POWER AND ENERGY METERS

Model 1918-C

High-Performance Hand-Held Optical Power and Energy Meter



1918-C High Performance Hand-Held Power and Energy Meter

- Measurement rep-rates up to 4 kHz
- True rms measurements
- Power measurements, 11 pW to 20 kW
- Energy measurements, 7 µJ to 20 kJ
- Accelerated thermopile based power measurements with fast prediction algorithm
- USB computer interface
- Data storage via internal memory (250k data samples) or USB Flash Drive
- Plotting, graphing, math, statistics, and on-board data post-processing

For applications requiring the measurement of low-power, high-power or energy of continuous or pulsed light sources, Newport's model 1918-C Hand-Held Optical Power and Energy Meter is the instrument of choice. This new optical meter leverages the advanced features and display capabilities of Newport's 1935-C Series optical meters, into a compact, wall-plug and battery powered device, for use in the lab or in the field. The 4 inch, full color, graphical LCD display enables both numerical and graphical measurement representation, with a selection of various color palettes to match filtering properties of users' laser eye safety goggles.

The 1918-C has the ability to handle peak-to-peak measurements of pulses with repetition-rates of up to 4 kHz at a sampling rate of 100 kHz. Pulse, peak-to-peak and DC source measurements can be displayed in units of W, dBm, dB, J, A, and V.

Low-power measurements, of 1nW to tens of Watts can be accomplished with Newport's 918D Series Silicon (Si), Germanium (Ge) or Indium Gallium Arsenide (InGaAs) Detectors, covering 200–1800 nm wavelengths (see page 1088). All 918D Series Detectors have a built-in temperature sensor utilized for sensing, and active compensation of temperature-induced measurement fluctuations. 818 Series low power detectors can also be used with the instrument in combination with a 841-DIN adapter.

High-power measurements, up to 6 kWatt can be performed with Newport's (page 1101, Thermopiles), enabling measurements in the $0.19-11~\mu m$ wavelength range.

Energy measurements of pulsed laser sources, from 100 $\mu Joule$ to 75 Joules can be taken with Newport's (page 1104, Pyroelectric Detectors), operating in the 0.19–20 μm wavelength range and pulse repetition rates from single shot to 4 kHz, without having to rely on oscilloscope measurements.

 $\it True\ Root-Mean-Square\ (rms)\ measurements,$ provide the most accurate rms value regardless of the shape of the input waveform.

Advanced features include a 250,000 data point storage buffer, analog and digital filtering, programmable sample rates, moving statistics, plotting and multiple user-configuration storage.

The 1918-C comes complete with a rechargeable battery, battery charger and carrying case. Batteries are field replaceable by the user and can also be ordered separately.









Phone: 1-800-222-6440 • Fax: 1-949-253-1680

Specifications

1918-C General	Dower/Energy	Matar	Specifications
1710-C General	Power/Energy	Meter	Specifications

