High-Performance Optical Meters

1835-C *Single-Channel*

2835-C *Dual-Channel*

Key Features

- *Greatest possible versatility in a single optical meter*
- *DC optical power measurements in the 100 fW–300 W range*
- *Pulsed and integrated energy measurements*
- *Fast IEEE-488 data throughput, 50–100 Hz, depending on software interface*
- *Large variety of programmable input and output controlling triggers*
- *Sophisticated automation capabilities in testing and laboratory applications*

Whether your application requires measurement of low-power, high-power or energy of continuous or pulsed light sources, Newport's **Models 1835-C and 2835-C** will do the job!

DC, peak-to-peak and pulse measurements can be displayed in units of W, dBm, dB, J, Ergs, A, and V. Simultaneous measurements of a variety of light sources operating at different power levels and wavelengths can be performed with our dual-channel **2835-C** optical meter.

Low-power measurements, in the 100 fW–2 W range, can be accomplished with any one of Newport's **818 Series** silicon, germanium or indium gallium arsenide semiconductor detectors, covering 190–1800 nm wavelengths.

High-power measurements, in the 10 mW–300 W range, can be performed with Newport's **818T Series** air-cooled thermopile detectors, enabling measurements in the 0.19–11 µm wavelength range.

Energy measurements of pulsed laser sources, from 35 nJ–1 J, can be taken with Newport's **818J Series** family of pyroelectric detectors, operating in the 0.19–20 µm wavelength range. Pulse repetition rates from single shot to 2 kHz can be accommodated.

Advanced features include a 2500 data point storage buffer; analog and digital filtering; programmable sample rates; moving statistics; and up to 10 recallable configurations.

Additional Benefits

- Includes both RS-232C and IEEE-488 interfaces
- Vacuum fluorescent display provides excellent legibility from any angle, in any light condition
- Analog bar graph with 10X zoom
- Audible beep on pulse arrival
- Wavelength calibration in 1 nm steps
- Trigger in/out control with alarm levels

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

Specifications

Display Type	6-digit vacuum fluorescent
Sampling Resolution	20,000 count ≤25 Hz, 4096 count ≤1 kHz
Gain Ranges	7 decades
Current Sensitivity (full-scale)	2.5 nA–2.5 mA
Voltage Sensitivity (full-scale)	790 µV–25 V
Resolution	100 fA, 125 nV
Sampling Rate	Up to 1 kHz single-channel, Up to 500 Hz dual-channel
Bandwidth (-3 dB)	DC to 1 MHz[1]
Analog Output	0–2.5 V into 50Ω
DC Accuracy	<±0.1% typical
Peak-to-Peak Accuracy	±1% typical
Pulse-to-Pulse Accuracy	±1% typical
Integration Accuracy	±1% typical
Power Requirements	90–240 VAC
Weight [lb (kg)]	2.5 (1.1)
Dimension (W x H x D) [in. (mm)]	8.5 (216) x 4 (102) x 14 (356)
Operating Temperature	10°C to 40°C, <80% RH
Storage Temperature	-25°C to 60°C, <90% RH

1) Gain and detector dependent

Detector Compatibility and Performance

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

Detector Family	DC Average Power	Integrated Energy	Peak-to-Peak Power	Pulse-to-Pulse Energy
Low-Power (818 Series)	Yes	Yes	Yes	No
High-Power (818T Series)	Yes	Yes	No	No
Energy (818J Series)	No	No	No	Yes

When used with our low-power semiconductor detectors, the system specifications for the Model 1835-C and 2835-C optical meters are the same as for our Model 2832-C, shown on page 130.

Ordering Information

Model	Description
1835-C	High-Performance Optical Meter
1835-C-CAL	1835-C with test data and certificate
2835-C	High-Performance Optical Meter
2835-C-CAL	2835-C with test data and certificate

Please see page 141 thru 158 for a detailed description of Newport's semiconductor, thermopile and pyroelectric detectors, compatible with the 2835-C and 1835-C.