

Solar Light 的 **Model PMA2121 型数字蓝光安全传感器** 可显示有效辐照度，并采用美国政府工业卫生学家会议 (ACGIH) 蓝光危害光谱加权函数进行加权。雇主、安全官员和风险管理者可以使用此传感器保护工人免受每日过度蓝光照射的影响。大量医学研究表明，这种暴露会对眼睛造成永久性和不可逆转的损害，造成视野缺损和视力障碍。可能产生蓝光危害的光源包括单色和准直激光、准直电弧和蓝色 LED。为了防止因慢性蓝光照射而对视网膜造成光化学损伤，对于角度小于 0.011 弧度的光源，其最大照射限值每 10,000 秒（或大约 2 小时 47 分钟）不应超过 $10\text{mJ}/\text{cm}^2$ 。对于曝光时间超过 10,000 秒的情况，加权辐照度不应超过 $1\mu\text{W}/\text{cm}^2$ 。



应用领域

- 工业辐射安全监测和实验室安全
- 印刷
- UV 紫外线固化和光刻
- 杀菌照明监测
- 安全眼镜测试
- 焊接环境监测

优势与特点：

- 高灵敏度
- 卓越的长期稳定性
- 余弦校正
- NIST 可追溯校准
- 易于使用

典型的蓝光辐照水平：

- 200W 卤素灯，距离 50 cm 处时 – $70 [\mu\text{W}/\text{cm}^2]$
- 150W 氙弧灯，距离 50 cm 处时 – $600 [\mu\text{W}/\text{cm}^2]$
- 40W 荧光灯，距离 2m 处时 – $5 [\mu\text{W}/\text{cm}^2]$

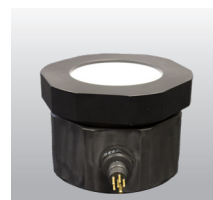




标准型Standard Chassis - IP60
1.8" (45.8mm) High x 1.6" (40.6mm) Diameter



防水型Standard Chassis - IP68
可浸入水下 3 米深
1.8" (45.8mm) High x 1.6" (40.6mm) Diameter



水下防水型Underwater Chassis - IP68
可潜水至100米深
3.3" (83.4 mm) High x 4.7" (119.7 mm) Diameter

可选:

- 三脚架安装板
- 防水底盘 (潜水深度可达 3 米)
- 防水水下底盘 (潜水深度可达 100 米)
- 还提供模拟输出型号 (Model PMA1121)

技术规格

光谱响应	遵循 ACGIH 蓝色危害作用光谱, 如图 1
余弦响应	±5% (角度 <40°)(Standard Chassis)
范围	*参见下页模型图
显示分辨率	*参见下页模型图
操作环境	32 to 120°F (0 to +50°C)
温度系数	Negligible
电缆长度	*请参阅下面的电缆长度表
尺寸与重量	*参见外形图

参考文献

"Documentation of the threshold limit values for Physical Agents in the Work Environment"
American Conference of Governmental Industrial Hygienists, Inc.
Sliney, D.H., The Merits of an Envelope Action Spectrum for UVR Exposure Criteria, Am. Industr. Hyg. Assn. J. 33 (9):644-653, 1972

Part Number: 210011

Revision Level: C

Specifications subject to change without notice.

线缆长度

Standard Chassis标准型	6英尺直线缆 (1.82米) (可定制长度)
Weatherproof Chassis防水型	15英尺标准电缆 (4.57 米) (可定制长度)
Waterproof Underwater Chassis 深度防水型	电缆长度按要求。 指定最多 100 米。

