elcometer 6075-3 SP64 Portable Sphere Spectrophotometer

The SP64 is the ultimate sphere spectrophotometer, designed to give fast, precise and accurate colour measurement information on materials ranging from paper and paint to plastics and textiles.

- Lightweight, compact, portable instrument
- Diffuse/8° sphere optical geometry
- 0.10 ΔEcmc inter-instrument agreement
- Switchable 4mm or 8mm aperture (optional fixed 16mm)
- Large, easy-to-read graphical LCD display
- JOBS and PROJECT operation model
- Opacity and color strength measurement
- 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:

- JOBS - Available on some models. Walks a user through measurement routines on the production floor. Up to six lines of clear instructions per routine can be displayed after download from X-Rite 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 SP64 provides absolute and difference measurements for the following colormetric systems. These values can be obtained from any of the nine illuminants with 2° or 10° observer angle: CIE XYZ, CIE Yxy, CIE LAB, Hunter LAB, CIE LCH, CMC and CIE94. Whiteness and Yellowness per ASTM E313-98, Metamerism Index and DIN 6172.

Special JOB and PROJECT Modes

The JOB function is a programmed sequence of specific steps to assist the operator in the color measurement process. Up to six lines of specific instructions per measurement routine can be downloaded from X-Rite software and displayed on the SP64's LCD screen. Multiple color standards can also be collected under an identified PROJECT, a feature that supports corporate color standards programs.

Pass / Fail Mode

The SP64 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.

Switchable Apertures

The internal apertures can be quickly changed with the flip of a switch for 4mm or 8mm measurement areas. The instrument will recognise which aperture is being utilized and automatically adapt calibration data. This allows the operator to change measurement mode quickly and efficiently, depending on the sample size.

The Sphere

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

Opacity, Color Strength and Shade Sorting

The SP64 can measure opacity as well as three color-strength options: chromatic, apparent and tri-stimulus calculations. The SP64 also performs 555 shade sorting. These are important considerations in the color quality control of manufactured products involving plastics, painted or textile materials.

Texture and Gloss Influence

To determine the influence of the specular component, the SP64 allows simultaneous measurement of both specular-included (color) and specular-excluded (appearance).

User-Friendly Ergonomics

A wrist strap and tactile side grips make the instrument easy to hold. Read-outs are large and easy to use. A rechargeable battery pack allows extended operation of the instrument.

BAMR (Pty) Ltd, PO Box 23973, Claremont, 7735, South Africa
Ph : 27 (0)21 683 2100, Fax : 27 (0)21 674 1485
Email : sales@bamr.co.za, Web : www.bamr.co.za

Technical Specifications

Measuring Geometrics	d/8°, DRS spectral engine, switchable 4mm measurement area / 6.5mm target window or 8mm measurement area / 13mm target window (optional fixed 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	
Inter-Instrument Agreement	8mm / 14mm	*CIE L*a*b*:* Average 0.13 ΔE*ab based on average. of 12 BCRA Series II tiles (specular component included) Maximun 0.25 ΔE*ab on any tile (specular component included) *CMC Equivalent:* Average 0.10 ΔEcmc based on average. of 12 BCRA Series II tiles (specular component included) Maximum 0.20 ΔEcmc on any tile (specular component included)
	4mm	*CIE L*a*b*:* 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) *CMC Equivalent:* Average 0.15 ΔEcmc based on avgerage of 12 BCRA Series II tiles (specular component included) Maximum 0.30 ΔEcmc on any tile (specular component included)
Short-Term Repeatability†	0.05 ΔE*ab on white ceramic (standard deviation)	
Measurement Range	0 to 200% reflectance	
Measuring Time	Approximately 2 seconds	
Lamp Life	Approximately 500,000 measurements	
Power Supply	Removable (Ni-metal hydride) battery pack; 7.2 VDC rated @1450mAh	
AC Adapter Requirements	90 – 130VAC, 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°C 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 6075/3	XRite SP64 Portable Sphere Spectrophotometer	K0006075M003
Accessories	Remote Battery Charger	KT006075P001
	Replacement Recharagable Battery Pack	KT006075P002

BAMR (Pty) Ltd, PO Box 23973, Claremont, 7735, South Africa
Ph : 27 (0)21 683 2100, Fax : 27 (0)21 674 1485
Email : sales@bamr.co.za, Web : www.bamr.co.za