



产品特点 / Features

- ☑ 紧凑型数字光功率计表头 / Compact digital power meter console
- ☑ 测量连续光的功率 / For CW source detection
- ☑ 触屏显示 / Touchscreen display
- ☑ USB 2.0 接口可用于远程控制、数据传输和充电 / USB 2.0 interface for remote control, data transfer and charging
- ☑ 提供两种供电选择：18650 电池或内置锂电池，用户可根据需求二选一。 / Two power options available: choose either 18650 battery or built-in lithium battery.
- ☑ 充电后可工作 10 小时 / Up to 10 hours of battery-powered operation between charging
- ☑ 可提供探头升级和重新校准服务 / Sensors upgrade and recalibration services available

应用领域 / Applications

- ✧ 光功率测试 / Optical power testing
- ✧ 无源器件测试 / Passive component testing
- ✧ 光传感系统的光功率监测 / Optical power monitoring for optical sensing systems
- ✧ 光通信系统的光功率监测 / Optical power monitoring for optical communication systems

PM100USB 光功率计表头配合光电探头，适用于产线测试与自动化集成等工业场景。设备采用触屏操控及物理快捷键，支持波长设置、相对测量、精度切换、单位转换及界面切换，简化现场操作流程。测量结果以数字显示或实时趋势图呈现，便于监控功率稳定性，满足老化测试与在线监测需求。标配 USB 接口支持与工控机通信，可实现远程数据采集与系统集成。同时，设备支持探头校准、量程切换及归零校正，确保不同波段和功率等级下的测量准确性与长期重复性。

The PM100USB optical power meter head, paired with a photodiode sensors, is suited for production-line testing and automated integration. It features a touchscreen and physical shortcut keys for wavelength setting, relative measurement, resolution adjustment, unit switching, and display layout selection. Measurement readouts are available in digital or real-time trend chart formats for power stability monitoring during burn-in and in-line inspection. The USB interface enables remote data acquisition and system integration. The unit supports probe calibration, ranging, and zero adjustment to ensure measurement accuracy and long-term repeatability across various wavelengths and power levels.



性能指标 / Specifications

性能参数 / Parameters	技术指标 / Specifications
兼容探头型号 / Compatible sensors models	S12 / S13 / S14 / S15
电流响应范围 / Photocurrent response range	0.3 nA ~ 8.0 mA
测量不准确度 / Measurement uncertainty	< 3%
更新速率 / Update rate	0.5 / 1.0 / 10.0 s
显示方式 / Display format	数字显示和实时趋势图显示 / Numeric readout and real-time trend plot
探头接口类型 / Sensors connector type	DB-9 连接器 (母) / DB-9 connector (female)
外型尺寸 / Dimensions (W × H × D)	138.0 × 97.5 × 42.0 mm
充电器类型 / Charger type	DC +5 V / 2 A
外置电池规格 / External power cell	18650 × 2
测量模式 / Measurement mode	绝对测量和相对测量 / Absolute and relative measurement
工作温度范围 / Operating temperature range	0 °C ~ +40 °C
储存温度范围 / Storage temperature range	-40 °C ~ +70 °C
用户界面 / User interface	触摸屏和按键 / Touchscreen and physical shortcut buttons



产品特点 / Features

- ☑ 无显示屏紧凑型数字光功率计表头，适合系统集成 / Display-less compact digital power meter console for system integration
- ☑ 专用于连续光（CW）功率检测 / Dedicated to CW optical power detection
- ☑ 双通讯接口：USB 2.0 与 RS485，均支持供电、远程控制及数据传输 / Dual communication interfaces: USB 2.0 and RS485, both support power supply, remote control, and data transfer
- ☑ RS485 接口额外支持多表头组网，便于分布式部署 / RS485 interface additionally supports multi-unit networking for distributed deployment
- ☑ 提供探头升级与重新校准服务，确保长期测量精度 / Sensor upgrade

应用领域 / Applications

- ✧ 光功率测试 / Optical power testing
- ✧ 无源器件测试 / Passive component testing
- ✧ 光传感系统的光功率监测 / Optical power monitoring for optical sensing systems
- ✧ 光通信系统的光功率监测 / Optical power monitoring for optical communication systems

