



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: $L^*a^*b^*$, $\Delta L^*\Delta a^*\Delta b^*$, $L^*C^*h^*$, $\Delta L^*\Delta C^*\Delta H^*$, ΔE^*ab , $\Delta ECMC$, $\Delta E CIE94$, 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



Specifications

Measuring Geometrics
d/8°, DRS spectral engine, fixed aperture:
8mm measurement area
13mm 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 ΔE^*ab based on avg. of 12 BCRA Series II tiles (specular component included)
Max. 0.60 ΔE^*ab on any tile (specular component included)
CMC equivalent:
Avg. 0.30 ΔE_{cmc} based on avg. of 12 BCRA Series II tiles (specular component included)
Max. 0.50 ΔE_{cmc} on any tile (specular component included)

Short-Term Repeatability¹
.10 ΔE^*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

¹ Based on 20 measurements on a white tile.



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