Difference Scales:  $\Delta L^*a^*b^*$ ,  $\Delta Lab$ ,  $\Delta L^*C^*h^*$ ,  $\Delta Yxy$ ,  $\Delta XYZ$ Color Difference Indices:  $\Delta E^*$ ,  $\Delta E$ ,  $\Delta E$ CMC (I:c), CIE  $\Delta E$  2000

Indices and Metrics: APHA/PtCo/Hazen, Saybolt, Gardner, YI E313 Yellowness, YI D1925,

ADMI, EBC, CIE Y Transmission, US Pharmacopeia, EU Pharmacopeia, Japanese Pharmacopeia, Haze, ASBC Turbidity, ASTM D1500, NTU,

**EP** Opalescence

Other: Spectral Data (%T and Absorbance), Spectral Plot (%T and Absorbance),

Trend Plot, EZ View, Color Plot

Display

Touch screen, high resolution 1280x800

Communications I/O

**USB Micro OTG:**Connectivity to printer, keyboard / mouse

Front panel USB: Connectivity to USB thumb drive for saving and backing up data

Ethernet RJ45: Save, print and email capability directly from Vista instrument

Physical / Electrical

**Dimensions:** Height: 177.8 mm (7.0 in.)

Width: 485.8 mm (19.125 in.) Depth: 228.6 mm (9.0 in.) Weight: 6.35 kg (14.0 lbs)

**Transmission Compartment:**Height: 108.0 mm (4.25 in.)\*
Width: 101.6 mm (4.0 in.)

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Depth: 187.3 mm (7.375 in.) with cover on\*

\*Removable cover opens compartment on three sides (top, front, back)

to accomodate large samples

**Base to Measurement Port Distance:** 63.5 mm (2.5 in.)

**Power Requirements:** 100 to 240 VAC, 47 to 63 Hz, 60 W

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:

• Didymium diagnostic filter • Certificate of compliance • Power supply

• VISTA Quick Start Guide • Stylus • USB Flash Drive • Cleaning Cloth

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