High Performance Handheld Optical Power Meter

1919-R

1919-R is an advanced Optical Power/Energy Meter capable of measuring from pW to thousands of Watts, in an ergonomically designed compact body.

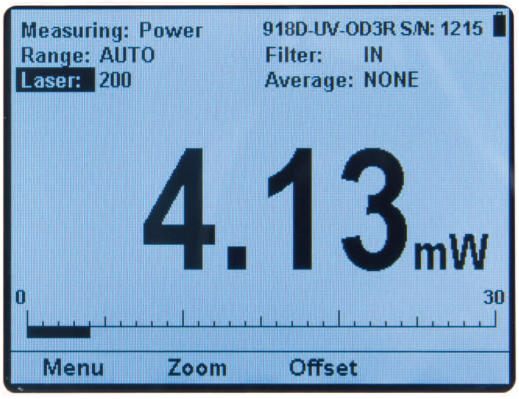
Model	Description
1919-R	High Performance Handheld Optical Power Meter, 1919-R

- Choose between Digital with Bargraph, Analog Needle, Line Plot, Stability, Real Time Statistics displays
- Scalable Analog Output
- Log every point at up to 5000Hz with Pyro sensors
- Brilliant color TFT 320x240 display
- Compact handheld design with rubberized bumpers and optimized kickstand
- USB and RS232 interfaces with PMManager™ PC application

Features

User Friendly Screen Layout

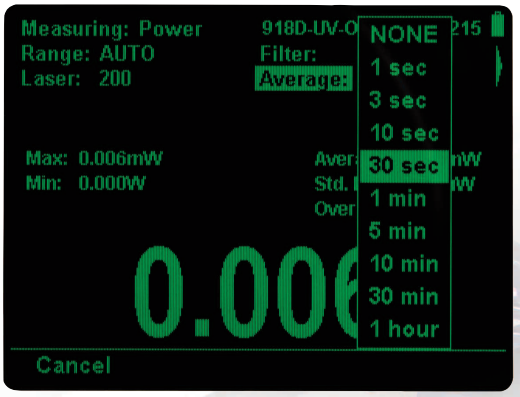
Significant improvement has been achieved with the user interface. The user will experience a quick configuration of the measurement parameters right at the main display. The bright color display gives unparalleled legibility and ease of interpreting information.



Standard main screen

Powerful User Interface

Just plug in one of the Newport detectors and you have a whole measurement laboratory at your fingertips. The user interfaces are available in four different languages: English, Chinese, Japanese, and Russian. Context sensitive help is available for all functions available.



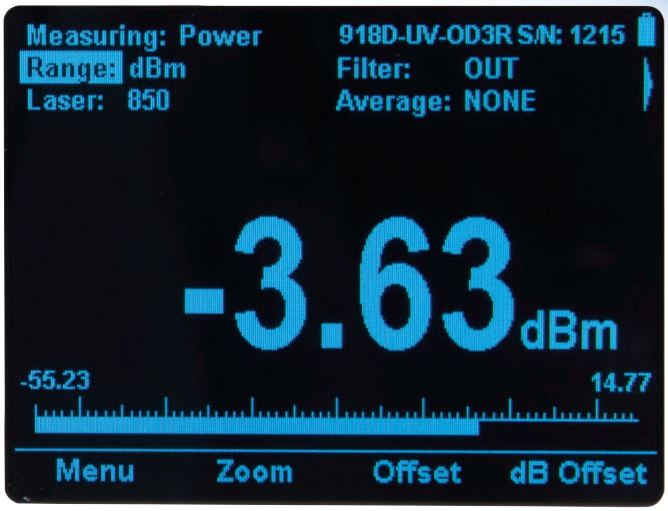
Averaging

Newport®
Experience | Solutions

HIGH PERFORMANCE HANDHELD POWER METER

Variety of Measurement Modes

1919-R can provide either a real time or an averaged measurement in watts, watts per area, joules, joules per area, or a unitless ratio against a reference value, depending on the detector types. When connected with a photodiode detector, the power meter gives readings in watts and dBm. When connected with the 919P series thermopile detector, it allows a power measurement in watts or a single shot energy measurement in joules. When connected with one of the all new 919E series pyroelectric detectors, it allows a pulse energy measurement in joules, average power in watts, or a total accumulated energy measurement over a set period of time.



Various color scheme

Line graph

Advanced Functions at Your Fingertip

1919-R is one of the most feature rich handheld optical power and energy meters available. With laser tuning, data logging, graphing, normalizing, statistics, user sectable display color, and mathematics functions in the power meter, one can run a complex experiment without going through a complex setup using a separate computer.

Variety of Data Presentation Methods

In addition to displaying the measurement values in the standard numerical bar graph mode, the simulated analog needle, and the line graph, one can also choose to display the real time statistical values on the screen.

Analog needle for alignment

Ergonomic Hardware Design

The case is made of molded high impact plastic with optimized angle kickstand. Rubberized sides provide an easy grip of the power meter and protection against damage.

843-R can be operated either by battery or from an AC power supply (included with either a US style plug or a European style plug) with the charger plugged in at all times. Its backlight allows illumination of the power meter in low light conditions.