PM102U 型光功率计表头与光电功率探头配套，构成面向工业激光与光源测量的光功率检测终端。设备支持通过远程指令完成波长配置、测量模式切换（包括相对测量，即显示相对于用户设定基准值的功率变化）、单位转换及测量结果读取等操作，减少现场人工干预。同时标配 RS485 通信接口，可实现多台功率计的组网联机与集中控制，适用于产线多点监测、自动化测试系统集成及远程数据采集等工业场景。

The PM102U optical power meter head, paired with a photodiode sensors, is designed for industrial laser and light source power measurement. It supports remote command configuration for wavelength, relative measurement mode (displaying power deviation from a user-set reference), unit switching, and data readout, reducing on-site intervention. With a standard RS485 interface, it enables networking and centralized control of multiple units, suitable for production-line monitoring, automated test integration, and remote data acquisition.

性能指标 / Specifications

性能参数 / Parameters	技术指标 / Specifications
兼容探头型号 / Compatible sensors models	S12 / S13 / S14 / S15
电流响应范围 / Photocurrent response range	0.3 nA ~ 8.0 mA
测量不准确度 / Measurement uncertainty	< 3%
通信方式 / Communication interface	USB and RS485
组网容量（通过 RS485） / Network capacity（Via RS485）	≤ 32 节点 / node
探头接口类型 / Sensors connector type	DB-9 连接器(母) / DB-9 connector (female)
外型尺寸 / Dimensions (W × H × D)	98.0 × 66.6 × 29.5 mm
测量模式 / Measurement mode	绝对测量和相对测量 / Absolute and relative
工作温度范围 / Operating temperature range	0 °C ~ +40 °C
储存温度范围 / Storage temperature range	-40 °C ~ +70 °C



产品特点 / Features

- ☑ 宽光谱覆盖 / Wide spectral coverage
- ☑ 高灵敏度与宽动态范围 / High sensitivity and wide dynamic range
- ☑ 内置校准，即插即用 / Embedded calibration for Plug-and-Play
- ☑ 紧凑坚固，适配工业集成 / Compact & robust for industrial integration

S12 系列标准光电二极管功率探头采用高灵敏度 Si / InGaAs 光电二极管，覆盖 0.4 ~ 1.7 μm 波长范围，功率测量下限低至 -70 dBm (100 pW)，上限达 +27 dBm (500 mW)，适配光纤通信、光传感及激光测试等领域的精密光功率测量需求。探头采用紧凑金属封装，配备 FC 光纤接口与 DB-9 电气接口，兼容 PM100USB、PM102U 等表头。每只探头出厂经独立标定，表头连接后自动识别加载，无需人工配置。S12 系列提供六种型号，覆盖 Si 与 InGaAs 双材料体系，可灵活选配以满足不同波段及功率等级的检测需求，适用于器件插入损耗测试、激光输出监测及自动化产线集成等工业场景。

The S12 Series standard photodiode power sensors feature high-sensitivity Si/InGaAs photodiodes, covering a wavelength range of 0.4 ~ 1.7 μm with a power measurement floor as low as -70 dBm (100 pW) and a maximum of +27 dBm (500 mW). They are designed for precision optical power measurement in fiber-optic communications, optical sensing, laser testing, and related applications. Housed in a compact metal enclosure, the sensors are equipped with an FC fiber-optic connector and a DB-9 electrical interface, ensuring compatibility with PM100USB, PM102U, and other power meter consoles. Each sensor is individually calibrated at the factory, with automatic recognition and loading upon connection to the console—eliminating the need for manual configuration. Available in six models across Si and InGaAs material variants, the S12 Series offers flexible selection to accommodate diverse wavelength and power level requirements, making it suitable for insertion loss testing of passive components, laser output monitoring, and automated production line integration in industrial environments.

