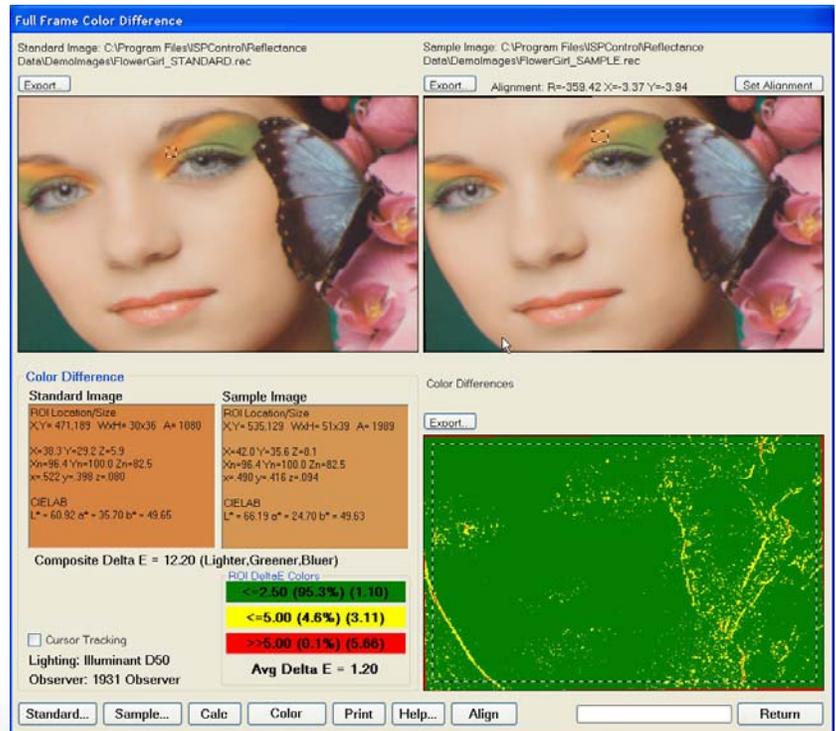


Model 600 Imaging Spectrophotometer



Typical Applications

- Printed Products
- Food Product
- Textiles
- Consumer Goods
- Pharmaceuticals
- Construction Products
- Automotive Displays



- ISO 9001:2008 Certified
- ISO 13485:2003 Certified
- Boeing Silver Certified Supplier
- FDA Registered
- Establish in 1976

TRICOR's Model 600 Imaging Spectrophotometer is an exciting new product for measuring color. Unlike other imaging colorimeters, the Model 600 can be used to measure radiated sources, reflectance as well as transmittance from 380nm to 780nm. This spectral information can be used to calculate various color coordinates; by convolving the spectral curve with a user specified type of illumination and standard observer. The software allows for any combination of illuminant (11+ types) and standard observer (CIE 1931 or 1964). Resulting color units include XYZ (Tristimulus Values), xyz (chromaticity coordinates), L*a*b* (CIELAB 1976), Lab (Hunter Lab 1946), u*v' (CIE 1976 UCS), L*u*v* (CIE 1976 CIELUV) and CCT (Correlated Color Temperature).

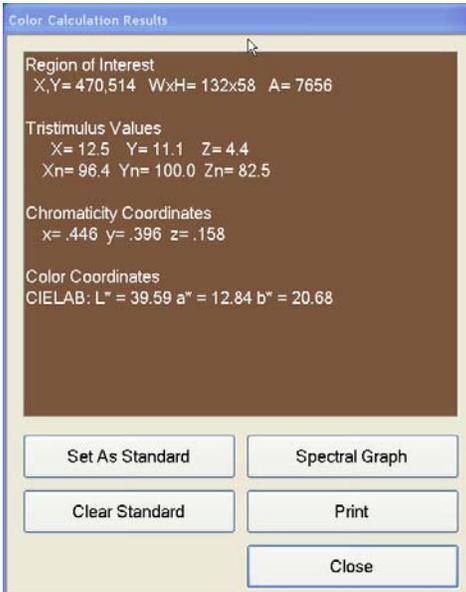
The "Imaging" portion of Imaging Spectrophotometer refers to the system sensor, a camera, used to acquire spectral data over the measurement area. All this functionality can be done on an

image as opposed to a single point. Every pixel location represents a virtual independent spectrophotometer! Therefore, a 1280x960 image is equivalent to having over 1.2 million independent spectral reflectance curves.

Many other color systems on the market use the tristimulus method of measuring color. The tristimulus method has a major distinct disadvantage compared to the spectrophotometric method. The limited tristimulus method simply measures a red, green and blue reflectance over an area with a single illuminant. These devices give no information regarding spectral/reference content; and therefore lack the capability to directly detect metamerism.

We are only beginning to scratch the surface... Applications will continue to push the operating envelope of this system. It will continue to improve, as new emerging technologies become available to increase performance, capabilities and ease of use.

