

# Power Meter

IQ-1100/PM-1100



- Up to +20 dBm measurement

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Graphical display mode

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Excellent  $\pm 0.015$  dB linearity

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Flexible data acquisition



Fiber-optic T&M,  
monitoring, manufacturing  
and assembly solutions

**EXFO**

# Accurate, Automated Measurements

The PM-1100 and IQ-1100 Power Meters provide accurate power measurements over a high dynamic range along with high resolution and excellent linearity. Use the IQ-1100 and PM-1100 Power Meters for automatically measuring discrete values such as insertion loss or, alternately, for continuous monitoring and data acquisition. The IQ-1100 module series and the stand-alone PM-1100 provide exceptional performance, flexibility, user-friendliness and extensive integration capabilities.

The IQ-1100 single-channel power meter module series is part of the IQ solution. The IQ-203 mainframe and IQ-206 expansion units support up to 27 modules. For a virtually unlimited number of channels, link two or more systems together through the GPIB interface.



## Key Features

### Excellent Specifications

The IQ-1100 and PM-1100 Power Meters offer  $\pm 0.015$  dB linearity with a  $\pm 5\%$  absolute uncertainty and a 0.001 dB power resolution. Whether you are measuring absolute or relative power levels, count on accurate and precise measurements.

Select the IQ-1100 or PM-1100 when measuring high power (up to 20 dBm) in the 750 to 1700 nm wavelength range. The sensitivity of this detector is -75 dBm.

### Easy-to-Use Software

The IQ-1100 Windows-compatible software application provides unprecedented user-friendliness, improved productivity and instrument flexibility. Easily select all configuration parameters from a single setup window.

## IQ-1100: Advanced Data Acquisition

### Simple, Flexible and Familiar Graphical User Interface

- Windows interface
- Easy control with software buttons, front panel keys or keyboard
- Multiple-user configuration storage
- Simultaneous multiple applications for true multitasking
- Online help

#### Channel Setup

Select wavelength, resolution, offset, sampling rate and units from a single window.

#### Reference Button

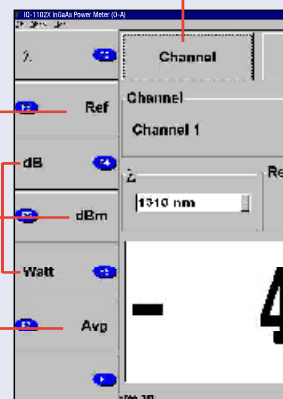
Take power reference measurements at the touch of a button.

#### Display Units

Select dB, dBm or W.

#### Averaging

Display measurements as unprocessed or averaged values.



## PM-1100: Performance and Ease of Use



- 1 Adjustable display intensity**  
Turn off the display without turning off the unit
- 2 Direct access to setup parameters**  
Perform nulling or adjust setup using front panel keys
- 3 Program mode**  
Programmable acquisitions of up to 1024 samples
- 4 Menu-driven interface**  
Easy control of advanced functions menus
- 5 Interchangeable fiber-optic adapters (FOA)**  
Different types of connectors may be used

## Applications

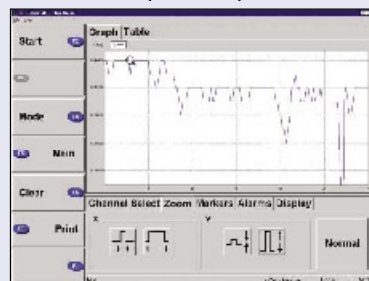
The IQ-1100 and PM-1100 are the ideal power meters for the following applications:

- Periodic multichannel monitoring  
(requires an IQ-1100 or PM-1100 Power Meter and IQ-9100 Optical Switch )
- Absolute power measurement
- Insertion loss measurement
- System or component monitoring
- Linearity verification
- Component characterization
- Source stability measurement
- Attenuation measurement

Three convenient display modes:

- Absolute (in dBm or W)
- Relative (in dB)
- Offset (in dBm or dB)

### Unique Graphical Display Mode (IQ-1100)



### Timed and/or Conditional Data Acquisition

Acquisition Setup	
Mode	Sampling Rate
<input type="radio"/> Timer <input type="radio"/> Trigger <input type="radio"/> Delay	1.0/sec
Trigger	Delay
<input type="checkbox"/> Apx x: 0.000 dBm	0000:00:10
<input type="checkbox"/> Apx y: 0.000 dBm	Duration
<input type="checkbox"/> X-Y	0000:00:10
Data File	File Name
ACOPM00.DAT	
Start	Stop
	Cancel

