PHOTO RESEARCH®, Inc.

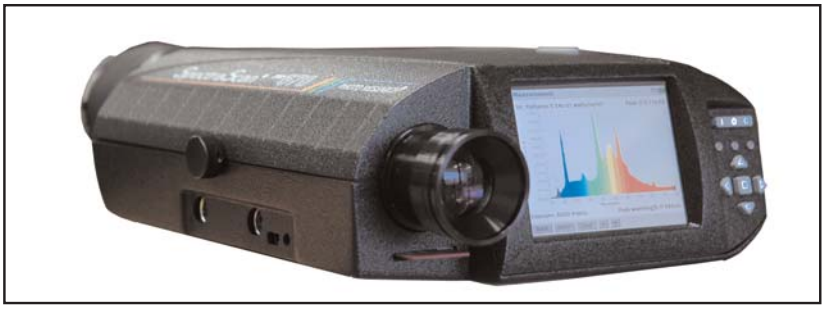
The PR®-670 SpectraScan® Colorimeter

Unique Design

The PR-670 SpectraScan is the newest addition to the world renowned SpectraScan colorimeter series of instruments. This unique, portable battery powered instrument utilizes a fast-scanning 256 detector element spectometer with a spectral resolution of 1.56 nm per pixel and is supplied with 4 automated measuring apertures (1°, 1/2°, 1/4° and 1/8°) and automated measure shutter. Other hardware features include AutoSync® for automatically synchronizing to the source refresh rate insuring the utmost accuracy, an external trigger port allowing remote measurement activation from either a push button or perpherial device, a Secure Digital (SD) port for measurement storage, and a long lasting rechargeable Lithium-ion (Li) battery.

Easy to Use

The PR-670 is controlled via the on-board, 2.25" x 3" high resolution, full color touch screen LCD display and 5-way keypad for easy navigation. Following a measurement, the PR-670 displays data *and* color spectral and CIE graphs on the system display. The PR-670 design provides stand alone operation - no PC required. The PR-670 can be also controlled via the world famous SpectraWin software over the USB or Bluetooth interface or using text based commands (Remote Mode).



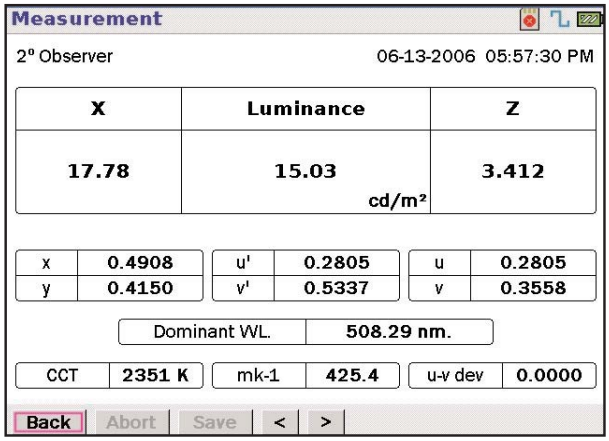
PR-670 SpectraScan Colorimeter

Flexibility

The unique design of the PR-670 makes tasks such as spectrally based photometric and colorimetric measurements, source spectral power distribution, Color Rendering Index (CRI), dominant wavelenth and correlated color temperature quick and simple. We've further enhanced the flexibility by adding 2 extended sensitivity modes and 4 measurement speeds.

The PR-670 can be supplied with up to 15 filter based remote heads connected to the instrument in a 'daisy chain' configuration to make simultaneous illuminance or luminance measurements - an ideal tool for tasks such as projector uniformity. Select heads for luminance, illuminance or chromaticity.

For applications other than radiance or luminance the PR-670 can be supplied with optical accessories such as a cosine receptor for irradiance / illuminance, LR-127 LED Analyzer for testing LED's to CIE 127, fiber probe for remote non-line-of-sight luminance testing, and a series of magnification lens for small spot size analysis. In fact, all of the accessories available for the PR-650 SpectraScan can be used on the PR-670.



Measurement Result Screen

Connectivity

It's easy for the PR-670 to talk to the outside world - it comes equipped with USB and (optional) Bluetooth® wireless interfaces. It is supplied with text based, Remote Mode syntax and a driver that emulates an RS232 interface (COM: port) making it a simple task to generate custom programming to perform specific tasks or for inclusion in an ATE environment. If you want, we can optionally add a traditional RS232 I/F.

