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Find the *Exfo IQS-3100-B-EI* at our website: ***Click HERE***

VARIABLE ATTENUATOR

IQS-3100

R&D AND MANUFACTURING–OPTICAL



- Excellent spectral uniformity of ± 0.1 dB
- 100 dB maximum attenuation
- Monitor output option
- Ultra-low insertion loss
- Ideal for BER testing
- Singlemode and multimode

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A Fully Programmable IQS Solution

Optical system vendors and transceiver manufacturers know that variable attenuators are essential in order to keep their test systems running smoothly. They look for performance, user-friendliness, complete control of test parameters and advanced programming capability. EXFO's IQS-3100 Variable Attenuator combines innovative design techniques, high-quality components and meticulous calibration procedure.

Reliability and repeatable performance. That's what the IQS-3100 offers, in a flexible and fully programmable module built for both singlemode and multimode applications. Choose from three attenuation modes: absolute, relative and X+B. Cycle through a repeatable sequence of up to 100 attenuation steps. Need to highlight SMF and MMF application. Add a user-friendly Windows environment, and you've got a first-class variable attenuator.

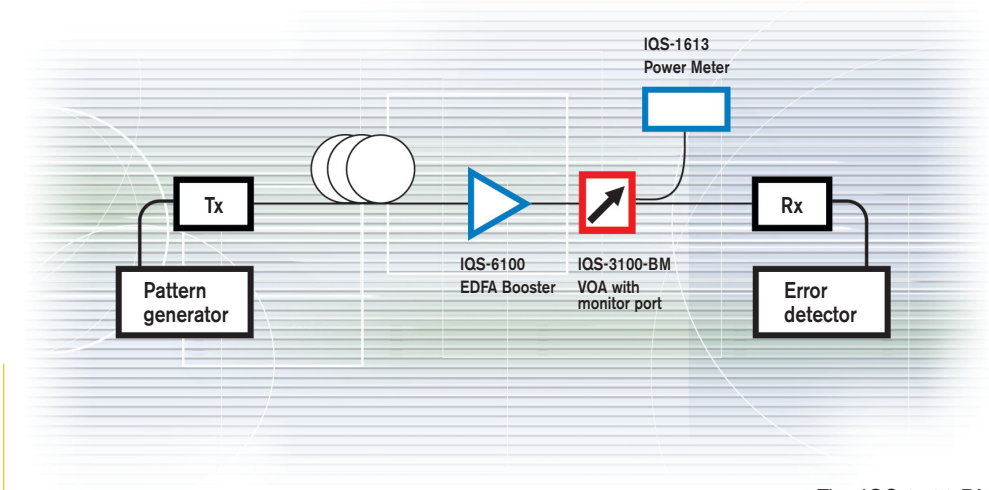


IQS-3100 with monitor port.

APPLICATIONS

- BER testing
- EDFA characterization
- System or component loss simulation
- Accurate power-level monitoring
- Instrument calibration
- Linearity measurement
- Precision variable optical source output
- Spectral tuning
- Optical margin analysis

Bit-error-rate measurement



Typical BERT setup.

The IQS-3100-BM allows you to precisely control the amount of power your receiver (Rx) under test detects and, therefore, to achieve proper BER measurements. The IQS-3100-CM or IQS-3100-DM would be used for a similar characterization for multimode applications.

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A Simple, Flexible and User-Friendly GUI

CUSTOMIZED PARAMETERS

Easily customize wavelength and step size parameters according to specific requirements.

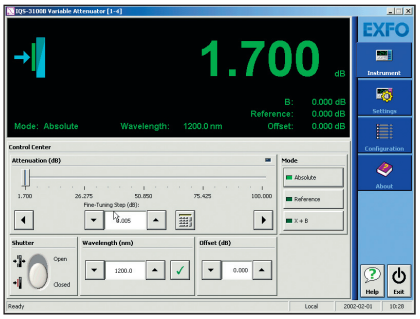
HIGH-ISOLATION SHUTTER

Protect personnel and sensitive components from unnecessary exposure with a > 100 dB attenuation.

FINE-TUNED ATTENUATION SETTINGS

Scroll up or down the attenuation setting range.

- Windows-based environment
- Easy control with software buttons, front panel keys or keyboard
- Multiple configuration storage
- True multitasking
- Online help
- Ideal for standard or custom multimodule applications



The IQS-3100's graphical user interface.