Sampling Rate (kHz) Measurement Rate (kHz) Measurement Rate (kHz) Display Refresh Rate (Hz) Waximum Rep Rate (kHz) Waximum Bete Rate (kHz) Waximum Detector Input Current (mA) Accuracy (%) #±1 (Peak to Peak, Pulse to Pulse, Integration) Waximum Detector Input Current (mA) ### Pulse (Waximum Detector Input Current (mA) ### Pulse (Waximum Detector Input Woltage (W) ### Pulse (Waximum Maximum Detector Input Woltage (W) ### Pulse (Waximum Maximum Detector (W) ### Pulse (Waximum Input Power (W)	1918-C General Power/Energy Meter Specifications			
Measurement Rate (kHz) Display Refresh Rate (Hz) Display Refresh Rate (Hz) Oisplay Refresh Rate (Hz) Auximum Rep Rate (kHz) Resolution (% of Full Scale) Oo004 CW Accuracy (%) Accuracy (%) Accuracy (%) Accuracy (%) Analog Output (User Selectable) On1V , 0-2 V, or 0-5 V into 1MΩ Analog Output (User Selectable) Oisplay Formats Oisplay Formats Oisplay Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) Destremal Sample Storage (data points) Destremal Sample Storage (data points) Destremal Semple Storage (data points) Destremal Femperature Power Requirements Operating Temperature Power Requirements Weight (Bickg) Dismostors (W x H x D) (in. (mm)) Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**Output National Calibrated Measurements with 818E Series Pyroelectric Detectors (**Output National Measurable Energy (JJ) Maximum Detectable Energy (JJ) Maximum Measurable Energy (JJ)	Compatible, Hot-swappable Newport Detectors	918D, 918L, 818P, 818E, and 818 (w/adapter)		
Display Refresh Rate (Hz) Maximum Rep Rate (kHz) A (Photodiode Detectors, Peak to Peak Power) Resolution (% of Full Scale) O.0004 ACCUracy (%) Accuracy (%) Accuracy (%) Analog Output (User Selectable) Analog Output (User Selectable) Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats Ammunication Interfaces USB Internal Sample Storage (data points) External Sample Storage (data points) Defined by external USB Flash drive (user supplied) Battery Type and Life (Typical) Rechargeable, 8 Hours Dover Requirements Doperating Temperature Storage Temperature Range Po-240 VAC, 24V 1.5A Dirensions (W x H x D) [in. (mm)] Allow (W x H x D) [in. (mm)] Accilibrated Measurements with 918D and 918L Series Photodiode Detectors (PM) Minimum Detectable Power (pW) Accilibrated Measurements with 818P Series Thermopile Detectors (PM) Maximum Input Power (W) Accilibrated Measurements with 818E Series Pyroelectric Detectors (PM) Minimum Detectable Energy (μ)) Maximum Measurable Energy (μ)	Sampling Rate (kHz)	100		
Maximum Rep Rate (kHz) 2 (Pyroelectric Detectors) Maximum Rep Rate (kHz) 4 (Photodiode Detectors, Peak to Peak Power) Resolution (% of Full Scale) 0.0004 CW Accuracy (%) ±0.1 Accuracy (%) ±1 (Peak to Peak, Pulse to Pulse, Integration) Maximum Detector Input Current (mA) 25 Maximum Detector Input Voltage (V) 130 Analog Output (User Selectable) 0-1 V , 0-2 V, or 0-5 V into 1MΩ Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) 250,000 External Sample Storage (data points) Defined by external USB Flash drive (user supplied) Battery Type and Life (Typical) Rechargeable, 8 Hours Deparating Temperature Range 90-240 VAC, 24V 1.5A Deparating Temperature Range 90-240 VAC, 24V 1.5A Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Zalibrated Measurements with 918D and 918L Series Photodiode Detectors (Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Maximum Input Power (W) 1 Maximum Input Power (mW) 1 Maximum Input Power (W) 400 Maximum Hoasurable Energy (J) 6.7 μJ Maximum Measurable Energy (J) 75 J	Measurement Rate (kHz)	4		
Maximum Rep Rate (kHz) 4 (Photodiode Detectors, Peak to Peak Power) Resolution (% of Full Scale) 0.0004 2W Accuracy (%) ±0.1 Accuracy (%) ±1 (Peak to Peak, Pulse to Pulse, Integration) Maximum Detector Input Current (mA) 25 Maximum Detector Input Voltage (V) 130 Analog Output (User Selectable) 0.1 V , 0-2 V, or 0-5 V into 1MΩ Analog Output (User Selectable) 0.25 Maximum Beteotor Input Voltage (V) 130 Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) External Sample Storage (data points) Defined by external USB Flash drive (user supplied) Battery Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Deparating Temperature 10°C to 40°C, <80% RH Storage Temperature Range -20°C to 60°C, <90% RH Weight [Ib (kg)] 2.3 (1.04) Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (nm) 200-1800 Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Maximum Input Power (Betectable Energy (LU) Maximum Measurable Energy (LU)	Display Refresh Rate (Hz)	20		
Resolution (% of Full Scale) O.0004 CW Accuracy (%) ±0.1 Accuracy (%) ±1 (Peak to Peak, Pulse to Pulse, Integration) Maximum Detector Input Current (mA) 25 Maximum Detector Input Voltage (V) Analog Output (User Selectable) O-1 V , 0-2 V, or 0-5 V into 1MΩ Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) Battery Type and Life (Typical) Power Requirements Operating Temperature 10°C to 40°C, <80% RH Storage Temperature Range 20°C to 60°C, <90% RH Weight [Ib (kg)] Dimensions (W x H x D) [in. (mm)] Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Winimum Detectable Power (W) 2 Wavelength Range (nm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (μJ) Maximum Detectable Energy (μJ) Maximum Detectable Energy (μJ) Maximum Detectable Energy (μJ) Maximum Measurable Energy (μJ)	Maximum Rep Rate (kHz)	2 (Pyroelectric Detectors)		