#### Variable Sampling Rate

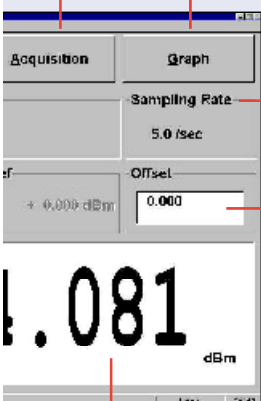
Select a high sampling rate to measure transient responses or a low sampling rate for very low power levels.

#### Variable Resolution

Use the automatic resolution or select from 0, 1, 2 or 3 decimals.

#### Convenient Offset Feature

Enter an offset value to compensate for known power loss or gain.



# Specifications<sup>1</sup>

<b>Model</b>	PM/IQ-1102X	<b>General Specifications</b>	
<b>Detector type</b>	GeX	<b>IQ-1100</b>	
<b>Detector size (mm)</b>	2	<b>Dimensions (H x W x D)</b>	12.1 cm x 3.8 cm x 26.2 cm (4 3/4 in x 1 1/2 in x 10 5/16 in)
<b>Wavelength range (nm)</b>	750 to 1700	<b>Weight</b>	0.63 kg (1.4 lb)
<b>Power range<sup>2</sup> (dBm)</b>	20 to -75	<b>Temperature (operating)</b>	0 °C to 50 °C (32 °F to 122 °F)
<b>Uncertainty<sup>3</sup> (dB)</b>	± 5 % (1000 to 1650 nm) (+10 to -35 dBm)	<b>Temperature (storage)</b>	-40 °C to 70 °C (-40 °F to 158 °F)
<b>Linearity<sup>4</sup> (dB)</b>	± 0.015 (10 to -35 dBm)	<b>Relative humidity<sup>5</sup></b>	0 % to 80 % non-condensing
<b>Power resolution<sup>4</sup> (dB)</b>	0.001 (20 to -35 dBm)	<b>PM-1100</b>	
<b>Wavelength resolution (nm)</b>	1	<b>Dimensions (H x W x D)</b>	11.7 cm x 22.2 cm x 33.3 cm (4 5/8 in x 8 3/4 in x 13 1/8 in)
<b>Fiber type (µm)</b>	5/125 to 62.5/125	<b>Weight</b>	2.0 kg (4.5 lb)
<b>Standard Accessories</b>		<b>Temperature (operating)</b>	0 °C to 40 °C (32 °F to 104 °F)
User guide, fiber-optic connector adapter (FOA), Certificate of Calibration and Certificate of Compliance		<b>Temperature (storage)</b>	-40 °C to 70 °C (-40 °F to 158 °F)
<b>Software Options</b>		<b>Relative humidity<sup>5</sup></b>	0 % to 80 % non-condensing
OCX controls and LabVIEW drivers (IQ-1100)		<b>Notes</b>	

- All power specifications are at 1310 nm unless otherwise specified, and after a warmup period of 20 minutes followed by an offset nulling.
- From 0 °C to 30 °C.
- At 23 °C ± 1 °C with FOA-222. Add 1 % to uncertainty below 1000 nm, and 3 % over 1650 nm.
- For a temperature that is stable within ± 1 °C in the 0 °C to 40 °C range.
- Measured in the 0 °C to 40 °C range.

# Ordering Information

IQ-110X                      PM-110X

Detector code

12X = GeX

Specify model number and the connector adapter you wish to obtain (one free connector adapter included)

- FOA-216: SMA 906 low reflection
- FOA-222 : FC low reflection: FC (/PC/SPC/UPC/APC, NEC-D3)
- FOA-228 : DIN 47256 (LSA) low reflection: DIN 47256 (/PC/APC)
- FOA-232 : ST low reflection: ST (/PC/SPC/UPC)
- FOA-240 : Diamond HMS-0, HFS-3 (3.5 mm) low reflection
- FOA-254: SC low reflection: 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

Please select your fiber-optic connector adapter (FOA) from the preceding list.

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