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Find the *Exfo IQ-1643* at our website: ***Click HERE***

High-Speed Power Meter

IQ-1600







- Fast stabilization time over a wide dynamic range
- Wide area detector
- Detector with low polarization-dependent response
- Convenient user interface
- Graphical display mode
- Ideal for component characterization and environmental and dynamic testing



Fiber-optic test, measurement and monitoring instruments

EXFO

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The Fastest Power Meter on the Market

The IQ-1600 High-Speed Power Meter is designed for high-performance fiber-optic testing. The high sampling rate and fast stabilization time are ideal for system monitoring as well as high-density WDM component characterization and assembly. With a choice of 1-, 2- or 4-channel InGaAs photodetectors, this high-speed power meter meets wide-ranging requirements for power level and wavelength.



High-Performance Features

With the automatic gain range feature, power fluctuations of up to 95 dB stabilize within 15 ms, and a continuous sampling rate of up to 256 samples per second can be achieved. You can also manually select the gain range for individual channels. In this case, dynamic range is limited to selection; but in return, stabilization times are shorter (as little as 1 ms), with sampling rates as high as 4096 samples per second.

The synchronization capability of the IQ-1600 High-Speed Power Meter complements the high sampling rates. The high-speed power meter provides two types of synchronization triggers, a power level trigger and a TTL voltage (electrical) trigger. For both, synchronization of all optical channels (2- and 4-channel models) is simultaneous.

The IQ Solution

For integrated test solutions, you can combine the IQ-1600 High-Speed Power Meter with other IQ instruments that cover testing requirements for DWDM components, whether passive or active, as well as cable and fiber subassemblies. All IQ instruments are built for fast data transfer and comprehensive test result analysis, as well as true multitasking.

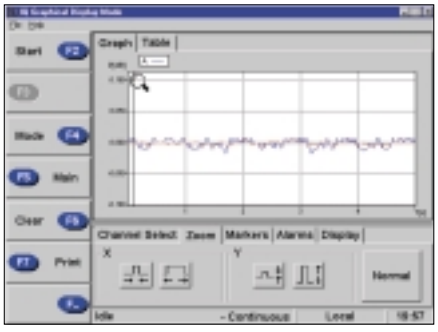
Advanced Detector Options

Wide Area Detector

Select EXFO's new Wide Area Detector for excellent repeatability of in-process testing of passive components long before they are connectorized. Combined with our family of bare fiber adapters (FC, SC or ST), the IQ-1600W Power Meter will allow you to take precise and efficient measurements over the S-, C- and L-bands.

Low-PDR Detector

A new detector option, specified for very low polarization-dependent response (IQ-1600-PL, with a PDR of 0.010 dBpp), provides improved relative uncertainty. Even with highly polarized sources such as DFB or tunable lasers, minor variations in the test setup (patchcord movement or pinching) don't affect readings beyond specified values. For IL or very low PDL component measurements, this detector provides optimal accuracy.



Comparison of power measured with a standard power meter (blue trace) and EXFO's new low-PDR detector (red trace)

Easy-to-Use Interface

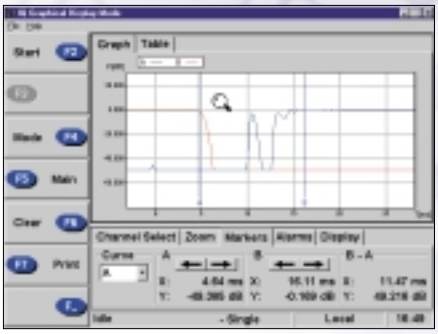
The flexible graphical user interface (GUI) developed by EXFO allows easy control of the power meter settings. Get instant access to software buttons, such as those used to launch an acquisition, perform a min/max signal tracking or to activate the Graph mode.

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Graph Mode

The Graph mode displays measurements. Up to eight curves, incorporating measurements from several IQ modules, can be displayed at once. When operating in Continuous mode (up to 256 samples per second), the graph displays the measurements in real time.

High-speed acquisitions (from 512 to 4096 samples per second) can be triggered by very fast power fluctuations, or by an electrical signal, and are displayed right after data processing.



Typical response settling time of an optical switch in Graph mode

Specifications[1]

