SOLAR®
LIGHT

Digital Sensors
Photopic Sensor PMA2130

Measures Illuminance According to Photopic Luminous Efficiency Curve

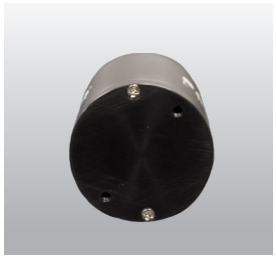
Solar Light's **Model PMA2130 Digital Photopic Light Sensor** is a portable Lux detector with a spectral response following the CIE photopic luminous efficiency function (which mimics the human eye's response in the visible region) and following the SI definition of 683 lm/W at 555 nm. It has a Teflon diffuser, assuring an angular response close to the cosine function (Lambertian response). The angular response of the PMA2130 sensor is cosine corrected, and suitable for measurements of diffuse radiation or radiation from extended sources. Several packages are available for different types of environments, including standard, low profile, weatherproof, and waterproof.

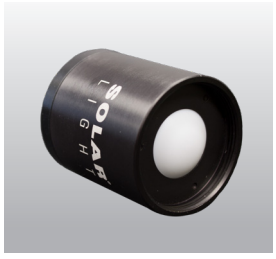
Applications

- Environmental Monitoring
- Industrial and Laboratory Safety
- Industrial and Residential Lighting
- Art and Museum Maintenance
- Photography and Film Studios

Features and Benefits

- High Sensitivity
- Excellent Long-term Stability
- Cosine Corrected
- NIST Traceable Calibration





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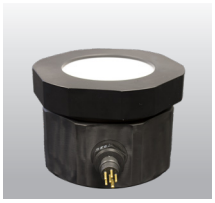
Standard Chassis - IP60
1.8" (45.8mm) High x 1.6" (40.6mm) Diameter

Weatherproof Standard Chassis - IP68
Can be submersed up to 3 meters deep
1.8" (45.8mm) High x 1.6" (40.6mm) Diameter

Low Profile Chassis - IP60
0.8" (21mm) High x 1.6" (40.6mm) Diameter



Waterproof Underwater Chassis - IP68
Can be submersed up to 100 meters deep
3.3" (83.4 mm) High x 4.7" (119.7 mm) Diameter

Options:

- Tripod Mounting Plate
- Weatherproof Chassis (submersible up to 3 meters)
- Low Profile Chassis
- Waterproof Underwater Chassis (submersible up to 100 meters)
- Analog Model Also Available (Model PMA1130)