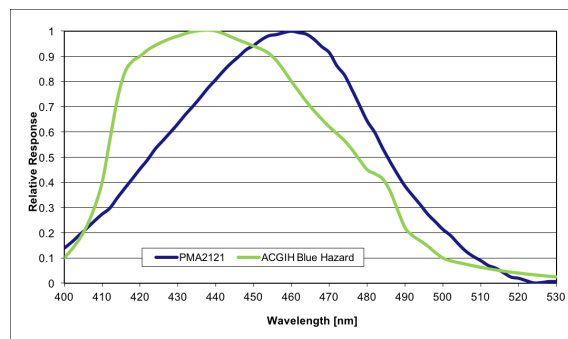


图 1. 光谱响应

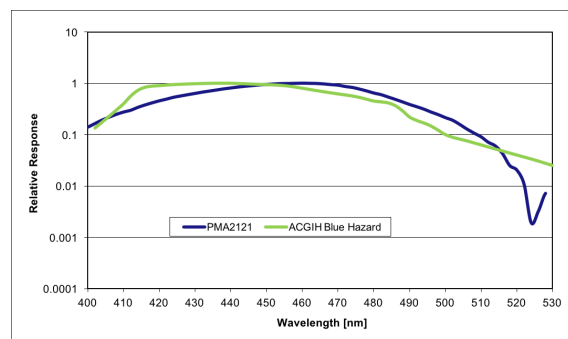


图 2. 对数光谱响应

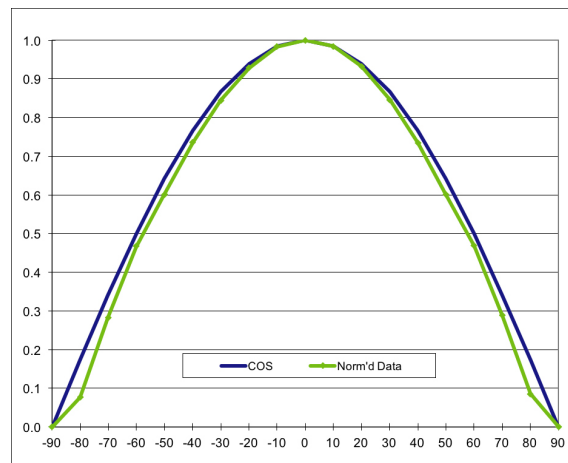


图 3. 余弦响应

部分选型表



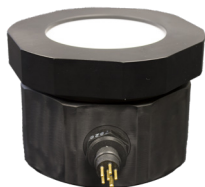
STANDARD CHASSIS - IP60

Model	范围	显示分辨率
PMA2121	2,000 [$\mu\text{W}/\text{cm}^2$] or 20,000 [mW/m^2]	0.01 [$\mu\text{W}/\text{cm}^2$] or 0.1 [mW/m^2]
PMA2121H	20,000 [$\mu\text{W}/\text{cm}^2$] or 200,000 [mW/m^2]	0.1 [$\mu\text{W}/\text{cm}^2$] or 1 [mW/m^2]



WEATHERPROOF CHASSIS - IP68

Model	范围	显示分辨率
PMA2121-WP	2,000 [$\mu\text{W}/\text{cm}^2$] or 20,000 [mW/m^2]	0.01 [$\mu\text{W}/\text{cm}^2$] or 0.1 [mW/m^2]
PMA2121H-WP	20,000 [$\mu\text{W}/\text{cm}^2$] or 200,000 [mW/m^2]	0.1 [$\mu\text{W}/\text{cm}^2$] or 1 [mW/m^2]

