



“We use X-Rite instruments in our laboratories, so for us there was no question but to offer our customers the same quality products that we use ourselves. Because if our customers are successful – we are successful.”

—Richard Fischer, HEAD OF THE COLORISTIC DEPARTMENT AT MIPA

▲ PICTURED: Special finishes require special measurement techniques. That's exactly what X-Rite's family of multi-angle spectrophotometers delivers.

## MA Family

### Handheld spectrophotometers



### Overview

As they seek to differentiate their products and make them stand out in a crowded marketplace, brand owners are increasingly turning to a range of special-effect finishes that add depth, impact and appeal to their products. Measuring color and appearance of these finishes can be a challenge, and with a distributed manufacturing platform, it can be difficult to ensure that all components will match at final assembly. That's where X-Rite's market-leading multi-angle spectrophotometers come into play.

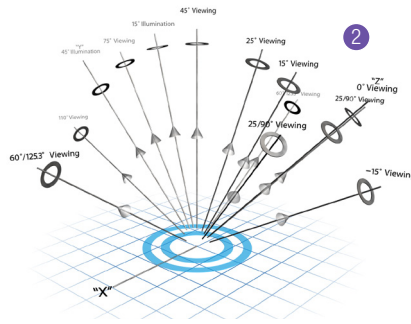
### Key Benefits

X-Rite's proprietary multi-angle spectrophotometry technology makes the measurement of special effect paints and coatings fast, easy and consistent, replacing time-intensive laboratory-based tests that require expensive instruments. The result is improved uptime on painting and assembly lines, reduced scrap rates and fast root cause analysis when color problems are discovered. This is especially important in industries where global sourcing requires that all components match at final assembly.

- Capture spectral measurements that ensure consistent color across a global sourcing supply chain, even when multiple special-effect paints or coatings are used, with all components matching at the point of assembly.
- Measure incoming material to identify issues early in the process to reduce potential downtime or rework during subsequent manufacturing or assembly processes.
- Streamline color measurement during production with a fast, easy-to-use and understand X-Rite multi-angle spectrophotometer, minimizing downtime without sacrificing quality. The average measurement is achieved in 2 seconds.
- Leverage the JOBS function that allows for more consistent color measurements from shift to shift, minimizes the learning curve and reduces the probability of human error.
- Benefit from an instrument that meets DIN and ASTM standards, including: ASTM D 2244, E 308, E 1164, E 2194; DIN 5033, 6174, 6175-2; ISO 7724; SAE J1545.



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- ① Capture spectral measurements of special-effect paints or coatings.
- ② Uses 5 angles to measure special-effect paints.  
Uses 6 angles to measure special-effect paints.  
Uses 11 angles to measure special-effect paints.

## Recommended

### X-Color QC

Organizing color data for all types of surfaces, materials and coatings while giving controlled access to authorized users can be a challenge and often requires the use of several systems. X-Color QC gives you the freedom to efficiently control color quality while reducing the margin for error. There is no need for separate systems and no need to patch different systems together. Instrument settings and product color palettes can be controlled down to the individual user level.

### CarFlash

CarFlash is a non-contact multi-angle spectrophotometer designed to be integrated inline in robotics systems to ensure integrity of color quality throughout the production process. Non-contact inline measurement mitigates the risk of damaging paint during the measurement process. In addition, there is excellent inter-instrument agreement between CarFlash and X-Rite multi-angle spectrophotometers used in the laboratory. This ensures color consistency from design through manufacturing for even the most complex special effect paints and coatings.

## Service Support & Warranty

Drawing on our extensive color expertise, X-Rite offers the right level of services on-site, online or on the phone, to support and nurture your business. For additional protection beyond the one-year warranty, take advantage of our extended warranty program. With global full service contracts, you can ensure your devices are well maintained through X-Rite's Annual Five Point Checkup, uniquely developed to keep devices performing to original specifications. With 12 global service centers, we make it easy to reach us. For more information about extended support options, visit [www.xrite.com/extended-warranties-services](http://www.xrite.com/extended-warranties-services)

## Specifications

	MA98	MA96	MA94
Battery	Lithium ion	Lithium ion	Lithium ion
Calibration	white/black calibration	white/black calibration	white/black calibration
Color Differences	L*a*b*, L*C*h°, ΔE*, ΔECMC; ΔE DIN6175, ΔE2000	L*a*b*, L*C*h°, ΔE*, ΔECMC; ΔE DIN6175, ΔE2000	L*a*b*, L*C*h°, ΔE*, ΔECMC; ΔE DIN6175, ΔE2000
Light Source	15° and 45° tungsten halogen	45° tungsten halogen	45° tungsten halogen
Measurement Geometry	10 angles of measurement and 2 illumination angles	6 Aspecular measurement angles	5 Aspecular measurement angles
Humidity	85% Relative Humidity max (non-condensing)	85% Relative Humidity max (non-condensing)	85% Relative Humidity max (non-condensing)
Illuminants	A, C, D50, D65, F2, F7, F11 & F1	A, C, D50, D65, F2, F7, F11 & F1	A, C, D50, D65, F2, F7, F11 & F1
Illumination Spot Size	Approx. 12mm (.5 inch)	Approx. 12mm (.5 inch)	Approx. 12mm (.5 inch)

Full list of specifications available at [www.xrite.com/categories/portable-spectrophotometers/ma-family](http://www.xrite.com/categories/portable-spectrophotometers/ma-family)