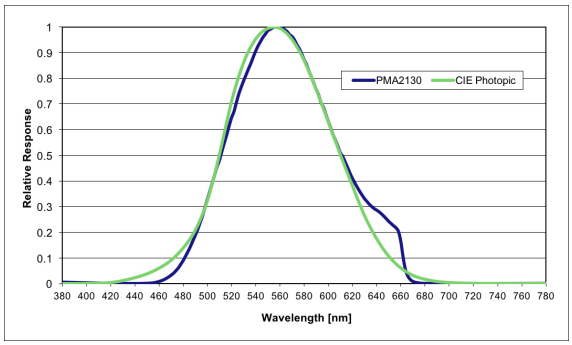


Fig. 1. Linear Spectral Response

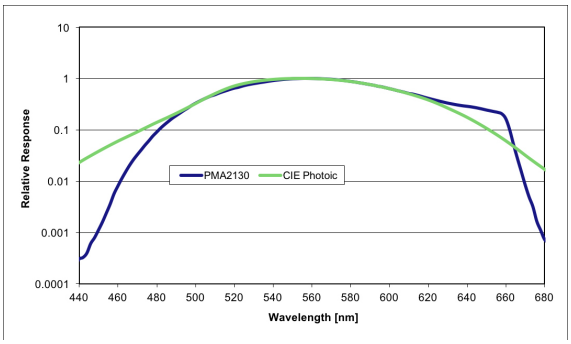


Fig. 2. Log Spectral Response

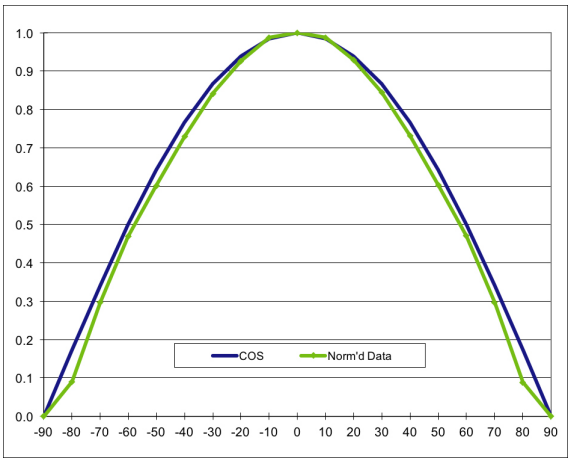


Fig. 3. Cosine Response

SPECIFICATIONS	
Spectral Response	Follows CIE Photopic Luminous Efficiency Curve (360-830nm), Figure 1
Cosine Response	5% for <60° (Standard Chassis)
Range	**See model chart on the next page*
Display Resolution	**See model chart on the next page*
Operating Environment	32 to 120°F (0 to +50°C)
Cable Length	**See cable length chart below*
Dimensions and Weight	**See outline drawings*

REFERENCES

"American National Standards: Nomenclature and Definitions for Illuminating Engineering" (1981) Illuminating Engineering Society, New York
Smith, Warren J. "Modern Optical Engineering", McGraw-Hill, New York (1966)

Part Number: 210013
Revision Level: D

Specifications subject to change without notice.

CABLE LENGTHS	
Standard Chassis	6ft Straight Cable (1.82m) *(Custom Lengths Available)*
Weatherproof Chassis	15ft Standard Cable (4.57m) *(Custom Lengths Available)*
Waterproof Underwater Chassis	Cable Length by Request. Specify up to 100 Meters.
Low Profile Chassis	6ft Straight Cable (1.82m) *(Custom Lengths Available)*

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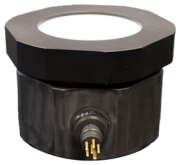
Partial Model Selection Chart

STANDARD CHASSIS - IP60		
Model	**Range**	**Display Resolution**
PMA2130D	200 [Lux] or 19 [ft-cd]	0.001 [Lux] or 0.001 [ft-cd]
PMA2130L	1,500 [Lux] or 140 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]
PMA2130E	2,000 [Lux] or 190 [ft-cd]	0.01 [Lux] or 0.01 [ft-cd]
PMA2130M	15,000 [Lux] or 1,400 [ft-cd]	0.1 [Lux] or 0.01 [ft-cd]
PMA2130	150,000 [Lux] or 14,000 [ft-cd]	1 [Lux] or 0.1 [ft-cd]
PMA2130H	1,500,000 [Lux] or 140,000 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]

WEATHERPROOF CHASSIS - IP68		
Model	**Range**	**Display Resolution**
PMA2130D-WP	200 [Lux] or 19 [ft-cd]	0.001 [Lux] or 0.001 [ft-cd]
PMA2130L-WP	1,500 [Lux] or 140 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]
PMA2130E-WP	2,000 [Lux] or 190 [ft-cd]	0.01 [Lux] or 0.01 [ft-cd]
PMA2130M-WP	15,000 [Lux] or 1,400 [ft-cd]	0.1 [Lux] or 0.01 [ft-cd]
PMA2130-WP	150,000 [Lux] or 14,000 [ft-cd]	1 [Lux] or 0.1 [ft-cd]
PMA2130H-WP	1,500,000 [Lux] or 140,000 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]



WATERPROOF UNDERWATER CHASSIS - IP68		
Model	**Range**	**Display Resolution**
PMA2130D-UW	200 [Lux] or 19 [ft-cd]	0.001 [Lux] or 0.001 [ft-cd]
PMA2130L-UW	1,500 [Lux] or 140 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]
PMA2130E-UW	2,000 [Lux] or 190 [ft-cd]	0.01 [Lux] or 0.01 [ft-cd]
PMA2130M-UW	15,000 [Lux] or 1,400 [ft-cd]	0.1 [Lux] or 0.01 [ft-cd]
PMA2130-UW	150,000 [Lux] or 14,000 [ft-cd]	1 [Lux] or 0.1 [ft-cd]
PMA2130H-UW	1,500,000 [Lux] or 140,000 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]