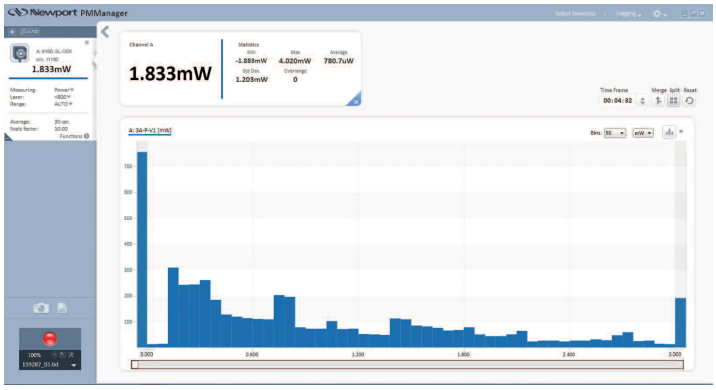
Easy Computer Interface

The built-in USB and RS232 interfaces and PMManager™ PC software allow on-line processing of data or processing previously stored data; results are displayed graphically on a PC. To support PC interfacing, LabVIEW drivers, COM Object Interface and demo source code are provided. Measurement data can be transported to a USB thumb-drive memory.

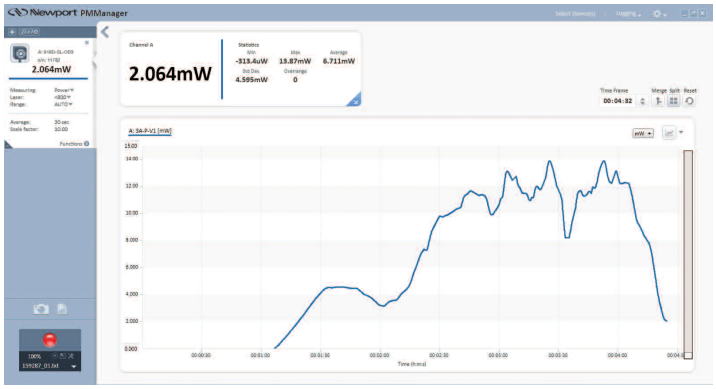
Powerful PMManager™ Application Software

PMManager is a powerful application software controlling and taking measurement data out of the 1919-R Power Meter. It turns a PC into a laser power multi-channel analysis workstation. The PMManager software features include:

- Extensive graphic display of data:
  - Line Plot, Histogram, Pulse Chart, and Simulated Analog Needle
  - Multiple data sets on separate graphs on the same screen
- Advanced measurement processing
  - Power/energy density, scale factor, normalize against a reference
  - Multi-channel comparisons
  - User defined mathematical equations: channels A/B, etc.
- Connect additional devices during active measurements
- Data logging for future review
  - Displayed graphically or saved in text format
  - Exported to an Excel spreadsheet.
- Printing of graphs and data.
- Interfaces and supports data logging with Newport's devices



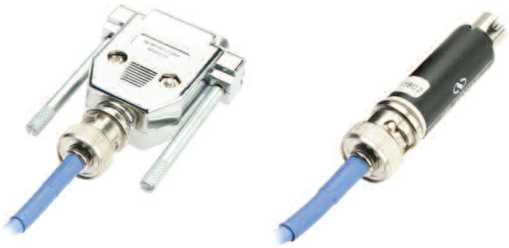
PMManagerApplication Window, with Histogram plot of only one channel



PMManagerApplication Window, with Line graph of only one channel

Compatibility with Legacy 8-pin DIN Round Calibration Modules

The Newport detectors with the legacy /CM models having the Round 8-pin DIN calibration modules requires an 843-DIN adapter. The legacy 841-DIN adapter is not compatible with 843-R.



The connector of the 818-xx/DB models come with a DB15 connector (left), while the 818-xx/CM models come with a round 8-pin connector.

1919-R Specifications

1919-R Handheld Power&Energy Meter Specifications	
Accuracy	±0.25 % (Full Scale) (Add ± 20 pA for PD and Thermopile Detectors)
Resolution	18 bits plus sign for PD and Thermopile 12 bits no sign for Pyroelectric Detector
Sampling Rate (Hz)	15 for PD and Thermopile 5000 Hz for Pyroelectric Detectors
Maximum Detector Input Current (mA)	1.4
Display Type	High legibility TFT 320 x 240 pixel graphics LCD
Input Range	15 nA - 1.5 mA full scale in 16 ranges for PD and Thermopile 0 - 6 V full scale for Pyroelectric Detectors
Display	15 mm numeric display. High resolution analog needle also can be chosen.
Analog Output	1, 2, 5, 10 V into 100 Ω, mono audio 2.5 mm jack (included)
Communication Interfaces	USB2.0, RS-232
Display Refresh Rate	15 Hz
Battery Life	14 hours typical between charges.
Power Requirements	DC 12 - 16 V, 1W
Weight [lb (kg)]	1.0 (0.47)
Dimensions (W x H x D) [in. (mm)]	4.4 (113) x 8.4 (213) x 40 (1.6 in.)
CE Certified	Yes
RoHS	Compliant

1) Instrument range is determined by detector used, please refer to our complete offering on detector types for complete specifications of individual detectors.

Accessories

Model	Description
843-DIN	8-pin DIN to DB15 Adapter, 818-xx/CM Detectors to DB15 Power Meters
843-PS-UN	Spare External Universal Power Supply for 843-R series

Related Products

Optical Power and Energy Meters, 1936-R and 2936-R

Economical Handheld Laser Power Meter

Power Measurement Kits, PMKIT Series

Laser Pulse Energy Detectors, 919E Series

Thermopile Sensors

818 Series Low-Power Calibrated Photodiode Sensors

Fiber Optic Detectors, Sphere-Based

Wand Style Calibrated Photodiode Sensors

High Performance Photodiode Sensors

Integrating Sphere Sensors

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