



## SP60

### Portable Sphere Spectrophotometer

The SP60 is a spherical hand held spectrophotometer designed to meet the performance and feature capabilities necessary for diverse color measurement applications.

# SP60 Advantages

- **Versatile.** Use for lab, plant or field operation
- **Easy to Read.** Large, graphical LCD display
- **Quick Color Compare.** Permits quick measurement and comparison of two colors without need to create tolerances or store data
- **Pass/Fail Mode.** Up to 1,024 standards with tolerances can be stored for easy pass/fail measurement
- **Measuring Functions and Indices.** Absolute and difference measurements are obtained for the following colorimetric systems:  $L^*a^*b^*$ ,  $\Delta L^*\Delta a^*\Delta b^*$ ,  $L^*C^*h^*$ ,  $\Delta L^*\Delta C^*\Delta H^*$ ,  $\Delta E^*ab$ ,  $\Delta E_{CMC}$ ,  $\Delta E_{CIE94}$ , XYZ, Whiteness and Yellowness per ASTM E313-98
- **Opacity, Color Strength and Shade Sorting.** Device measures opacity, color strength in chromatic, apparent, and tri-stimulus calculations, and 555 shade sorting for precise color control of products involving plastic, painted, or textile materials
- **Texture and Gloss Influence.** To determine the influence of the specular component, the SP60 allows simultaneous measurement of both specular-included (color) and specular-excluded (appearance)
- **User-Friendly Ergonomics.** A wrist strap and tactile side grips facilitate holding and a flip back target shoe adds flexibility
- **Rechargeable Battery.** Allows for remote use

## X-Rite: Your source for accurate color. On time. Every time.

X-Rite is a world leader in providing global color control solutions for manufacturing and quality management requirements.

We lead the industry in offering service options to ensure uninterrupted performance of all X-Rite products. Training and educational resources are available globally and online for both new and experienced users to optimize their color measurement capabilities.

Visit [xrite.com](http://xrite.com) for more information about X-Rite products. X-Rite customers worldwide may also call the Applications Support team at [CASupport@xrite.com](mailto:CASupport@xrite.com) or Customer Service at 800-248-9748.

[XRITE.COM](http://XRITE.COM) | [PANTONE.COM](http://PANTONE.COM)

© 2010, X-Rite, Incorporated. All rights reserved.

PANTONE® and other Pantone, Inc. trademarks are the property of Pantone, Inc.

L10-153 (04/12)



## Specifications

**Measuring Geometrics**  
d/8°, DRS spectral engine, fixed aperture:  
8mm measurement area  
14mm target window

**Light Source**  
Gas-filled tungsten lamp

**Illuminant Types**  
C, D50, D65, D75, A, F2, F7, F11 & F12

**Standard Observers**  
2° & 10°

**Receiver**  
Blue-enhanced silicon photodiodes

**Spectral Range**  
400 – 700nm

**Spectral Interval**  
10nm – measured  
10nm – output

**Storage**  
1,024 standards with tolerances,  
2,000 samples

**Measurement Range**  
0 to 200% reflectance

**Measuring Time**  
Approx. 2 seconds

**Inter-Instrument Agreement**  
CIE  $L^*a^*b^*$ :  
Avg. 0.40  $\Delta E^*ab$  based on avg. of 12 BCRA Series II tiles (specular component included)  
Max. 0.60  $\Delta E^*ab$  on any tile (specular component included)  
CMC equivalent:  
Avg. 0.30  $\Delta E_{cmc}$  based on avg. of 12 BCRA Series II tiles (specular component included)  
Max. 0.50  $\Delta E_{cmc}$  on any tile (specular component included)

**Short-Term Repeatability<sup>1</sup>**  
.10  $\Delta E^*ab$  on white ceramic (Standard deviation)

**Lamp Life**  
Approx. 500,000 measurements

**Power Supply**  
Removable (Ni-metal hydride) battery pack; 7.2 VDC rated @ 1650 mAh.

**AC Adapter Requirements**  
90 – 130VAC, 50 – 60Hz, 15W max.

**Charge Time**  
Approx. 4 hours – 100% capacity

**Measurements Per Charge**  
1,000 measurements within 8-hour period

**Display**  
128 x 256 pixel graphical LCD

**Operating Temperature Range**  
50° to 104°F (10° to 40°C)  
85% relative humidity maximum (non-condensing)

**Storage Temperature Range**  
-4° to 122°F (-20° to 50°C)

**Weight**  
2.4 lbs. (1.1 kg)

**Dimensions**  
4.3”H 3.3”W 7.7”L  
(10.9 cm 8.4 cm 19.6 cm)

**Accessories Provided**  
Calibration standards, operation manual, AC adapter, carrying case

**Options**  
Optional remote battery charger and replacement rechargeable battery packs available

<sup>1</sup> Based on 20 measurements on a white tile.

\* Specifications and design subject to change without notice. X-Rite standards are traceable to National Institute of Standards and Technology, Gaithersburg, Maryland, USA.