LOW PROFILE CHASSIS - IP60		
Model	**Range**	**Display Resolution**
PMA2130D-F	200 [Lux] or 19 [ft-cd]	0.001 [Lux] or 0.001 [ft-cd]
PMA2130L-F	1,500 [Lux] or 140 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]
PMA2130E-F	2,000 [Lux] or 190 [ft-cd]	0.01 [Lux] or 0.01 [ft-cd]
PMA2130M-F	15,000 [Lux] or 1,400 [ft-cd]	0.1 [Lux] or 0.01 [ft-cd]
PMA2130-F	150,000 [Lux] or 14,000 [ft-cd]	1 [Lux] or 0.1 [ft-cd]
PMA2130H-F	1,500,000 [Lux] or 140,000 [ft-cd]	0.01 [Lux] or 0.001 [ft-cd]

Custom ranges, cable lengths, and cable types are available upon request – please consult factory for details

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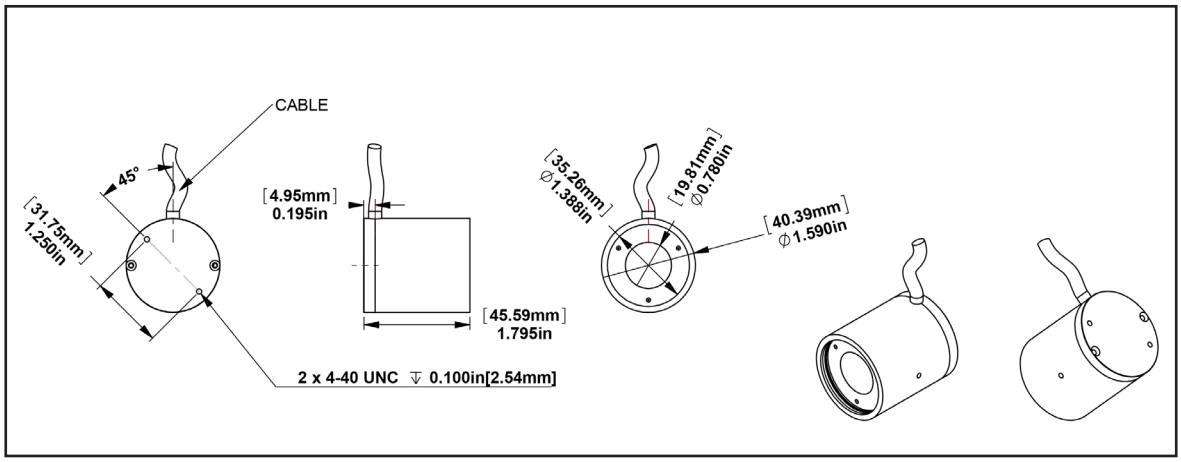
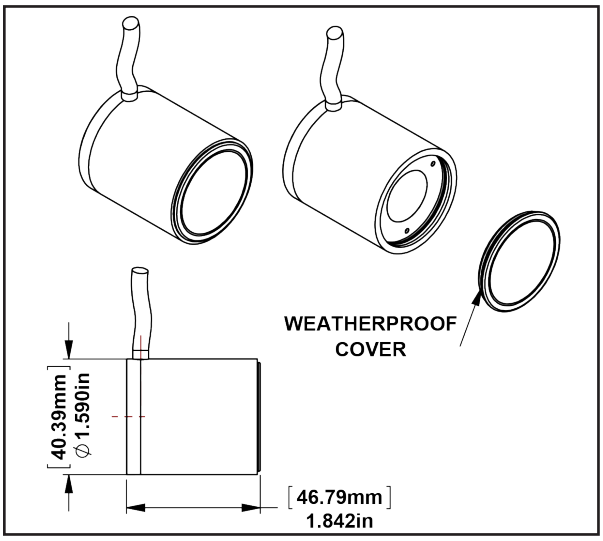
Standard Chassis