性能指标 / Specifications

性能参数 / Parameters	技术指标 / Specifications					
型号 / Model	S121VN	S121S	S122VN	S122S	S123VN	S123S
探头类型 / Sensors type	Si	InGaAs	Si	InGaAs	Si	InGaAs
波长范围 / Wavelength range	0.4-1.1 um	0.8-1.7 um	0.4-1.1 um	0.8-1.7 um	0.4 -1.1 um	0.8-1.7 um
功率范围 / Power range	-70 dBm ~ +7 dBm (100 pW ~ 5 mW)		-60 dBm ~ +17 dBm (1 nW ~ 50 mW)		-50 dBm ~ +27 dBm (10 nW ~ 500 mW)	
分辨率 / Power resolution	10 pW		0.1 nW		1 nW	
线性度 / Power linearity	±0.5%					
光连接器 / Fiber optic connector	FC					
电接口 / Electrical interface	DB-9 连接器（公） / DB-9 connector (male)					
线缆长度 / Cable length	1 m					
探头尺寸 / Sensors size	Φ41.0 × 34.0 mm					
工作温度 / Operating temperature	0 °C ~ +40 °C					
储存温度 / Storage temperature	-40 °C ~ +70 °C					
支架 / Mount	选配 / Optional					



产品特点 / Features

- ☑ 超薄紧凑设计，适合狭窄空间 / Ultra-Slim profile for tight spaces
- ☑ 宽光谱覆盖，双材料可选 / Wide spectral coverage with dual material
- ☑ 高灵敏度与宽动态范围 / High sensitivity and wide dynamic range
- ☑ 内置校准，即插即用 / Embedded calibration for Plug-and-Play
- ☑ 大孔径空间耦合输入 / Large-Aperture free-space input
- ☑ 标准接口，兼容性强 / Standard interfaces for broad compatibility
- ☑ 增强电磁屏蔽，确保信号完整性 / Enhanced shielding for signal integrity

S13 系列超薄光电二极管功率探头采用高灵敏度光电二极管，适用于狭窄空间内的精密光功率测量场景。探头采用超薄机械设计，可轻松安装于密集光学元件、笼式系统及其他标准功率计无法进入的狭小空间。标配空间耦合入射方式，兼容 DB-9 电气接口，适配 PM100USB、PM102U 等表头。每只探头出厂经独立标定，表头连接后自动识别加载，无需人工配置。S13 系列提供两种型号，分别采用 Si 与 Ge 探测器材料，可灵活选配以满足不同波段检测需求。探头具备良好的电磁屏蔽性能，有效抑制外部干扰，确保测量信号完整性，适用于光纤通信器件测试、激光器输出监测及自动化产线集成等工业场景。

The S13 Series slim photodiode power sensors feature high-sensitivity photodiodes for precision optical power measurement in confined spaces. Their ultra-slim design enables installation in densely packed optical assemblies, cage systems, and other tight spaces where standard sensors cannot fit. Free-space coupling is provided as standard, with a DB-9 interface for compatibility with PM100USB, PM102U, and other consoles. Each sensor is individually factory-calibrated, with automatic recognition upon console connection—no manual setup required. Available in two models with Si and Ge detector materials, the S13 Series offers flexible selection for different wavelength requirements. Robust electromagnetic shielding ensures signal integrity by suppressing external interference, making the sensors suitable for fiber-optic component testing, laser output monitoring, and automated production line integration.

性能指标 / Specifications

性能参数 / Parameters	技术指标 / Specifications	
型号 / Model	S131VN	S131S
探头类型 / Sensors type	Si	Ge
波长范围 / Wavelength range	0.4 ~ 1.1 μm	0.8 ~ 1.7 μm
功率范围 / Power range	-70 dBm ~ +5 dBm (Up to 15 dBm)	
分辨率 / Power resolution	10 pW / 0.1 nW	
线性度 / Power linearity	$\pm 0.5\%$	
光连接方式 / Optical coupling	空间耦合 / Free-space	
电接口 / Electrical interface	DB-9 连接器（公） / DB-9 connector (male)	
线缆长度 / Cable length	1 m	
探头尺寸 / Sensors size	150.0 × 21.0 × 12.0 mm	
工作温度 / Operating temperature	0 °C ~ +40 °C	
储存温度 / Storage temperature	-40 °C ~ +70 °C	
支架 / Mount	选配 / Optional	