EW Accuracy (%) Analog Output Current (mA) Analog Output (User Selectable) Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) External Sample Storage (data points) Defined by external USB Flash drive (user supplied) Battery Type and Life (Typical) Rechargeable, 8 Hours Power Requirements Deparating Temperature 10°C to 40°C, <90% RH Weight [lb (kg)] Dimensions (W x H x D) [in. (mm)] Acalibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) Acalibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Power (mW) 1 Maximum Input Power (W) Acalibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Power (mW) Acalibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Energy (μ) Maximum Input Power (W) Acalibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Energy (μ) Maximum Measurable Energy (μ)	Maximum Rep Rate (kHz)	4 (Photodiode Detectors, Peak to Peak Power)		
Accuracy (%) ±1 (Peak to Peak, Pulse to Pulse, Integration) Maximum Detector Input Current (mA) 25 Maximum Detector Input Voltage (V) Analog Output (User Selectable) O-1 V , 0-2 V, or 0-5 V into 1MΩ Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) External Sample Storage (data points) Defined by external USB Flash drive (user supplied) Battery Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Deparating Temperature 10°C to 40°C, <80% RH Storage Temperature Range -20°C to 60°C, <90% RH Weight [Ib (kg)] 2.3 (1.04) Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2.0 Wavelength Range (mm) 2.00-1800 Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (μJ) Maximum Measurable Energy (μJ) Maximum Measurable Energy (μJ) Maximum Measurable Energy (μJ) Maximum Measurable Energy (μJ)	Resolution (% of Full Scale)	0.0004		
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Maximum Detector Input Voltage (V) Analog Output (User Selectable) Analog Output (User Selectable) Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) External Sample Storage (data points) Defined by external USB Flash drive (user supplied) Battery Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A 10-24 VAC, 24V 1.5A Display Type and Life (Typical) Rechargeable, 8 Hours 90-240 VAC, 24V 1.5A 10-24 VAC, 24V 1.5A 10-25 VAC,	Accuracy (%)	±1 (Peak to Peak, Pulse to Pulse, Integration)		
Analog Output (User Selectable) O-1 V , O-2 V, or 0-5 V into 1MΩ Analog Output Bandwidth DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro) Display Type 82 x 62 mm Graphical, Color TFT LCD, 1/4 VGA Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) External Sample Storage (data points) Defined by external USB Flash drive (user supplied) Battery Type and Life (Typical) Rechargeable, 8 Hours Power Requirements Operating Temperature 10°C to 40°C, <80% RH Storage Temperature Range -20°C to 60°C, <90% RH Weight [lb (kg)] Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Minimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (mm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Minimum Detectable Energy (μJ) Maximum Measurable Energy (μJ) Maximum Measurable Energy (JJ) Maximum Measurable Energy (JJ)	Maximum Detector Input Current (mA)	25		
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Display Formats 14 mm Numeric, Bar Chart, Min/Max Bar, Statistics Communication Interfaces USB Internal Sample Storage (data points) External Sample Storage (data points) Battery Type and Life (Typical) Power Requirements Operating Temperature 10°C to 40°C, <80% RH Storage Temperature Range -20°C to 60°C, <90% RH Weight [lb (kg)] Dimensions (W x H x D) [in. (mm)] Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Wavelength Range (mm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 918P Series Thermopile Detectors (**) Winimum Detectable Power (mW) 1 Maximum Input Power (W) Auguelength Range (mm) Calibrated Measurements with 918P Series Thermopile Detectors (**) Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Maximum Input Power (W) Auguelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (μ.) Maximum Measurable Energy (μ.) Maximum Measurable Energy (μ.) Maximum Measurable Energy (μ.)	Analog Output Bandwidth	DC-500 kHz (Photodiode), DC-1 MHz (Thermo or Pyro)		
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Battery Type and Life (Typical) Rechargeable, 8 Hours Power Requirements 90-240 VAC, 24V 1.5A Operating Temperature 10°C to 40°C, <80% RH Storage Temperature Range -20°C to 60°C, <90% RH Weight [lb (kg)] 2.3 (1.04) Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (nm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (µJ) 6.7 µJ Maximum Measurable Energy (JJ) 75 J	nternal Sample Storage (data points)	250,000		