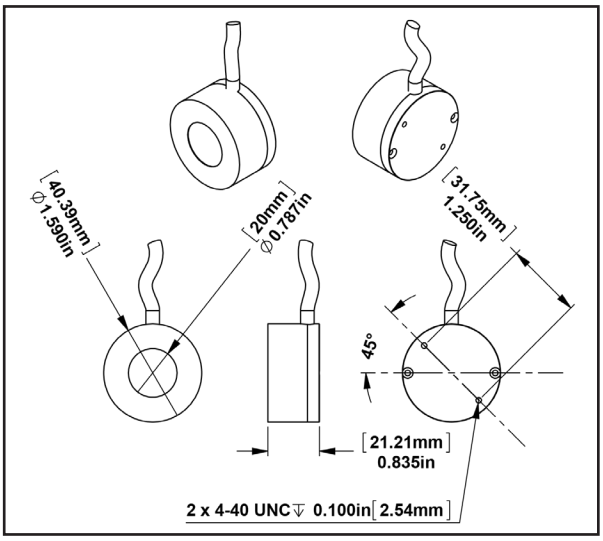
Est. Weight: 4 oz. (113 g)

Weatherproof Chassis



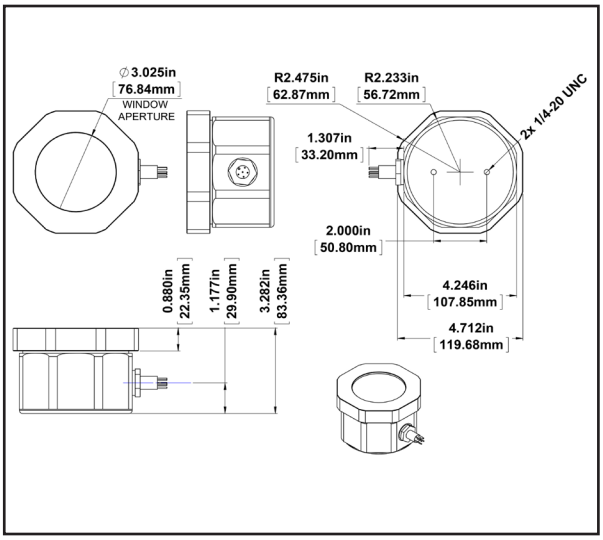
Est. Weight: 4.2 oz. (119 g)

Low Profile Chassis



Est. Weight: 2.2 oz. (62 g)

Waterproof Underwater Chassis



Est. Weight: 3.7 lbs. (1678 g)

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Since 1967, Solar Light Company, LLC has been recognized worldwide as America's premier manufacturer of Precision Solar Simulators and Light Sources, Light Measurement Instrumentation, UV Transmittance Analyzers, Meteorological Instrumentation, and Digital and Analog Sensors. Our advanced line of UV, visible, and IR radiometers and light meters measure laboratory, industrial, environmental, and health related light levels with NIST traceable accuracy. Column ozone, aerosol, and water vapor thickness measurements, in addition to long-term global ultraviolet radiation studies all over the world are performed using our atmospheric line of instrumentation. Solar Light also provides NIST traceable spectroradiometric analyses, calibrations for light meters and light sources, accelerated ultraviolet radiation degradation testing of materials, and OEM instrumentation and monitors. Please visit our website for more details, specifications, and pictures!

State Of The Art Solar Simulators available in 150-1000+ watt UV or AM variations for a variety of applications including PV Cell Testing, Materials Testing, Pre-Irradiation for *In Vitro* Broad Spectrum Sunscreen Testing, SPF Testing, and much more.

Multi-Functional Professional Grade Radiometers available with and without data logging, and compatible with over 130 Solar Light PMA-Series Sensors to measure UV, Visible and IR wavelengths. Specialty Meters also available to measure UV Radiation, SUV/UVA, Scotopic/ Photopic Spectra, and much more.

Advanced NIST-Traceable Sensors for accurate measurement of UVA, UVB, UVA+B, UVC, Visible, IR, Photostability, Temperature, and Custom Wavelength – well over 130 models in both digital and analog configurations, all compatible with our Radiometers.

Ultraviolet Transmittance Analyzers available as complete integrated turnkey systems to meet the latest ISO24443 requirements.

Handheld Ozonometers and Sunphotometers for fast and dependable Column Ozone, Aerosol, and Water Vapor Thickness measurements, in addition to long-term global ultraviolet radiation studies.

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