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Model 1815-C

Optical Power Meter

Key Features

- *Low-power and high-power CW measurements*
- *Convenient, portable operation*
- *Suitable for basic power measurements from the lab to the production floor*



Delivering high precision at a reasonable price, the Model 1815-C Optical Power Meter is compatible with all of Newport's low- and high-power detectors. Most other BNC-terminated low-power and thermopile detectors will also work with the 1815-C.

Low-power, CW measurements, in the 10 pW–2 W range can be performed with Newport's semiconductor, 818 Series Si, Ge and InGaAs detectors.

High-power measurements, in the 10 mW–300 W range can be performed with Newport's 818P and 818T Series thermopile detectors.

Additional features include wavelength compensation for detector and detector with attenuator, an analog BNC output, which allows signal monitoring using external equipment, and portable 130-hr battery operation.

NIST, ISO, IEC, ANSI, NCSL, MIL-STD by www.raeservices.com

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Call Newport's Application Sales Engineers to help you select the Optical Detector appropriate for your application.

Instrument Specifications

Display Type	3.5-digit LCD
Sampling Rate	2.5 Hz
Gain Ranges	6 Ranges, 1 per Decade
Full Scale Readings:	
Low-Power	20 nW–2 mW
Low-Power w/Attn	20 μW–2 W
High-Power	2 W–2 kW
DC Accuracy	< ±0.5%, ±0.25% Typ.
Bandwidth	2 kHz Max., Range Dependent
Analog Output	0–2V into 1 MΩ
Input Connector	BNC
Battery Life	130-180 hrs
Battery	6x AA Alkaline
Weight [lb (kg)]	1.5 (0.7)
Dimension (W x H x D) [in. (mm)]	3.3 (83) x 6.0 (152) x 7.0 (178)
Operating Temperature	18 °C to 28 °C, <70% RH
Storage Temperature	-25 °C to 60 °C, <90% RH

System Specifications

When used with Newport's low power semiconductor detectors, the following System Specifications are attained:

Model	818-UV	818-SL	818-ST	818-ST-UV	818-IR	818-IG
Material	Silicon	Silicon	Silicon	Silicon	Germanium	Indium Gallium Arsenide
Diameter (cm)	0.23	1.13	1x1	1x1	0.3	0.3
Wavelength (nm)	190–1100	400–1100	400–1100	190–1100	780–1800	800–1650
Power Range (dBm)	-83 to +23	-90 to +33	-70 to +33	-70 to +33	-70 to +21.5	-90 to +21.5
Display Resolution (pW)	0.1	0.1	0.1	0.1	10	0.1
Accuracy ¹⁾	±2%	±2%	±2%	±2%	±3%	±2%
Applicable wavelength range (nm)	200–1100	400–1100	400–1100	190–1100	780–1700	800–1650
Linearity	±0.5%					
NEP @ 5 Hz and 1 A/W	50 fW/√Hz	50 fW/√Hz	3 pW/√Hz	3 pW/√Hz	4 pW/√Hz	30 fW/√Hz

1) At calibration temperature maintained to ± 0.2°C, -20 dBm level having 99% encircled energy on detector with no optical attenuator, Calibration Factor = 5

Ordering Information

Model	Description
1815-C	Optical Power Meter
1815-C-CAL	1815-C with test data and certificate