Power Requirements 90-240 VAC, 24V 1.5A Deparating Temperature 10°C to 40°C, <80% RH Storage Temperature Range -20°C to 60°C, <90% RH Weight [lb (kg)] 2.3 (1.04) Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Calibrated Measurements with 918D and 918L Series Photodiode Detectors ** Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (nm) 200-1800 Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors ** Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors ** Winimum Detectable Energy (μJ) 6.7 μJ Maximum Measurable Energy (JJ) 75 J	External Sample Storage (data points)	Defined by external USB Flash drive (user supplied)		
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Storage Temperature Range -20°C to 60°C, <90% RH Weight [lb (kg)] Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (nm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (µJ) 6.7 µJ Maximum Measurable Energy (J) 75 J	Power Requirements	90-240 VAC, 24V 1.5A		
Weight [lb (kg)] 2.3 (1.04) Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Winimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (nm) 200-1800 Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (µJ) 6.7 µJ Maximum Measurable Energy (J) 75 J	Operating Temperature	10°C to 40°C, <80% RH		
Dimensions (W x H x D) [in. (mm)] 7.6 (193) x 5.4 (137) x 2.4 (61) Calibrated Measurements with 918D and 918L Series Photodiode Detectors (**) Minimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (nm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Minimum Detectable Energy (µJ) 6.7 µJ Maximum Measurable Energy (J) 75 J	Storage Temperature Range	-20°C to 60°C, <90% RH		
Calibrated Measurements with 918D and 918L Series Photodiode Detectors (1) Minimum Detectable Power (pW) Maximum Input Power (W) Maximum Input Power (W) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (1) Minimum Detectable Power (mW) Maximum Input Power (W) Maximum Input Power (W) Maximum Input Power (W) Maximum Measurements with 818E Series Pyroelectric Detectors (1) Minimum Detectable Energy (µJ) Maximum Measurable Energy (J) 75 J	Weight [lb (kg)]	2.3 (1.04)		
Minimum Detectable Power (pW) 11.1 Maximum Input Power (W) 2 Wavelength Range (nm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (**) Minimum Detectable Power (mW) 1 Maximum Input Power (W) Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Minimum Detectable Energy (µJ) 6.7 µJ Maximum Measurable Energy (J) 75 J	Dimensions (W x H x D) [in. (mm)]	7.6 (193) x 5.4 (137) x 2.4 (61)		
Maximum Input Power (W) Wavelength Range (nm) Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors ** Winimum Detectable Power (mW) Maximum Input Power (W) Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors ** Winimum Detectable Energy (µJ) 6.7 µJ Maximum Measurable Energy (J) 75 J	Calibrated Measurements with 918D and 918L Series	Photodiode Detectors (1)		
Wavelength Range (nm) 200-1800 Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (1) Winimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors (1) Winimum Detectable Energy (µJ) 6.7 µJ Maximum Measurable Energy (J) 75 J	Minimum Detectable Power (pW)	11.1		
Supported Advanced Features Temperature Compensation and Attenuator Sensing Calibrated Measurements with 818P Series Thermopile Detectors (1) Minimum Detectable Power (mW) Maximum Input Power (W) Wavelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors (1) Minimum Detectable Energy (μJ) Maximum Measurable Energy (J) 75 J	Maximum Input Power (W)	2		
Calibrated Measurements with 818P Series Thermopile Detectors (**) Vinimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 µm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (µJ) 6.7 µJ Waximum Measurable Energy (J) 75 J	Wavelength Range (nm)	200-1800		
Minimum Detectable Power (mW) 1 Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Minimum Detectable Energy (μ) Maximum Measurable Energy (J) 75 J	Supported Advanced Features	Temperature Compensation and Attenuator Sensing		
Maximum Input Power (W) 400 Wavelength Range 190 nm - 11 μm Calibrated Measurements with 818E Series Pyroelectric Detectors (**) Winimum Detectable Energy (μ) 6.7 μ Maximum Measurable Energy (J) 75 J	Calibrated Measurements with 818P Series Thermopil	le Detectors (1)		
Wavelength Range 190 nm - 11 μ m Calibrated Measurements with 818E Series Pyroelectric Detectors (1) 6.7 μ J Maximum Measurable Energy (μ J) 75 J	Minimum Detectable Power (mW)	1		
Calibrated Measurements with 818E Series Pyroelectric Detectors (1) Minimum Detectable Energy (µJ) Maximum Measurable Energy (J) 75 J	Maximum Input Power (W)	400		
Minimum Detectable Energy (μJ) Maximum Measurable Energy (J) 75 J	Wavelength Range	190 nm - 11 μm		
Maximum Measurable Energy (J) 75 J	Calibrated Measurements with 818E Series Pyroelect	ric Detectors (1)		
	Minimum Detectable Energy (ய)			
Navelength Range 190 nm - 20 μm	Maximum Measurable Energy (J)	75 J		
	Wavelength Range	 190 nm - 20 μm		