积分球光电二极管功率探头

Integrating Sphere Photodiode Power Sensors

S14 系列



产品特点 / Features

- ☑ 积分球光收集设计，降低测量不确定性 / Integrating sphere design for reduced measurement uncertainty
- ☑ 宽光谱覆盖，双材料可选 / Wide spectral coverage with dual material
- ☑ 内置校准，即插即用 / Embedded calibration for Plug-and-Play
- ☑ 高功率测量能力 / High-Power measurement capability
- ☑ 标准接口，兼容性强 / Standard interfaces for broad compatibility

S14 系列积分球光电二极管功率探头采用高灵敏度 Si/InGaAs 光电二极管与积分球光收集结构，覆盖 0.4 ~ 1.7 μm 波长范围，功率测量上限高达 +43 dBm (20 W)，专为高功率激光测量及非标准光束收集场景设计。探头采用积分球入射口设计，有效降低光束指向性、偏振态及模场分布不均对测量结果的影响，确保高重复性与低偏振相关损耗。配备标准 FC 光纤接口与 DB-9 电气接口，兼容 PM100USB、PM102U 等表头。每只探头出厂经独立标定，表头连接后自动识别加载，无需人工配置。S14 系列提供四种型号，覆盖 Si 与 InGaAs 双材料体系及不同功率等级，可灵活选配以满足高功率激光器输出监测、光纤放大器测试及光通信系统功率检测等工业场景需求。

The S14 Series integrating sphere photodiode power sensors feature high-sensitivity Si/InGaAs photodiodes with an integrating sphere light-collection structure, covering 0.4 ~ 1.7 μm and measuring up to +43 dBm (20 W) for high-power laser and non-standard beam applications. The integrating sphere input minimizes errors from beam pointing, polarization, and mode field variations, ensuring high repeatability and low polarization-dependent loss. Equipped with FC and DB-9 interfaces, the sensors are compatible with PM100USB, PM102U, and other consoles. Each sensor is factory-calibrated with automatic recognition upon console connection—no manual setup required. Available in four models with Si and InGaAs detectors across different power levels, the S14 Series offers flexible selection for high-power laser monitoring, amplifier testing, and optical communication power measurement.

性能指标 / Specifications

性能参数 / Parameters	技术指标 / Specifications			
型号 / Model	S142VN	S142S	S143VN	S143S
探头类型 / Sensors type	Si	InGaAs	Si	InGaAs
波长范围 / Wavelength range	0.4 ~ 1.1 um	0.8 ~ 1.7 um	0.4 ~ 1.1 um	0.8 ~ 1.7 um
功率范围 / Power range	-20 dBm ~ +35 dBm (10 uW ~ 3 W)		-20 dBm ~ +43 dBm (10 uW ~ 20 W)	
分辨率 / Power resolution	1 uW		1 uW	
线性度 / Power linearity	±0.5%			
光连接器 / Fiber optic connector	FC			
电接口 / Electrical interface	DB-9 连接器（公）/ DB-9 connector (male)			
线缆长度 / Cable length	1 m			
探头尺寸 / Sensors size	82.0 × 75.0 × 69.5 mm			
工作温度 / Operating temperature	0 °C ~ +40 °C			
储存温度 / Storage temperature	-40 °C ~ +70 °C			
支架 / Mount	无 / None			



产品特点 / Features

- ☑ 三档功率等级，灵活选配 / Three power levels for flexible selection
- ☑ 宽光谱覆盖，双材料可选 / Wide spectral coverage with dual material
- ☑ 高灵敏度与宽动态范围 / High sensitivity and wide dynamic range
- ☑ 内置校准，即插即用 / Embedded calibration for Plug-and-Play
- ☑ 紧凑设计，适配空间受限场景 / Compact design for Space-Constrained applications
- ☑ 标准接口，兼容性强 / Standard interfaces for broad compatibility
- ☑ 增强电磁屏蔽，确保信号完整性 / Enhanced shielding for signal integrity