Applications

Display luminance and color	Medical / dental color testing
Contrast	Reflectance / transmittance
Screen brightness	Quality control
LED testing	Human factors
Paper, ink and textile testing	Dominant wavelength

Features	*Benefits*
Full Color Touch Screen Display	Easy-to-use menu based software
Wide Dynamic Range	Address almost any display measurement requirement
USB Interface	Connects to virtually any PC
Bluetooth ready (optional)	Wireless, remote data transfer
Long lasting rechargeable Li battery	Excellent for field use.
SD Memory	Save thousands of measurements

PR-670 Specifications

Detector	256 detector array
Spectroradiometer Wavelength Range	380 to 780 nm
Optics	Pritchard viewing and measuring system.
Digital Resolution	16 bits
Spectral Resolution	1.56 nm / pixel
Spectral bandwidth	8 nm (5 nm optional)
Spectral Accuracy	± 1 nm
Liminance accuracy (Against NIST luminance standard)	± 2%
Luminance repeatability	≤ 1% at 3 cd/m^2
Color Accuracy (for Illuminant A)	±0.0015 in CIE 1931 x,y
Measurement Capabilities	Luminance, Illuminance, luminous intensity, chromaticity, correlated color temperature, dominant wavelength.
Measurement Time	6 ms to 24 secs.
Battery	Rechargeable Lithium-ion. (≥ 12 hours continuous operation)
Weight	3.75 lbs (1.7 kg)
Operating Temperature	34° to 95° F (1° to 35° C)

Notes:

1. Sensitivities are for 100:1 signal to RMS noise against an Illuminant A based NIST traceable luminance standard
2. All specifications are subject to change without notice.

Measurement Spot Size

		Aperture			
Accessory	**Working Distance**	**1°**	**1/2°**	**1/4°**	**1/8°**
MS-75 (355 mm to infinity)	355 mm 305 m	5.25 mm 5.32 m	2.63 mm 2.66 m	1.315 mm 1.33 m	0.658 mm 665 mm
SL-0.5X	94.1 mm to 137 mm	1.5 mm to 2.54 mm	0.75 mm to 1.27 mm	0.375 mm to 0.635 mm	0.188 mm to 0.318 mm
SL-1X	46 mm to 66 mm	0.890 mm to 1.32 mm	0.445 mm to 0.660 mm	0.226 mm to 0.330 mm	0.111 mm to 0.165 mm
MS-2.5X	46 mm	0.51 mm	0.225 mm	0.128 mm	0.064 mm
MS-5X	28 mm	0.289 mm	0.145 mm	0.072 mm	0.036 mm
MS-7.5	100 mm 3.05 m	17.5 mm 53 cm	4.38 mm 13.3 cm	1.09 mm 3.31cm	0.273 mm 0.82.8 mm
LA-600	Contact	13.2 mm	13.2 mm	13.2 mm	13.2 mm
FP-600	Contact	3.17 mm	3.17 mm	3.17 mm	3.17 mm

Luminance Range (cd/m^2)

	Aperture			
Access.	**1°**	**1/2°**	**1/4°**	**1/8°**
MS-75	0.20 to 15,000	0.8 to 60,000	3.2 to 240,000	12.8 to 960,000
SL-0.5X	0.20 to 15,000	0.8 to 60,000	3.2 to 240,000	12.8 to 960,000
SL-1X	0.20 to 15,000	0.8 to 60,000	3.2 to 240,000	12.8 to 960,000
MS-2.5X	1.25 to 50,000	5 to 200,000	20 to 800,000	80 to 3,200,000
MS-5X	1.75 to 70,000	7 to 280,000	28 to 1,120,000	112 to 4,480,000
MS-7.5	0.20 to 15,000	0.8 to 60,000	3.2 to 240,000	12.8 to 960,000
LA-600	0.20 to 15,000	0.8 to 60,000	3.2 to 240,000	12.8 to 960,000
FP-600	1 to 40,000	4 to 160,000	16 to 640,000	64 to 2,560,000
CR-600	2.5 to 107,700 lux	10 to 430,800 lux	40 to 1,723,200 lux	160 to 6,892,800 lux

PHOTO RESEARCH, Inc.

9731 Topanga Canyon Place
Chatsworth, CA 91311-4135 USA
Phone: 818-341-5151 Fax: 818-341-7070
sales@photoresearch.com
www.photoresearch.com