# SPECIFICATIONS

## Aeros ®

*Patent #US 10,352,767 B2*

## MEASUREMENT

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|---|---|
| **Measurement Principle:** | Dual-beam Non-contact Reflectance Spectrophotometer |
| **Measurement Method:** | Port down Non-contact rotating platter |
| **Maximum Sample Height:** | 140 mm (5.5 in.) |
| **Measurement Duration:** | User selectable (5,10,15,30 sec) |
| **Sampling Rate:** | Continuous at 7 measurements per second |
| **Measurements per Rotation:** | 35 |
| **Area Measured per Rotation:** | 177.25 cm$^2$ (27.5 in$^2$) |

## TECHNICAL

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|---|---|
| **Spectral Range:** | 400 nm - 700 nm |
| **Specular Component:** | Excluded |
| **Spectral Resolution:** | < 3 nm |
| **Effective Bandwidth:** | 10 nm equivalent triangular |
| **Reporting Interval:** | 10 nm |
| **Photometric Range:** | 0 to 150 % |
| **Light Source:** | Full spectrum, balanced LED array |
| **LED Life:** | 5 years typical |
| **Spectrophotometer:** | Sealed optics; 256-element diode array; high resolution concave holographic grating |
| **Displayed Height Resolution:** | 0.1 mm |

## PERFORMANCE

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|---|---|
| **Inter-Instrument Agreement:** | ΔE*< 0.30 (Avg) on CCSII (BCRA) Tile Set |
| **Colorimetric Repeatability:** | ΔE*< 0.025 (Max) on white tile |

## USER INTERFACE

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|---|---|
| **Data Views:** | EZ View, Color Data Table, Color Plot, Spectral Data, Spectral Plot, Trend Plot |
| **Other Features:** | Pass/Fail color indication, time and date stamp, auto-naming, auto-saving, data backup and recovery |
| **Indices and Metrics:** | E313 Whiteness Index, Tint, E313 Yellowness Index, D1925 Yellowness Index, Y Brightness, Z%, 457 nm Brightness, Baking Contrast Units, HCCI, SCCA |
| **Color Scales:** | CIE L*a*b*, Hunter Lab, CIE L*C*h, 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, and $\Delta$E 2000 |
| **Data Storage:** | 8 GB (> 1 million data records) |
| **Illuminants:** | A, C, D50, D55, D65, D75, F02, F07, F11, TL84, ULT30, ULT35 |
| **Observers:** | 2° and 10° |
| **Languages:** | English, Japanese, and Simplified Chinese (German coming soon) |
| **Display:** | Touch screen, high resolution 1280x800 |
| **External PC Software:** | Compatible with HunterLab EasyMatch QC and EasyMatch QC-Electronic Records Quality Control Software |

## COMMUNICATIONS I/O

| | |
|---|---|
| **USB OTG:** | Connectivity to printer, keyboard, mouse |
| **Front Panel USB:** | 2.0 bidirectional, data export/import via thumb drive |
| **Ethernet RJ45:** | Print directly to standalone or network printers<br>Email directly from the instrument<br>Stream data to LIMS and SPC systems |
| **Remote Access Support:** | Enabled via internet-based support tool |

## PHYSICAL / ELECTRICAL

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|---|---|
| **Sensor Dimensions:** | Height:  56 cm (22 in)<br>Width:   38 cm (15 in)<br>Depth:  51 cm (20 in)<br>Weight: 23 kg (50 lbs) |
| **Display:** | Touch screen, high resolution color, 7 in, 1280 x 800 |
| **Power:** | Input: 100 to 240  VAC,  47 to 63 Hz to universal power supply @ 24 VDC (3.75A  90W) |
| **Operating Environment:** | 4° to 38°C (40° to 100° F), 10 % to 85 % RH, noncondensing |
| **Storage Environment:** | -20° to 65°C (-5° to 150° F), 10 % to 90 % RH, noncondensing |
| **System Components:** | • Calibrated white tile (NIST Certificate of Traceability)    • Black glass standard<br>• Green diagnostic tile   • Standards Box    • 15.2 cm (6 in) pan / 2.54 cm (1 in) Depth<br>• 30.5 cm (12 in) pan / 2.54 cm (1 in) Depth   • 100V - 240V universal power supply<br>• Aeros Quick Start Guide   • Aeros User's guide on CD |

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