



## ProMetric<sup>®</sup> Imaging Photometers and Colorimeters



Specifications subject to change without notice.

- \* Based on a virtual detector size of 100 x 100 pixels.
- \*\* Based on illuminant A or user calibration for specific spectra.
- Based on a virtual detector size of 100 x 100 pixels and a minimum exposure time of 10ms.
- \*\*\* For 100 cd/m<sup>2</sup>, using Ethernet.

Model	ProMetric Y2	ProMetric Y29	ProMetric Y43	ProMetric Y45	ProMetric Y61	ProMetric I2	ProMetric I8	ProMetric I29	ProMetric I61
<b>Primary Application</b>	Production, Lighting		Production, Display Testing, Pixel-level Measurement, Advanced Vision			Uniformity Testing, R&D	Production, Display Testing, Pixel-level Measurement, Color Correction		
<b>Sensor pixel resolution</b>	1600 x 1200	6576 x 4384	8040 x 5360	8192 x 5460	9568 x 6380	1600 x 1200	3296 x 2472	6576 x 4384	9568 x 6380
<b>Sensor megapixels</b>	1.9	28.8	43.1	44.7	61.0	1.9	8.1	28.8	61.0
<b>Sensor Type</b>	CCD			CMOS		CCD			CMOS
<b>System Dynamic Range</b> (single exposure, per pixel)	59 dB (1 x 1 binning)			66 dB (1 x 1 binning)	76 dB (1 x 1 binning)	59 dB (1 x 1 binning)			76 dB (1 x 1 binning)
<b>Luminance (Minimum)*</b>	0.00001 cd/m <sup>2</sup> Limit of Detection 0.0001 cd/m <sup>2</sup> @ SNR = 60 0.0005 cd/m <sup>2</sup> @ SNR = 100		0.0001 cd/m <sup>2</sup> Limit of Detection 0.0002 cd/m <sup>2</sup> @ SNR = 60 0.0005 cd/m <sup>2</sup> @ SNR = 100	0.0005 cd/m <sup>2</sup> Limit of Detection 0.0010 cd/m <sup>2</sup> @ SNR = 60 0.0015 cd/m <sup>2</sup> @ SNR = 100	0.0005 cd/m <sup>2</sup> Limit of Detection 0.0010 cd/m <sup>2</sup> @ SNR = 60 0.0015 cd/m <sup>2</sup> @ SNR = 100	0.00001 cd/m <sup>2</sup> Limit of Detection 0.0001 cd/m <sup>2</sup> @ SNR = 60 0.0005 cd/m <sup>2</sup> @ SNR = 100		0.0005 cd/m <sup>2</sup> Limit of Detection 0.0010 cd/m <sup>2</sup> @ SNR = 60 0.0015 cd/m <sup>2</sup> @ SNR = 100	
<b>Luminance (Maximum)</b>	10 <sup>10</sup> cd/m <sup>2</sup> with optional ND filters					10 <sup>10</sup> cd/m <sup>2</sup> with optional ND filters			
<b>System accuracy**</b>	Illuminance ± 3% Luminance (Y) ± 3%					Illuminance ± 3% Luminance (Y) ± 3% Color Coordinates (x,y) ± 0.003			
<b>Short-term repeatability*</b>	Illuminance ± 0.02% Luminance (Y) ± 0.02%		Illuminance ± 0.04% Luminance (Y) ± 0.04%	Illuminance ± 0.02%; Luminance (Y) ± 0.02%	Illuminance ± 0.02% Luminance (Y) ± 0.02% Color Coordinates (x,y) ± 0.00005				
<b>Lens Type</b>	Electronically controlled focus and aperture					Electronically controlled focus and aperture			
<b>Focal Distances Available</b>	24, 35, 50, 100, 200 mm		35, 50, 100, 200 mm			24, 35, 50, 100, 200 mm			50, 100, 200 mm
<b>Field of View</b> (Full Angle, H x V degrees)	24 mm 20° x 15° 35 mm 14° x 10° 50 mm 10° x 8° 100 mm macro 5° x 4° 200 mm 3° x 2°	35 mm 55° x 37° 50 mm 40° x 28° 100 mm macro 20° x 14° 200 mm 11° x 7°	35 mm 40° x 27° 50 mm 29° x 19° 100 mm macro 15° x 10° 200 mm 8° x 5°	35 mm 55° x 37° 50 mm 40° x 28° 100 mm macro 20° x 14° 200 mm 11° x 7°	24 mm 20° x 15° 35 mm 14° x 10° 50 mm 10° x 8° 100 mm macro 5° x 4° 200 mm 3° x 2°	24 mm 38° x 30° 35 mm 29° x 22° 50 mm 21° x 16° 100 mm macro 10° x 8° 200 mm 5° x 4°	50 mm 40° x 28° 100 mm macro 20° x 14° 200 mm 11° x 7°		
<b>Minimum measurement time***</b>	0.2 sec - photopic	1.0 sec - photopic	1.4 sec - photopic	0.5 sec - photopic	0.6 sec - photopic	0.3 sec - photopic 1.1 sec - color	0.4 sec - photopic 1.2 sec - color	0.9 sec - photopic 2.4 sec - color	0.6 sec - photopic 1.8 sec - color
<b>Spatial measurement capabilities</b>	Luminance, Radiance, Illuminance, Irradiance, Luminous Intensity, Radiant Intensity.					Luminance, Radiance, Illuminance, Irradiance, Luminous Intensity, Radiant Intensity. CIE Chromaticity Coordinates, L*a*b* Color Scale, Correlated Color Temperature (CCT), Dominant Wavelength.			
<b>Units</b>	foot-lambert, cd/m <sup>2</sup> , nit, W/sr/m <sup>2</sup> , foot-candles, lux, lux-s, W/m <sup>2</sup> , W-s/m <sup>2</sup> , candela, W/sr.					foot-lambert, cd/m <sup>2</sup> , nit, W/sr/m <sup>2</sup> , foot-candles, lux, lux-s, W/m <sup>2</sup> , W-s/m <sup>2</sup> , candela, W/sr. CIE (x,y) and (u', v'), Kelvin (CC)			
<b>Communication interface</b>	Ethernet 100/1000, USB 2.0			10 Gigabit Ethernet (10 GigE)		Ethernet 100/1000, USB 2.0			10 Gigabit Ethernet (10 GigE)
<b>Power</b>	External AC / DC adapter, 100-240 V, 50-60 Hz, 60 Watts					100-240 V, 50-60 Hz, 140 Watts			
<b>LCD touch panel</b>	None					Resolution: 800 x 600 Diagonal: 125 mm			
<b>Dimensions (H x W x D)</b>	86 mm x 86 mm x 154 mm				86 mm x 86 mm x 170 mm	238 mm x 181 mm x 230 mm			
<b>Weight</b>	1.4 kg			1.2 kg	1.2 kg	4.9 kg			4.6 kg
<b>Operating temperature</b>	0 - 30° C		15 - 35° C	5 - 35° C	5 - 35° C	0 - 30° C			5 - 35° C
<b>Operating humidity</b>	20 - 70% non-condensing					20 - 70% non-condensing			