

Solar Light's **Model PMA1130 Analog 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. The sensor has a diffuser, assuring an angular response close to the cosine function (Lambertian response.) 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





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



**OEM Chassis - IP60**  
1.6" (40.6mm) High x 1.3" (32mm) Diameter

### Options:

- Tripod Mounting Plate
- Weatherproof Chassis (submersible up to 3 meters)
- Low Profile Chassis
- Waterproof Underwater Housing (submersible up to 100 meters)
- OEM Chassis for High Quantity Applications
- Digital Model for Interface with PMA Series Meters (Model PMA2130)

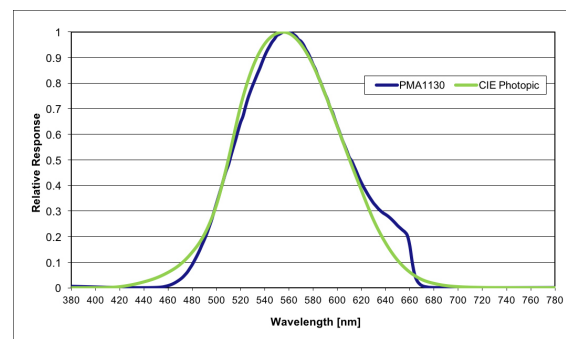


Fig. 1. Linear Spectral Response

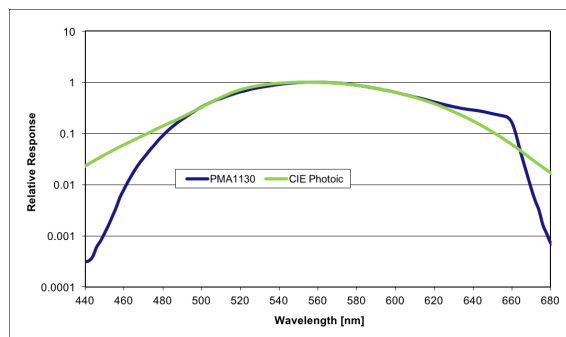


Fig. 2. Log Spectral Response

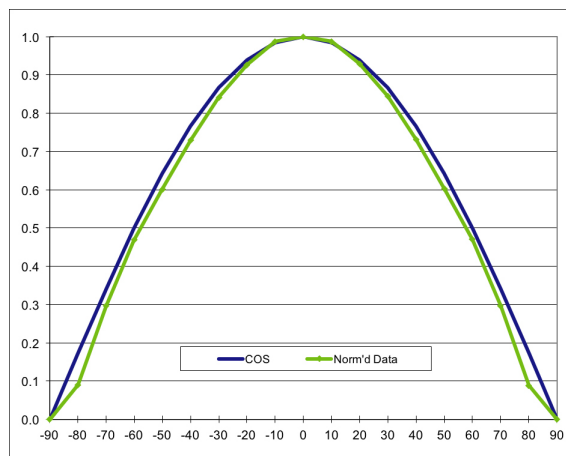


Fig. 3. Cosine Response

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

Part Number: 210037

Revision Level: D

Specifications subject to change without notice.

### Partial Model Selection Chart



STANDARD CHASSIS - IP60				
Model	Input Power	Output Signal	Range	Cable Type
PMA1130-S-05-200	9-24 VDC @ 30 mA	0-5 VDC	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-S-420-200	9-24 VDC @ 70 mA	4-20 mA	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130L	±5-12 VDC @ <1 mA	*0-5 VDC	1,500 [Lux] or 140 [ft-cd]	6' cable stripped/tinned
PMA1130-S-05-2000	9-24 VDC @ 30 mA	0-5 VDC	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-S-420-2000	9-24 VDC @ 70 mA	4-20 mA	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-S-05-150K	9-24 VDC @ 30 mA	0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-S-420-150K	9-24 VDC @ 70 mA	4-20 mA	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130	±5-12 VDC @ <1 mA	*0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	6' cable stripped/tinned



OEM CHASSIS - IP60				
Model	Input Power	Output Signal	Range	Cable Type
PMA1130-007-05-200	9-24 VDC @ 30 mA	0-5 VDC	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-006-420-200	9-24 VDC @ 70 mA	4-20 mA	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-007-05-2000	9-24 VDC @ 30 mA	0-5 VDC	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-006-420-2000	9-24 VDC @ 70 mA	4-20 mA	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-007-05-150K	9-24 VDC @ 30 mA	0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-006-420-150K	9-24 VDC @ 70 mA	4-20 mA	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable



