

MA48 Multi-Angle Spectrophotometer



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- Five measurement angles (15°, 25°, 45°, 75°, 110°)
- Single screen displays all angles
- Nine color value formats: L*a*b*,
ΔE_{L*}ΔE_{a*}ΔE_{b*}, L*C*h°,
ΔE_{L*}ΔE_{C*}ΔE_{H*}, Flop Index,
ΔE_{Flop} Index, ΔE_{EL}*a*b*, ΔE_{Ecmc},
and DIN 6175
- Seven languages
- Intuitive, menu-driven operation
- Industrial membrane switches – easy to see, use and clean

The X-Rite® MA48 is an affordable portable multi-angle spectrophotometer, designed to give fast, precise and accurate color measurement information on metallic, pearlescent and special effect finishes. It delivers a full range of angular viewing, from 15° to 110°. The MA48 allows remote measurement operation. Measurements are stored in the instrument and later uploaded to a PC running X-RiteColor® Master quality control and formulation software.

Dynamic Rotational Sampling (DRS)

The MA48 employs Dynamic Rotational Sampling, a patented X-Rite technology that uses a simple, rugged optical system to measure all angles simultaneously.

Ergonomic Design

The MA48 fits comfortably in the user's hands and is easy to position for accurate measurement. Its optional barcode-reading wand allows users to read and store data instantly. All controls are large and easy to operate.

Docking Station

The docking station enables easy data transfer to a PC. The docking station provides open-port black calibration and has a place to store the calibration plaque. It charges/refreshes the battery and provides a convenient way to keep the instrument safe and secure when not in use.

Multiple Languages

The MA48 supports English, German, French, Spanish, Italian, Portuguese and Chinese (simplified).

One-Year Warranty

X-Rite offers a one-year limited warranty on this instrument.

Service and Support

X-Rite leads the market in service, providing phone/web/e-mail support, instrument recertification and flat-rate service contracts, as well as hands-on training classes worldwide.

Specifications:

Measuring Geometrics

- 45° illumination
- 15°, 25°, 45°, 75°, 110°
aspecular viewing
- Angular accuracy ±0.15°
- Fiber optic pick-up, coupled
with DRS technology

Measuring Area

0.5 in. diameter (12mm)

Light Source

Gas-filled tungsten lamp, color
corrected to approx. 4000°K

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

Standard Observers
2° & 10°

Receiver
Blue-enhanced silicon photodiodes

Spectral Range
400nm - 700nm

Spectral Interval
28 band spectral measurement:
• 10nm interval from
400nm to 640nm
• 20nm interval from
640nm to 700nm
• 15nm bandwidths

Spectral Data Output
Spectral reflectance values are
available for output from the
RS-232 or USB port via the docking
station for 5 angles at 10nm intervals
from 400nm to 700nm

Measurement Range
0 to 400% reflectance

Measuring Time
Approx. 2.0 seconds

Inter-Instrument Agreement
• 0.30 ΔE^* avg. on reference
BCRA tile set
• 0.40 ΔE^* max. on any
chromatic tile
• 0.15 ΔE^* max. on any grey tile
Short-Term Repeatability
0.10 ΔE^* ab on white ceramic

Lamp Life
Approx. 500,000 measurements

Power Supply
Built-in, rechargeable Ni-metal
hydride battery pack; 7.2 VDC rated
@ 1400 mAh

AC Adapter Requirements
• MA48: 90-130VAC, 50-60Hz,

15W max

- MA48X: 90-260VAC, 50-60Hz,
15W max

Charge Time

In Instrument: 4 hrs

Measurements Per Charge

1,000 5-angle measurements
(continuous measurements @ 10 sec.
intervals)

Data Storage (five angles)

200 Standards

850 Samples

Data Interface

Patented bi-directional RS-232 and USB,
9,600-19,200 baud

Display

128 x 256 pixel graphical LCD

Operating Temperature Range

50° to 104°F (10° to 40°C)

85% Relative humidity max
(non-condensing)

Storage Temperature Range

-4° to 122°F (-20° to 50°C)

Weight

2 lbs. 7 oz. (1.1 kg)

Dimensions

5.27"H 5.40"W 8.05"L

(13.4cm 13.7cm 20.4cm)

Accessories Provided

Calibration standards, docking station,
AC adapter, operation manual, and
wrist strap.

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