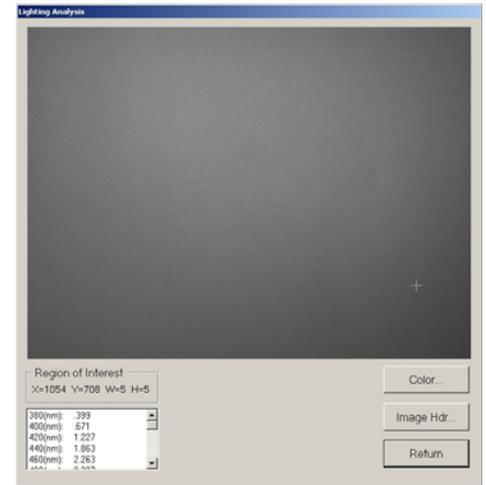
Model 600 Imaging Spectrophotometer



Color Calculation Results



Reflectance / Transmittance Analysis



Lighting Analysis

Specifications and Features

Sensor •

Silicon CCD camera

Resolution •

1280 x 960 pixels

Lens Options (FL; FOV H x V) •

35mm; 7.0° x 5.1°
24mm; 10.2° x 7.3°
15mm; 16.3° x 12.7°; Fisheye²

Resultant Image •

1280 x 960 x 10bits

Optical Bandwidth •

380-780nm; 20nm

Spectral Reporting •

380-780nm; 20nm

Measurement Units •

Tristimulus Values: XYZ
Chromaticity Coordinates: xyz
CIELAB Space: L*a*b*, Abs & ΔE
CIE 1976 UCS Space: u*v*, Abs & ΔE
CIELUV Space: L*u*v*, Abs & ΔE
Hunter Lab: Lab, Abs & ΔE
CCT (Correlated Color Temperature): °K

Short-term Repeatability³ •

0.10 CIELAB DE (typical)
0.31 CIELAB DE (maximum)

Inter-Instrument Agreement³ •

0.26 CIELAB DE (typical)
0.75 CIELAB DE (maximum)

Measurement 1st Time¹ •

60 seconds (@ 100 ft.L ~D65)

Minimum Measurement Time¹ •

30 seconds (@ 100 ft.L ~D65)

System Components

Mechanical Properties •

9 x 7 x 4 inches (w/o lens)
22.8 x 17.8 x 10.2 cm (w/o lens)
7.2 lbs (3.3 kg) (w/o lens)
¼"-20 Mounting Interface

Interface/Connections •

IEEE 1394; Type 2 (4 pin) (Camera Interface)
USB; Type B (Serial Comm Interface)
USB; RJ11 (6 pin) (External Lamp Interface)
USB; RJ45 (8 pin) (External I/O Interface)

Temperature Ranges •

Operating: 0° to 32°C (32° to 90°F)
Rel. Humidity <85% @ 32°C (90°F)
Storage: -20° to 55°C (-4° to 131°F)
(no condensation)

Power Source • Internal Power Supply

88 – 264 VAC (47 – 63 Hz) 15 Watts

Includes •

ISPControl, Basic Operating software;
Carrying Case; Power Cord; USB Cable,
Type A to B, 2M length; IEEE-1394 Cable,
IEEE-1394, Type 2 to 2, 2M length; IEEE-1394
Adapter, Type 1 (male) to Type 2 (female)

Customer Supplied Requirements

Computer Recommended Minimum Hardware •

Intel Dual Core Processor, 2.9GHz (or greater)
-IEEE 1394 Connector/Port
-USB Connector/Port

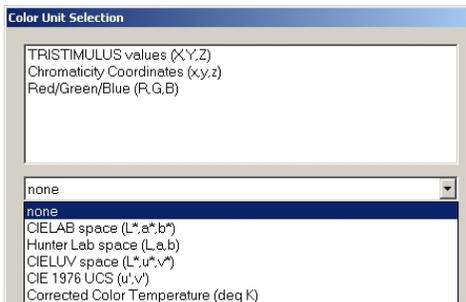
4GB, High Speed SDRAM

Recommended Display Resolution 1920 x 1200

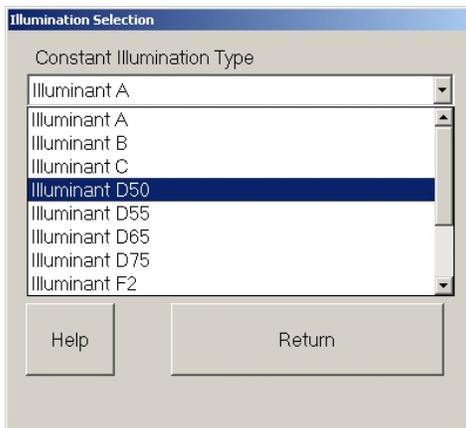
¹Acquisition times are dependent upon computer processor, bus speeds and sample brightness.

²Fisheye lenses inherently contain some image distortion but does not affect color readings.

³Results based on the IE600-1 System measuring the entire GretagMacbeth ColorChecker® test card.



Color Unit Selection



Illuminant Selection