

IQ-3300

Variable Back Reflector



THE IQ-3300 REFLECTS YOUR PERFORMANCE

- Back reflection from -15 to -55 dB
- Fully programmable
- Reflection monitoring port included

EXFO

The IQ Solution

Why Do I Need a Variable Back Reflector?

It is well known that optical reflections cause problems in many of today's high performance fiber-optic networks. When designing or evaluating these systems (or components), it is important to determine their sensitivity to reflection. By introducing a precise calibrated reflection, system performance (bit error rate, noise levels, or distortion) can be monitored and evaluated. Appropriate measures (isolators, directional couplers, APC connectors, etc.) can then be introduced to safeguard the system. Alternatively, you may find that your system is relatively immune to reflections and that costly, low reflection components are unnecessary.

The IQ Solution

As part of the IQ family, the IQ-3300 back reflector module integrates advanced testing applications with a simple, easy-to-use graphical user interface. The Windows™ application software ensures a rapid learning curve and provides impressive flexibility. Custom applications for automatic testing or monitoring can easily be created.

Signal from transmission equipment
INPUT

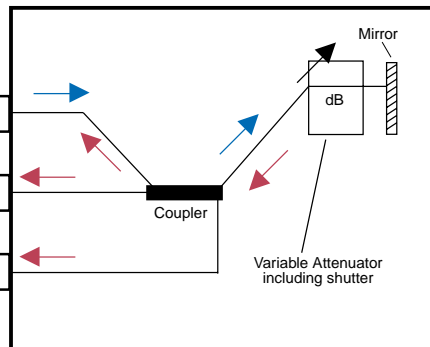
- Source (cw)
- Transmitter
- Amplifier
- Other...

Return loss monitoring
MONITOR OUT

- Power meter

Signal to receiving equipment
OUTPUT

- Power meter
- BER analyzer



The IQ-3300 Variable Back Reflector

The IQ-3300 Variable Back Reflector consists of a variable attenuator and a precision mirror coupled to an input port, an output port, and a monitor port. The internal variable attenuator varies the intensity of the reflected light coupled back into the system. The monitor port provides access for direct monitoring of the reflected power.

The IQ-3300 Variable Back Reflector is Ideal for these Typical Applications:



Source power stability measurements: requires an IQ-3300 Variable Back Reflector and an IQ-1100 Power Meter

Other Applications:

- Bit error rate vs. return loss characterization
- Source power stability measurements
- Source spectral stability measurements
- System noise performance tests
- Distortion tests
- Return loss meter certification

Testing Tip

When performing source stability measurements, use the IQ-3300 program feature to create an automatic reflection scan.

Exceptional Performance

Three Different Display Modes

Display reflection settings as absolute, relative, or X+B (offset) values.

Fine Tune Reflection Setting

Press the Up or Down buttons to change the reflection one step. Step sizes between 0.01 dB and 40.00 dB may be selected.

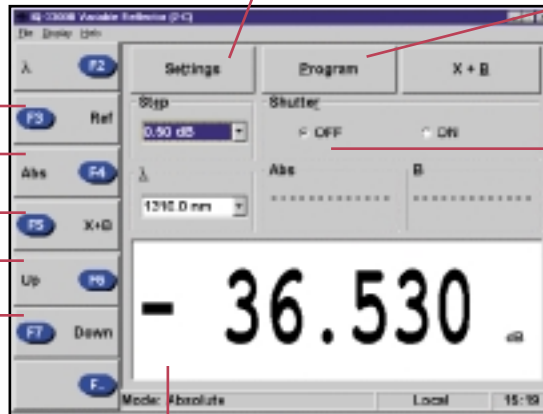
Edit the displayed value to precisely set a specific reflection.

Customize

Depending on your specific requirements, wavelength and step size parameters are easily customized. The spectral resolution is 0.1 nm and the minimum step size is 0.01 dB.

Powerful Program Mode

Use the program mode to quickly create automatic reflection scans. Up to 100 program steps with a maximum dwell time of 99 hours for each step.



High Isolation Shutter

The shutter instantly isolates the mirror from the optical circuit ensuring lower than -55 dB reflectance.

Impressive Performance

- Calibrated reflection to -55 dB
- ± 0.5 dB accuracy
- ± 0.2 dB linearity
- ± 0.06 dB repeatability
- 0.01 dB resolution
- 1270 to 1350 and 1510 to 1590 nm spectrum
- 0.1 nm spectral resolution
- Low insertion loss
- Low polarization dependent loss (PDL)

User-Friendly Graphical Interface

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

OPTICAL SPECIFICATIONS

Fiber type (μm)	9/125	
Wavelength range ¹ (nm)	1270 to 1350	1510 to 1590
Reflection range (dB)	-15 to -55	
Insertion loss (in-out) ² (dB)	5	
Resolution (dB)	0.01	
Accuracy ³ (dB)	± 0.5	
Linearity ⁴ (dB)	± 0.2	
Repeatability (dB)	± 0.06	
Maximum input power ⁵ (dBm)	22	
PDL (dB) max.	0.4	
Reflection with shutter (dB)	<-55	

MECHANICAL SPECIFICATIONS

Temperature	operating	0 to 50°C	32 to 122°F
	storage	-40 to 70°C	-40 to 158°F
Relative humidity ⁶	0 to 95% non-condensing		
Dimensions (H x W x D)	12 x 3.8 x 26.2 cm		
	4 ^{3/4} x 1 ^{1/2} x 10 ^{5/16} in		
Weight	0.80 kg	1.76 lb	

NOTES

1. Calibrated at 1310 nm and 1550 nm, wavelength corrections are performed by software.
2. Insertion loss includes unit connectors.
3. Using APC connectors.
4. Obtained at 23 $\pm 2^\circ\text{C}$, using a light source of 0.002 dB stability during a 15 minute period (source accuracy of ± 0.5 nm) with non-polarized light and at calibrated wavelength.
5. Input power above this limit may damage the unit. The linearity specification may be higher than specified.
6. Measured in 0° to 40°C (32 to 104°F) temperature range.

Specifications subject to change without notice.

ORDERING INFORMATION

IQ-3300-XX

Connector code

- 58 = FC/APC
- 86 = DIN 47256 (LSA)/APC
- 88 = SC/APC
- EI = EXFO UPC Interface
- EA = EXFO APC Interface

The fixed base-plate (EA) must be ordered with a removable universal connector adapter EUI-XX. Please specify one EUI from the following list:

- EUI-28= DIN 47256
- EUI-89= FC
- EUI-91= SC
- EUI-95= E-2000

STANDARD ACCESSORIES

- IQ-3300 module c/w APC connectors
- Test jumper
- Calibration mandrel
- Instruction manual
- Certificate of Compliance

OPTIONAL ACCESSORIES

- LabVIEW drivers available
- OCX controls available in IQ-SDK

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.

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

These devices comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) these devices may not cause harmful interference, and (2) these devices 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.



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