



## CarFlash™ System

### Non-Contact Multi-Angle Spectrophotometer

Ensure the complete integrity of color quality control throughout the production process with this automated solution for collecting colorimetric data on special effects coatings. By integrating this unit with an industrial robot, color quality can be controlled and managed earlier in the production process and with greater repeatability and efficiency.

# CarFlash System Advantages

- **Resolves Key Compliance Issues.** Provides for 100% sampling to improve quality and overall process integrity
- **Non-Destructive.** Non-contact operation eliminates risk of damage and waste
- **Fully Automated.** No need for additional resources
- **Integrates In Line.** Works in combination with industrial robot (6 axis)
- **Full Part Coverage.** Multiple angles of measurement, from 15° to 75° performed simultaneously to ensure complete part evaluation
- **Collects Essential Data.** In addition to colorimetric information, system includes non-contact, orange peel detection and surface temperature data with each measurement



*CarFlash is the ideal automated system for meeting the intense color quality demands of the global automotive market.*

## X-Rite: Your source for accurate color. On time. Every time.

X-Rite is a world leader in providing global color control solutions for manufacturing and quality management requirements.

We lead the industry in offering service options to ensure uninterrupted performance of all X-Rite products. Training and educational resources are available globally and online for both new and experienced users to optimize their color measurement capabilities.

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### X-RITE WORLD HEADQUARTERS

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## Specifications

### Measuring Geometrics

45° illumination  
15°, 25°, 45°, 75° aspecular viewing  
Grating spectrometer technology  
Distance to object surface: 35mm

### Measuring Area

8mm x 17mm

### Light Source

Xenon-flash lamp

### Illuminant Types

D65, 10°

### Spectral Interval

31 band spectral measurement  
10nm interval from 400nm – 700nm  
15nm bandwidths

### Measurement Range

0 to 300% reflectance

### Measurement Time

Approx. 3.0 seconds

### Inter-Instrument Agreement

0.20  $\Delta E^*$  avg. on reference BCRA tile set  
0.40  $\Delta E^*$  max. on any chromatic tile  
0.15  $\Delta E^*$  max. on any grey tile

### Short-Term Repeatability

0.10  $\Delta E^*$  abon white ceramic

### Lamp Life

Approx. 500,000 measurements

### Orange Peel Digital frame

processing system for analyzing an IR light pattern that is projected onto the painted surface

**Data Storage** (five angles)  
ASCII-file

**Data Interface**  
Ethernet, Fieldbus (PROFIBUS)

### Operating Temperature Range

15° to 35°C 85% relative humidity max. (non-condensing)

### Weight

16.5lbs. (7.5kg)

### Dimensions

175mm H, 255mm W, 305mm L

### Accessories Provided

Calibration standards, interface box, PC, operation manual

### IR Surface Temperature

Surface temperature: 15 – 150°C  
Temperature resolution  $\pm 0, 1^\circ\text{C}$   
Environmental temperature 15° – 35°C

### Ultra Sonic Distance Sensor

To define the distance to the surface in z-direction, +100mm to -15mm (referring to the measuring point coordinates)

### Positioning Requirements

Gloss degree of surface > 65 reflector meter units (20°)  
Surfaces' radius of curvature > 100mm, < -400mm  
70mm x 70mm measuring area