WEATHERPROOF CHASSIS - IP60				
Model	Input Power	Output Signal	Range	Cable Type
PMA1130-WP-05-200	9-24 VDC @ 30 mA	0-5 VDC	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-WP-420-200	9-24 VDC @ 70 mA	4-20 mA	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130L-WP	±5-12 VDC @ <1 mA	*0-5 VDC	1,500 [Lux] or 140 [ft-cd]	6' cable stripped/tinned
PMA1130-WP-05-2000	9-24 VDC @ 30 mA	0-5 VDC	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-WP-420-2000	9-24 VDC @ 70 mA	4-20 mA	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-WP-05-150K	9-24 VDC @ 30 mA	0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-WP-420-150K	9-24 VDC @ 70 mA	4-20 mA	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-WP	±5-12 VDC @ <1 mA	*0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	6' cable stripped/tinned



WATERPROOF UNDERWATER CHASSIS - IP68				
Model	Input Power	Output Signal	Range	Cable Type
PMA1130L-UW	±5-12 VDC @ <1 mA	*0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	6' cable stripped/tinned

\*0 to Supply -0.5 Volts

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

### Partial Model Selection Chart



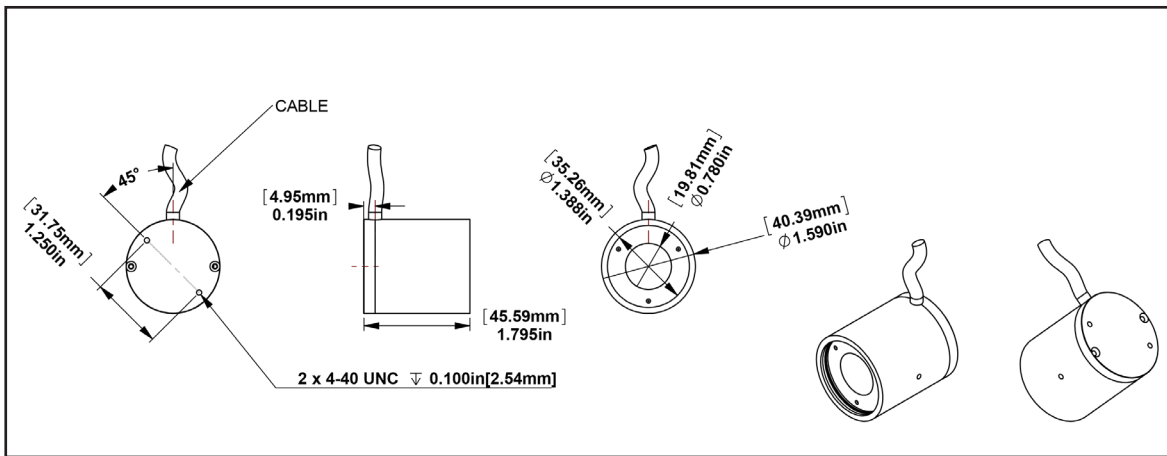
LOW PROFILE CHASSIS - IP60				
Model	Input Power	Output Signal	Range	Cable Type
PMA1130-F-05-200	9-24 VDC @ 30 mA	0-5 VDC	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-F-420-200	9-24 VDC @ 70 mA	4-20 mA	200 [Lux] or 19 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130L-F	±5-12 VDC @ <1 mA	*0-5 VDC	1,500 [Lux] or 140 [ft-cd]	6' cable stripped/tinned
PMA1130-F-05-2000	9-24 VDC @ 30 mA	0-5 VDC	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-F-420-2000	9-24 VDC @ 70 mA	4-20 mA	2,000 [Lux] or 190 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-F-05-150K	9-24 VDC @ 30 mA	0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-F-420-150K	9-24 VDC @ 70 mA	4-20 mA	150,000 [Lux] or 14,000 [ft-cd]	Pigtail w/ 2 meter detachable cable
PMA1130-F	±5-12 VDC @ <1 mA	*0-5 VDC	150,000 [Lux] or 14,000 [ft-cd]	6' cable stripped/tinned

### Analog Wiring Chart

WIRE COLOR	PMA11xx-420	PMA11xx-05	PMA11xx
White	Power Ground*	Signal Out 0-5 VDC	Signal Out 0 to Vin-0.5 VDC
Blue		Power Ground	Power Ground
Green			Analog Ground
Red			Vin +5-12 VDC
Orange			Vin -5-12 VDC
Yellow			Signal Out 0 to Vin-0.5 VDC
Black		Analog Ground	
Pink		Vin 9-24 VDC	
Brown	Vin 9-24 VDC*		
Bare or Braid		Shield	Shield
A/C Plug			