Model		IQ-1613/1623/1643	IQ-1613/1623/1643-PL	IQ-1613W/1623W/1643W
Number of detectors		1/2/4	1/2/4	1/2/4
Detector type		InGaAs	InGaAs	InGaAs
Detector size (mm)		1	1	3
Wavelength range (nm)		800 to 1700	800 to 1700	800 to 1700
Power range[2] (dBm)		9 to -85	9 to -85	8 to -75
Uncertainty[3] (%)		± 5 (0 to -55 dBm)	± 5 (0 to -55 dBm)	± 5 (0 to -50 dBm)
Polarization dependent responsivity[4] (dBpp)		n/a	Δ = 0.010	n/a
Linearity[5] (dB)		± 0.015 (0 to -55 dBm)	± 0.015 (0 to -55 dBm)	± 0.015 (0 to -50 dBm)
Power resolution (dB)		0.001 (9 to -40 dBm)	0.001 (9 to -40 dBm)	0.001 (8 to -40 dBm)
Wavelength resolution (nm)		0.01	0.01	0.01
Stabilization time (ms)				
automatic range		< 12 (9 to -85 dBm)	< 12 (9 to -85 dBm)	< 6 (8 to -75 dBm)
automatic range		< 3 (9 to -49 dBm)	< 3 (9 to -49 dBm)	< 3 (8 to -49 dBm)
fixed range (ranges 1 to 4)		< 1	< 1	< 1
Sampling rate (sample/s/channel)				
fast acquisition mode		up to 4096	up to 4096	up to 4096
continuous measurement mode		up to 256	up to 256	up to 256
Fiber type (µm)		5/125 to 62.5/125	5/125 to 62.5/125	5/125 to 62.5/125
Analog output	bandwidth[6] (Hz)(ranges 1 to 6)	700 k; 700 k; 30 k; 30 k; 150; 150; typical	700 k; 700 k; 30 k; 30 k; 150; 150; typical	50 k; 7.5 k; 5 k; 7 k; 1 k; 1 k; typical
	output voltage (V)	between 0 and 4, typical	between 0 and 4, typical	between 0 and 4, typical
	output impedance (Ω)	640	640	640

General Specifications

External trigger	input voltage (V)	0 to 5 (TTL)	
Size (H x W x D)		12 cm x 3.8 cm x 26.2 cm	(4.75 in x 1.50 in x 10 .33 in)
Weight		0.7 kg	(1.55 lb)
Temperature	operating[7]	0 to 50 °C	(32 to 122 °F)
	storage	-35 to 70 °C	(-35 to 158 °F)
Relative humidity[8]		0 to 80 % non-condensing	

Units of measurment in this document conform to SI standards and practice.

NOTES

1. All specifications are measured at 1310 nm (unless otherwise specified) with an FC/non-angled connector and a warmup time of 20 minutes, followed by an offset nulling.
2. From 18 to 32 °C (64.4 to 89.6 °F)
3. Measured at 23 °C ± 1 °C with FOA-222 between 1000 and 1640 nm.
   The uncertainty on absolute measurement may reach 0.22 dB. For IQ-16X3 and IQ-16X3W add 1 % to uncertainty below 1000 nm and 6 % over 1640 nm. For IQ-16X3-PL, add 2 % to uncertainty below 1000 nm and 6 % over 1640 nm. All uncertainties are valid on the day of calibration.
4. At 23 °C ± 5 °C, constant wavelength (1550 nm) and constant power.
5. Averaged measurement at constant temperature in 0 to 40 °C (32 to 104 °F) range.
6. Bandwidth corresponds to each electrical scale from the lowest to the highest gain.
7. 0 to 40 °C (32 to 104 °F) for IQ-16X3W
8. Measured in 0 to 40 °C (32 to 104 °F) range.

n/a: not available

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Instrument Drivers

OCX controls and LabVIEW™ driver

Standard Accessories

Instruction manual; one fiber-optic adapter per channel; Certificate of Compliance; Certificate of Calibration

Ordering Information

IQ-16XX-XX-XX-FOA-2XX

Number of channels
1 = One channel
2 = Two channels
4 = Four channels

Detector code
3 = InGaAs
3W = InGaAs wide area (3 mm)

Connector adapter code
FOA-216 = SMA 906 low reflection
FOA-222 = FC low reflection:
FC, FC (/PC/SPC/UPC/APC, NEC-D3)
FOA-228 = DIN 47256 (LSA) low reflection: DIN 47256 (/PC/APC)
FOA-232 = ST low reflection: ST, ST (/PC/SPC/UPC)
FOA-240 = Diamond HMS-0, HFS-3 (3.5 mm) low reflection
FOA-254 = SC low reflection: SC, SC (/PC/SPC/UPC/APC)
FOA-276 = FSMA HMS-10/AG, HFS-10/AG low reflection
FOA-284 = Diamond HMS-10, HFS-13 low reflection
FOA-296 = E-2000 low reflection: E-2000 (PC/APC)
FOA-298 = LC low reflection
FOA-299 = MU low reflection
FOA-8100 = Utility adapter

Polarization code
00 = Standard detector
Standard InGaAs only:
PL = Low polarization-dependent response (1 and 2 channels)
PL-SN = Low polarization-dependent response (4 channels)

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EXFO is certified ISO 9001 and attests to the quality of its products. These products are accompanied by a 24-month warranty and an excellent after-sales support service.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
EXFO has made every effort to ensure that the information contained in this brochure is accurate. However, we accept no responsibility for any errors or omissions, and we reserve the right to modify design, characteristics and products at any time without obligation.

Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.

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