



# The PR-525 / PR-521 ColorMate

## Modern Technology

The PR-525 ColorMate brings hand-held, colorimetric measurements into the 21<sup>st</sup> century. It features a backlit touch-screen LCD display, USB interface, Secure Digital (SD) card storage and rechargeable lithium-ion battery. Measuring refreshing sources? The PR-525 automatically syncs to non-DC signals. The PR-525 can be triggered remotely, and once triggered, will send a pulse to a remote device such as a xenon strobe. This way, single event sources can be measured.



**PR-525 ColorMate**

## Ease of Use

All set-up parameters, data display and management is handled by “touching” through menus on the on board display. Making a measurement is as easy as pressing the only button on the PR-525 - the measurement button.

## 15 Heads are Better Than One

If you have a need to make simultaneous color measurements of multiple areas, say uniformity of a projected image, the PR-525 can be outfitted with up to 15 remote heads (PR-515 Remote Head) all individually addressed and controlled from a PC talking to the PR-515 base unit using the included PR-525 software.

## Luminance Measurements

For luminance measurements, the optional PR-523 SpotMate replaces the standard cosine diffuser. The PR-523 features true Pritchard Optics for unambiguous target alignment capability. The



**PR-515 Remote Head**



**PR-523 SpotMate**

PR-525 and PR-523 can be ordered as a system, the **PR-521**.

## Remote Control

If you need to include the PR-525 into an ATE environment, we supply software that provides the functionality of a COM: port when the PR-525 is connected to your PC using the USB interface. Simply send a command string to the COM: port using ASCII characters and the PR-525 will perform the measurement and return the data requested in the command string. This capability, unique among hand held portable photometers, gives you complete remote control of the instrument and supplies measured values that could be exported into Microsoft Excel, etc.

## Features

- Illuminance (footcandles and lux) - Luminance (footlamberts and cd/m<sup>2</sup> with PR-523)
- CIE Chromaticity (x, y, u', v')
- Correlated Color Temperature
- Back Lit / Touch Screen Display
- USB Interface
- SD Card Storage

## Standard Equipment

- PR-525 with illuminance adapter
- Rechargeable lithium-ion battery
- AC Adapter
- Carrying Case
- Secure Digital (SD) Card

## Applications

- Room Lighting
- Luminaire Chromaticity
- Digital projector chromaticity
- Illuminance and color uniformity
- Set lighting / color temperature
- Ergonomic testing



## PR-525 / PR-521 ColorMate Specifications

<b>Standard Equipment</b>	PR-525 ColorMate with Illuminance Measuring Head, Lithium-ion battery, carrying case, AC Adapter, Secure digital (SD) card Utilities software								
<b>Digital Resolution</b>	20 Bits								
<b>Display</b>	Backlit Touch Screen LCD								
<b>Sync Range</b>	20 to 400 Hz								
<b>Measurement Modes</b>	Illuminance (footcandles and lux) Chromaticity (CIE x, y, u', v', CCT) Luminance (with PR-523 - footlamberts and cd/m <sup>2</sup> )								
<b>Options</b>	PR-515 Remote Heads (up to 15)								
<b>Illuminance Range</b>	0.0005 - 40,000 fc (0.005 - 400,000 lux) @ 10:1 S/N								
<b>Illuminance Accuracy</b>	± 2% against NIST traceable illuminance standard at 2856 Kelvin (Illuminant A) @ 0.0125 fc (0.125 lux)								
<b>Illuminance Repeatability</b>	≤ 1.00% at 0.0125 fc (0.125 lux)								
<b>Minimum Illuminance for Color Measurements</b>	0.05 fc (0.50 lux) at 2856 Kelvin (Illuminant A)								
<b>Color Accuracy</b>	± 0.003 in CIE 1931 x, y measuring Illuminant A (2856 Kelvin) @ 0.05 fc (0.5 lux)								
<b>Color Precision</b>	≤ 0.0005 in CIE 1931 x, y measuring Illuminant A (2856 Kelvin) @ 0.05 fc (0.5 lux)								
<b>Measurement Storage</b>	<b>Capacity:</b> <b>Internal:</b> 100 Measurement Buffer (while unit is on). <b>External:</b> For a 256 MB Card: Approx. 416,000 measurements (approx. 600 bytes per measurement)								
<b>PR-523 Specifications</b>  <b>Aperture 2</b>	<b>Luminance Range:</b> 0.08 fl to 10,500,000 fl (0.274 to 35,700,000 cd/m <sup>2</sup> )								
	<b>Luminance Accuracy:</b> ± 2% against an Illuminant A based Luminance Standard @ > 0.40 fl (1.37 cd/m <sup>2</sup> ).								
	<b>Luminance Repeatability:</b> ≤ 1% measuring Illuminant A at 0.40 fl (1.37 cd/m <sup>2</sup> ). <b>Color Accuracy and Repeatability:</b> ± 0.003 in CIE 1931 x, y measuring Illuminant A (2856 Kelvin) @ 1.6 fl (5.48 cd/m <sup>2</sup> )								
	<table border="0"> <tr> <td><b>Measuring Distance</b></td> <td><b>Spot Size</b></td> </tr> <tr> <td>356 mm (14 in.)</td> <td>11.54 mm (0.454 in.)</td> </tr> <tr> <td>1.53 m (5 ft.)</td> <td>53.2 mm (2.10 in.)</td> </tr> <tr> <td>3.05 m (10 ft.)</td> <td>106.2 (4.08 in.)</td> </tr> </table>	<b>Measuring Distance</b>	<b>Spot Size</b>	356 mm (14 in.)	11.54 mm (0.454 in.)	1.53 m (5 ft.)	53.2 mm (2.10 in.)	3.05 m (10 ft.)	106.2 (4.08 in.)
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<b>Power</b>	Rechargeable lithium ion battery - charges in the PR-525 while connected to the external supply.								
<b>Battery Life</b>	6 hours continuous use (without backlight)								
<b>Interface</b>	USB								
<b>Weight</b>	9.0 ounces (255 grams) without battery and PR-523								
<b>Dimensions</b>	<b>Main Body:</b> 4.73 x 3.0 in. (17.5 x 7.62 cm) <b>Measuring Head:</b> 2.17 x 3 in. (5.51 x 7.62 cm)								



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