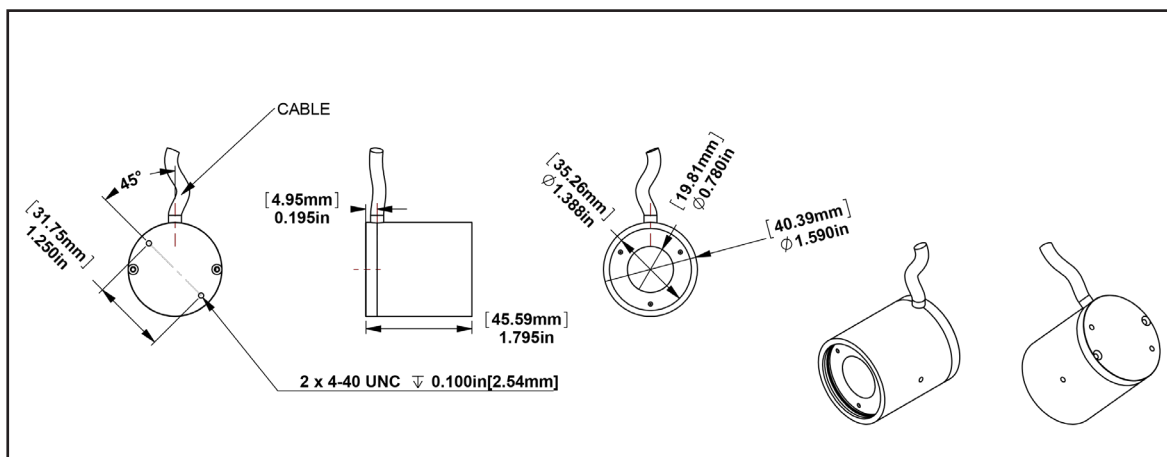


WATERPROOF UNDERWATER CHASSIS - IP68

Model	范围	显示分辨率
PMA2121-UW	2,000 [$\mu\text{W}/\text{cm}^2$] or 20,000 [mW/m^2]	0.01 [$\mu\text{W}/\text{cm}^2$] or 0.1 [mW/m^2]
PMA2121H-UW	20,000 [$\mu\text{W}/\text{cm}^2$] or 200,000 [mW/m^2]	0.1 [$\mu\text{W}/\text{cm}^2$] or 1 [mW/m^2]

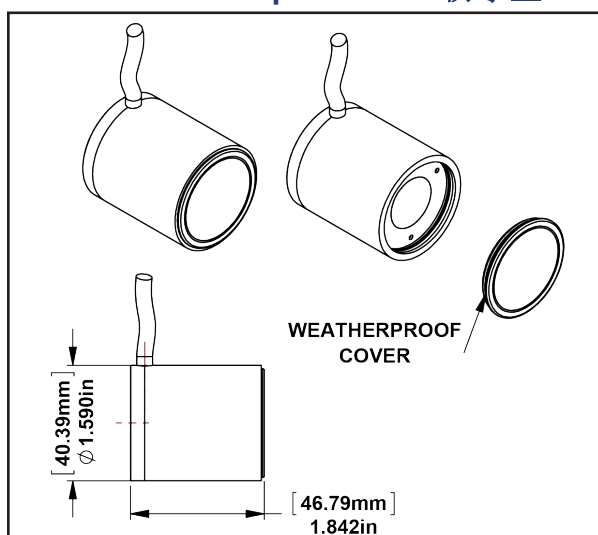
Custom ranges, cable lengths, and cable types are available upon request – please consult factory for details

Standard Chassis标准型



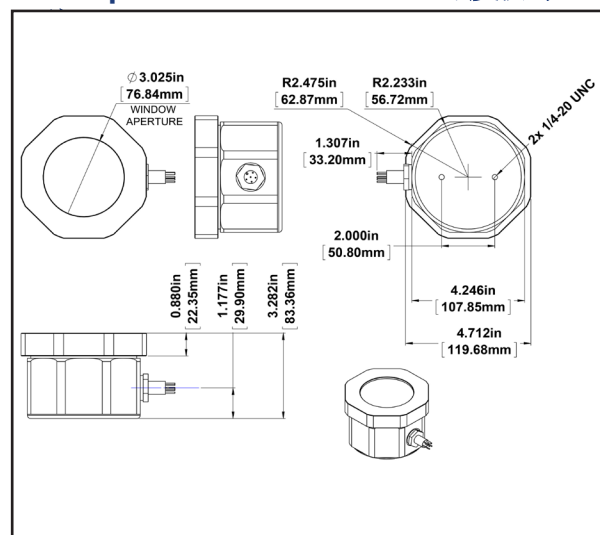
重量: 4 oz. (113 g)

Weatherproof Chassis防水型



重量: 4.2 oz. (119 g)

Waterproof Underwater Chassis深度防水



重量: 3.7 lbs. (1678 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.