¹⁾ Instrument range is determined by detector used. Please refer to our complete offering on detector types for complete specifications of individual detectors: Photodiode (see page 1088), Thermopile (see page 1101) and Pyroelectric (see page 1104) detectors.

Detector Compatibility and Performance

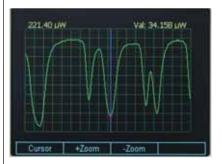
The 1918-C Power/Energy Meter is compatible with Newport's new Low-Power 918D, 818, High-Power 818P and 818E Series Energy Detectors, allowing both free-space and fiber pigtailed measurements in the 190 nm – 20 μm range. All compatible detectors have a built-in or external in-line EEPROM containing detector identification and calibration information. When using an 818 Series detector with the 1918-C, the optional 841-DIN adapter is required.

When used with various Newport detector types, the measurement modes shown below can be accessed:

Detector Family	DC Average Power	r Integrated Energy	Peak-to-Peak Power	Pulse-to-Pulse Energy (Single or Continuous)
Low-Power (918D, 918L and 818 Series Photodiodes)	Yes	Yes	Yes	No
High-Power (818P Series Thermopiles)	Yes	Yes	No	No
Energy (818E Series Pyroelectric)	No	No	No	Yes

Color Display Formats

Users can select from 6 display colors to match their specific lighting conditions and colors of their laser safety eyewear. Measurements can also be displayed in various display formats, such as numeric, graphic, bar and strip charts.



The 1918-C has advanced graphing capabilities



The 1918-C with vertical strip chart display

Ordering Information

Model	Description
1918-C	High-Performance Hand-Held Optical Power/Energy Meter
841-DIN ⁽¹⁾	Mini-DIN to DB15 Detector Adaptor for 818/CAL Series Detectors

(1) This adaptor is required when using 818 Series Low-power detectors with the 1918-C $\,$