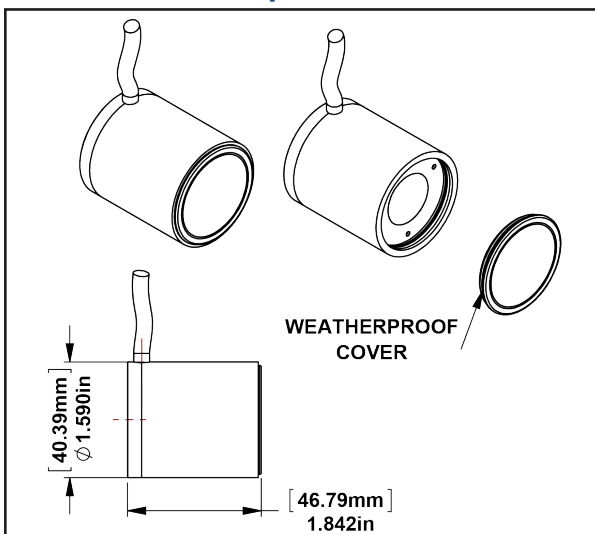
\*Current meter is connected in series with power supply and sensor

## Standard Chassis



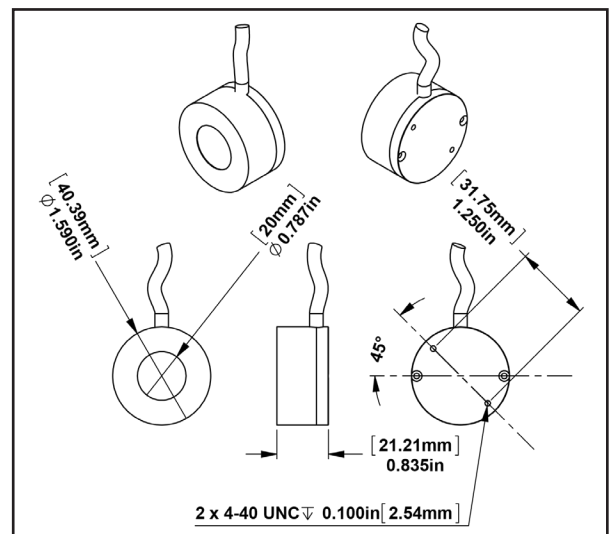
Est. Weight: 4 oz. (113 g)

## Weatherproof Chassis



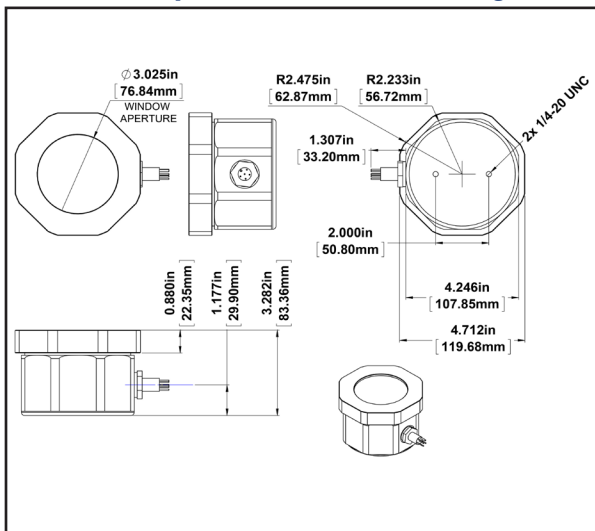
Est. Weight: 4.2 oz. (119 g)

## Low Profile Chassis



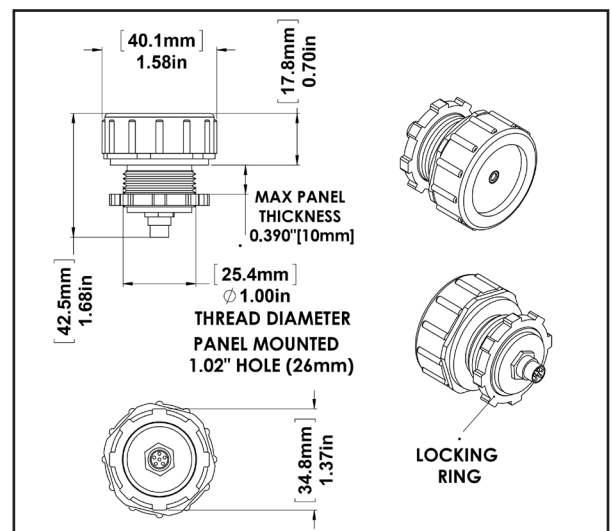
Est. Weight: 2.2 oz. (62 g)

## Waterproof Underwater Housing



Est. Weight: 3.7 lbs. (1678 g)

## OEM Chassis



Est. Weight: 1.2 oz. (34 g)

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.