

939




## The Spectrodensitometer of Choice



The X-Rite 939 is the ultimate graphic arts Spectrodensitometer, designed to provide accuracy and usefulness in the most demanding printing, packaging, proofing and ink formulation applications.

### Unparalleled Agreement

939's unique capability to excel in multi-site or multi-party agreement gives users the ultimate assurance of matches, resulting in color consistency and confidence in product or brand color integrity. Rely on 939 to effectively communicate color between print buyer, graphic designer, pre-press and pressroom, or to exchange crucial color information with ink and paper suppliers.

### Portable Versatility

Not only does the 939 boast unrivaled inter-instrument agreement, it adds the versatility of remote measurements and changeable aperture sizes. Only 939 can quickly switch between 4mm, 8mm and 16mm apertures in the field. And with on-board storage for thousands of color standards, tolerances, and samples, you can make pass/fail decisions press-side or in the field with no need for an attached computer. Of course, all data is time stamped and saved in memory so ISO, or reporting is as simple as connecting to an X-Rite software solution and transferring your supporting data.

### Boundless Features

939 can be used for quick evaluation of the  $L^*a^*b^*$  of an ink, a substrate, of density, or of dot area measurements of a proof, and for full ink formulation.

939 also provides unique spectral density and dot area function for use with special colors or HiFi printing. On board averaging gives summary information at-a-glance, and the graphing display can present density or spectral data graphically. Use these unique, multipurpose capabilities to minimize color mismatches and avoid costly errors by making clear decisions based on the right data, at any location in the prepress or printing process.



### Well Connected

X-Rite can help turn your color measurement data into summarized information for use in quality reporting for ISO or other quality efforts, customer relations, documentation or job tracking. Our X-Rite software solutions give you a complete picture of the measurements you make. You'll find information presented as colorful, easy-to-read charts, graphs and tabular data. In seconds, you'll see how samples are measuring up to your color specifications or customer standards.

939 calculates dozens of color expressions including  $L^*a^*b^*$ , density, opacity, color strength and dozens of other useful metrics. Each one is presented using the large graphical display and intuitive keypad.

X-Rite's 939 Spectrodensitometer is perhaps the most precise, intelligent QC tool for measuring and controlling color in your printing, packaging, converting, ink formulation or digital imaging operations.



## Specifications

Measuring geometry and Area	0/45°, DRS spectral engine, choice of aperture: 4mm, 8mm, 16mm
Receiver	Blue enhanced silicon photodiodes
Light source	Gas-filled tungsten lamp, approx. 2856°K (corrected for D65 illuminant)
Illuminant types	A, C, D50, D65, D75, F2, F7, F11, & F12
Standard observers	2° & 10°
Measurement range	0 to 200% reflectance 0 to 2.5D
Spectral range	400nm – 700nm
Spectral interval	10nm – measured, 10nm – output
Inter-instrument agreement	0.15 dE*ab, based on avg. of 12 BCRA series II tiles 0.30 dE*ab max on any tile
Short-term repeatability	0.05 dE*ab max. on white ceramic, standard deviation
Display	128 x 256 pixel graphical LCD
Storage	1,024 standards with tolerances, 2,000 samples
Measurements per charge	1000 typical
Measuring time	Approx. 2 seconds
Data interface	Patented bi-directional RS-232, 300 to 57,600 baud
Lamp Life	Approx. 500,000 measurements
Power supply	Removable NiMH (Nickel-metal hydride) battery pack included; 7.2v DC rated @ 1450mAh.
Charge time	Approx. 4 hours –100% capacity
AC adapter requirements	90–260VAC, 50–60 Hz Input 12 Vdc output
Operating temperature range	50° to 104°F (10° to 40°C)
Storage temperature range	85% relative humidity maximum (non-condensing) -4° to 122°F (-20° to 50°C)
Weight	2.4lbs. (1.1 Kg)
Dimensions	Height: 4.3" (10.9 cm) Width: 3.3" (8.4 cm) Length: 7.7" (19.6 cm)
Usage	Indoor only
Altitude	2000 m
Pollution Degree	2
Overvoltage	Category II
Accessories Provided	Calibration reference, Verification reference, Documentation Power supply, 4mm, 8mm & 16mm Measuring Apertures and Target windows, Carrying case
Optional Accessories	Ultra Violet Filter, Battery Charging Stand, Extra Battery Pack, Extended Warranty, X-RiteColor Master Software, X-Rite InkFormulation Software

### Training & Education from X-Rite

Do you need help to ensure your team gets the most out of the instruments in your workflow? Whether you prefer to learn in a classroom, online or at your own facility, Color Experts from X-Rite can help. Are you interested in obtaining ISO print standards certification? An X-Rite G7- or PSO-Certified Trainer can come to your facility to work with your staff hands-on to set up, train and qualify your team. For more information, please visit [xrite.com](http://xrite.com).