S15 系列光纤光电二极管功率探头采用高灵敏度 Si/InGaAs 光电二极管，覆盖 0.4~1.7 μm 波长范围，功率测量下限低至 -70 dBm（100 pW），上限达 +27 dBm（500 mW），专为光纤耦合光源的精密功率测量设计。探头采用紧凑化机械设计，适用于空间受限的集成应用与便携式测试场景。配备标准 FC 光纤接口与 DB-9 电气接口，兼容 PM100USB、PM102U 等表头。每只探头出厂经独立标定，表头连接后自动识别加载，无需人工配置。S15 系列提供六种型号，覆盖 Si 与 InGaAs 双材料体系及三档功率等级，可灵活选配以满足不同波段与功率检测需求。探头具备良好的电磁屏蔽性能，有效抑制外部干扰，确保测量信号完整性，适用于光纤通信器件测试、激光器输出监测及自动化产线集成等工业场景。

The S15 Series fiber photodiode power sensors feature high-sensitivity Si/InGaAs photodiodes, covering 0.4 ~ 1.7 μm with a power range of -70 dBm (100 pW) to +27 dBm (500 mW) for precision measurement of fiber-coupled sources. The compact design suits space-constrained and portable applications. Equipped with FC and DB-9 interfaces, the sensors are compatible with PM100USB, PM102U, and other consoles, with factory calibration and automatic console recognition—no manual setup needed. Available in six models with Si/InGaAs detectors across three power levels, the S15 Series offers flexible selection for diverse wavelength and power requirements. Robust shielding ensures signal integrity by suppressing interference, suiting fiber-optic testing, laser monitoring, and automated production line integration.

性能指标 / Specifications

性能参数 / Parameters	技术指标 / Specifications					
型号 / Model	S151VN	S151S	S152VN	S152S	S153VN	S153S
探头类型 / Sensors type	Si	InGaAs	Si	InGaAs	Si	InGaAs
波长范围 / Wavelength range	0.4-1.1 um	0.8-1.7 um	0.4-1.1 um	0.8-1.7 um	0.4-1.1 um	0.8-1.7 um
功率范围 / Power range	-70 dBm ~ +7 dBm (100 pW ~ 5 mW)		-60 dBm ~ +17 dBm (1 nW ~ 50 mW)		-50 dBm ~ +27 dBm (10 nW ~ 500 mW)	
分辨率 / Power resolution	10 pW		0.1 nW		1 nW	
线性度 / Power linearity	±0.5%					
光连接器 / Fiber optic connector	FC					
电接口 / Electrical interface	DB-9 连接器（公） / DB-9 connector (male)					
探头尺寸 / Sensors size	47.0 × 33.0 × 15.0 mm					
工作温度 / Operating temperature	0 °C ~ +40 °C					
储存温度 / Storage temperature	-40 °C ~ +70 °C					
支架 / Mount	无 / None					



探头配套支架 / Sensors mount

性能参数 / Parameters	技术指标 / Specifications
支架底座尺寸 / Mount base dimensions	140.0 × 80.0 × 15.5 mm
支架调节高度 / Height adjustment range	80.0 ~ 140.0 mm
储存温度范围 / Storage temperature range	-40 °C ~ +70 °C

兼容探头选型与编码对照表 / Compatible Sensor Selection and Coding Reference

系列代码 / Series code	功率代码 / Power range code	波长代码 / Wavelength range code
S12: 标准光电二极管功率探头 / Standard Photodiode Power Sensors	1: -70dBm ~ +7dBm(100pW ~ 5mW) 2: -60dBm ~ +17dBm(1nW ~ 50mW)	VN: 0.4 ~ 1.1 um S: 0.8 ~ 1.7 um
S13: 超薄光电二极管功率探头 / Slim Photodiode Power Sensors	3: -50dBm ~ +27dBm(10nW ~ 500mW)	
S14: 积分球光电二极管功率探头 / Integrating Sphere Photodiode Power Sensors		
S15: 光纤光电二极管功率探头 / Fiber Photodiode Power Sensors		

注：S13 和 S14 系列功率范围和上述描述范围不同，详见 S13、S14 系列性能指标。

Note: The power ranges of the S13 and S14 series differ from the ranges described above. Please refer to the respective performance specifications for details.