

elcometer® 6075-2 SP62 Portable Sphere Spectrophotometer



The SP62 is a versatile sphere spectrophotometer, designed to give fast, precise and accurate color measurement information on materials ranging from paper and paint to plastics and textiles.

- Lightweight, compact, portable instrument
- Diffuse/8° sphere optical geometry
- 0.15 ΔE_{cmc} inter-instrument agreement
- 4mm, 8mm or 16mm fixed aperture
- Large, easy-to-read graphical LCD display
- PROJECT operation mode
- Flip-back target shoe for flexible use
- Simultaneous measurement of both specular component included and specular component excluded
- Rugged construction
- Rechargeable battery for remote use

On-Board, Built-In Software

- PROJECTS - User can collect colors under one title. Data can be uploaded and/or downloaded via patented, bi-directional communications link to computer software.

Features

Measuring Functions and Indices

The SP62 provides absolute and difference measurements for the following colorimetric systems. These values can be obtained from any of the nine illuminants with 2° or 10° observer angle: CIE XYZ, CIE Yxy, CIE L*a*b*, Hunter LAB, CIE L*c*ho (calculated from ab or uv space), CMC and CIE94. Whiteness and Yellowness per ASTM E313-98, Metamerism Index and DIN 6172.

Special PROJECT Modes

Multiple color standards can also be collected under an identified PROJECT, a feature that supports corporate color standards programs.

Pass/Fail Mode

The SP62 stores up to 1,024 standards with tolerances for easy pass/fail measurement. A red/green LED indicator and the instrument's LCD display provide visual confirmation of results. A tone also sounds to indicate a fail result and measurement completion.

Quick Colour Compare

An operator can take a quick measurement and comparison of two colours. This allows the operator to take quality-control readings in a time efficient manner without having to create tolerances or store data.

The Sphere

The SP62's diffusing sphere is made of Spectralon®, a durable, highly reflective material designed to perform in a rigorous production environment. The diffusing material prevents premature degradation due to the flaking and chipping of the sphere wall material.

Inter-Instrument Agreement

The SP62 has superior inter-instrument agreement – essential in multiple instrument color-control programs. The SP62 offers excellent inter-instrument agreement with X-Rite SP64 Sphere Spectrophotometer. Both input data into X-Rite line of Windows-based colour quality assurance and colour formulation software.

Opacity, Colour Strength and Shade Sorting

The SP62 can measure opacity as well as three colour-strength options: chromatic, apparent and tri-stimulus calculations. The SP62 also performs 555 shade sorting. These are important considerations in the colour quality control of manufactured products involving plastics, painted or textile materials.

Texture and Gloss Influence

To determine the influence of the specular component, the SP62 allows simultaneous measurement of both specular-included (color) and specular-excluded (appearance).

User-Friendly Ergonomics

In addition to on-board programs to assist the operator in the data collection process, the instrument itself is highly user-friendly. It is compact and lightweight. A wrist strap and tactile side grips make it easy to hold. Read-outs are large and easy to see. A rechargeable battery pack allows extended operation of the instrument.



Technical Specifications

Measuring Geometrics	d/8°, DRS spectral engine Choice of optical aperture: 4mm measurement area / 6.5mm target window 8mm measurement area / 13mm target window 14mm measurement area / 20mm target window
Light Source	Gas-filled tungsten lamp
Illuminant Types	C, D50, D65, D75, A, F2, F7, F11 and F12
Standard Observers	2° and 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	<i>CIE L*a*b*</i> : Average 0.20 ΔE^*ab based on average of 12 BCRA Series II tiles (specular component included) Maximum 0.40 ΔE^*ab on any tile (specular component included) <i>CMC Equivalent</i> : Average 0.15 ΔE_{cmc} based on average of 12 BCRA Series II tiles (specular component included) Maximum 0.30 ΔE_{cmc} on any tile (specular component included)
Short-Term Repeatability†	0.05 ΔE^*ab on white ceramic (standard deviation)
Lamp Life	Approximately 500,000 measurements
Power Supply	Removable (Ni-metal hydride) battery pack; 7.2 VDC rated @1450mAh
AC Adapter Requirements	90 – 130VAC or 100 – 240VAC, 50 - 60Hz, 15W max
Charge Time	Approximately 4 hours – 100% capacity
Measurements per Charge	1,000 measurements within 8 hour period
Display	128 x 256 pixel graphical LCD
Data Interface	Patented bi-directional RS232, 300 – 57,000 baud
Operating Temperature Range	10 to 40°C 85% Relative Humidity Maximum (non-condensing)
Storage Temperature Range	-20° to 50°C
Weight	1.1kg
Dimensions	109 x 83 x 195mm
Supplied with	Calibration Standards, Operating Manual, AC Adapter and Carrying Case

† Based on 20 measurements on a white tile.

Part Numbers

Model	Description	Part Number
Elcometer 6075/2	XRITE SP62 Portable Sphere Spectrophotometer	K0006075M002
Accessories	Remote Battery Charger	KT006075P001
	Replacement Rechargeable Battery Pack	KT006075P002

