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# Fiber Optic Power Meter



- High Sensitivity
- Exceptional Repeatability
- Built-in Integrating Sphere with Si and InGaAs Detectors
- USB, GPIB and RS-232 Interfaces
- Rack-Mountable in Single or Dual Set Configurations

The **1930IS Fiber Optic Power Meter** delivers a unique high-performance solution for telecom/datacom laser power measurement applications with a direct fiber input.

The 1930IS power meter incorporates an integrating sphere to provide exceptional repeatability through reduced sensitivity to fiber positioning. The built-in integrating sphere combined with front panel connections and an interchangeable set of industry-standard fiber optic connectors saves workspace by reducing instrument footprint, while a high-contrast display with an intuitive user interface on the front panel or through USB/GPIB/RS-232 interfaces improves productivity.

Integrated Silicon (SI) and Indium Gallium Arsenide (InGaAs) detectors for fiber-optic applications support continuous spectral coverage from 400nm to 1650nm. Low-noise dual detectors and seven gain ranges enable continuous power measurements in the range of a *pico*-W to 250 *milli*-W.

Each instrument is individually calibrated to NIST traceable

standards using Newport's in-house calibration facility. Calibration data is taken in 10 nm increments, and electronically stored inside the power meter resulting in accurate power measurements over the entire wavelength band.

Certificates of calibration as well as the actual calibration curves are shipped with each instrument. Newport recommends annual recalibration to assure continued measurement accuracy. Commonality of accessories throughout the Newport power meter line ensures the compatibility between instruments within the product line while enhancing usability across test stations and supporting the correlation of results.

Newport's experience with calibration, together with NIST calibration traceability, and high precision optical power meters provide users with accurate measurements and exceptional inter-instrument correlation. In R&D, QA/QC, and manufacturing environments, the 1930IS power meter enables users to benefit from high correlation between multiple locations at a price-to-performance ratio second to none.

## Specifications

Signal Ranges	Up to 7 decades (dependent on detector type)
Display Type	Graphical High-Contrast 240 X 128 LCD
Sampling Resolution	250,000 counts, 4 kHz
Display Update Rate (ms)	100
Auto-Ranging Time	15 ms (typical)
GPIB Bus Transfer Time	10 ms (typical)
Analog Output	BNC, 0-5V into 1 M $\Omega$ , 0-2.5V into 50 $\Omega$
DC Accuracy	< $\pm$ 0.4% (typical)
<b>Connectors</b>	
Analog Output	BNC, 0-5V into 1 M $\Omega$ , 0-2.5V into 50 $\Omega$
USB	USB-Standard, Male
Fiber Optic Connector	FC & SC (Call for others)
RS-232	9 pin D-Sub
GPIB	IEEE-488
Power Requirements	90-132/198-250 VAC, 50/60 Hz
Absolute Maximum Line Current Rating (mA)	300
Dimensions [in. (mm)] (L x W x H)	13.6 (345) x 8.8 (224) x 5.3 (135)
Weight [lb (kg)]	8 (3)
Enclosure	Metal case, painted
Operating Temperature	10°C to +45°C; <85% RH noncondensing
Storage Temperature	-20°C to +60°C; <90% RH noncondensing

## System Specifications

Detector Material	Si	InGaAs
Active Diameter ( $\mu$ m)	1000	
Wavelength (nm)	400-1100	800-1650
Power Input Range [W (dBm)]	100 pW to 2.5 W (-70 to +34)	
Accuracy (%)	$\pm$ 5	
Linearity (%)	$\pm$ 0.5	
NEP @ 5 Hz and 1 A/W	30 fW/ $\sqrt$ Hz	20 fW/ $\sqrt$ Hz

## Ordering Information

Model	Description
1930IS	Fiber Optic Power Meter
PM1-RACK	Rack Mount Kit, Single
PM2-RACK	Rack Mount Kit, Dual

NIST, ISO, IEC, ANSI, NCSL, MIL-STD by [www.raeservices.com](http://www.raeservices.com)