Specifications[a]

SINGLE MODE CONFIGURATIONS

Description	SMF without monitor port		SMF with monitor port	
Models	**IQS-3100-B**	**IQS-3100-BW**	**IQS-3100-BM**	**IQS-3100-BWM**
Fiber type (µm)	9/125	9/125	9/125	9/125
Wavelength range (nm)	1200 to 1650	1200 to 1650	1200 to 1650	1200 to 1650
Max. attenuation (dB)	≥ 70	≥ 65	≥ 70	≥ 65
Insertion loss[b,c] (dB)				
Typical	1.1	1.1	1.4	1.4
Max.	1.8	1.8	2.2	2.2
Resolution (dB)	0.005	0.005	0.005	0.005
Linearity[d] (dB)	± 0.1	± 0.1	± 0.1	± 0.1
Spectral uniformity[e] (dB)	–	± 0.1	–	± 0.1
Repeatability (dB)	± 0.03	± 0.03	± 0.03	± 0.03
Max. PDL[f] (dB)	0.2	0.2	0.2	0.2
Typ. return loss[b,g] (dB)	> 55	> 55	> 55	> 55
Max. input power[h] (dBm)	20	20	20	20
Shutter isolation (dB)	> 100	> 100	> 100	> 100
Typ. monitor output (dB)	–	–	14.5	14.5

MULTIMODE CONFIGURATIONS

Description	MMF without monitor port	MMF with monitor port
Models	**IQS-3100-C, D, E**	**IQS-3100-CM, DM**
Fiber type (µm)	50/125, 62.5/125, 100/140	50/125, 62.5/125
Wavelength range (nm)	700 to 1350	700 to 1350
Max. attenuation (dB)	≥ 65	≥ 65
Insertion loss[b,c] (dB)		
Typical	1.3	2.3
Max.	2.0	3.2
Resolution (dB)	0.01	0.01
Linearity[d] (dB)	± 0.1	± 0.1
Repeatability (dB)	± 0.03	± 0.03
Typ. return loss[b,g] (dB)	> 25	> 25
Max. input power[h] (dBm)	20	20
Shutter isolation (dB)	> 100	> 100
Typ. monitor output (dB)	–	14.5

NOTES

a. At 23 °C ± 5 °C.

b. Measured at 1310 nm and 1550 nm for singlemode units, measured at 850 nm and 1300 nm for multimode units.

c. Measured with FC/UPC connectors for singlemode units and FC/PC for multimode units.

d. Measured at 1310 nm and 1550 nm (up to 60 dB) for singlemode units and 850 nm and 1300 nm (up to 50 dB) for multimode units, non-polarized light.

e. Measured between 1520 nm and 1570 nm at attenuation 20 dB, typical for BWM.

f. Measured at 1550 nm, attenuation of < 30 dB.

g. The return loss is limited by the return loss of the connectors. The connectors used are FC/APC for singlemode units and FC/PC for multimode units.

h. Typical value. Prolonged exposure may damage the unit.

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GENERAL SPECIFICATIONS

Size (H x W x D)	125 mm X 36 mm X 282 mm	(4 $^{15}/_{16}$ in X 1 $^{7}/_{16}$ in X 11 $^{1}/_{8}$ in)
Weight	0.75 kg	(1.65 lb)
Temperature		
Operating	0 °C to 40 °C	(32 °F to 122 °F)
Storage	–40 °C to 70 °C	(–40 °F to 158 °F)
Relative humidity	0 % to 80 % non-condensing	

Instrument Drivers

LabVIEW™ drivers , SCPI commands and COM/DCOM librairies.

Remote Control

With IQS-500: GPIB (IEEE-488.1, IEEE-488.2), Ethernet and RS-232.

Standard Accessories

User guide, Certificate of Compliance, Certificate of Calibration.

ORDERING INFORMATION

IQS-3100-X-XX

Model

IQS-3100-B = 9/125 µm
IQS-3100-BW = 9/125 µm optimized for spectral flatness
IQS-3100-C = 50/125 µm
IQS-3100-D = 62.5/125 µm
IQS-3100-E = 100/140 µm
IQS-3100-BM = 9/125 µm with monitor output
IQS-3100-BWM = 9/125 µm optimized for spectral flatness with monitor output
IQS-3100-CM = 50/125 µm with monitor output
IQS-3100-DM = 62.5/125 µm with monitor output

Example: IQS-3100-BW-EI-EUI-89

Connector

EI-EUI-28 = UPC/DIN 47256
EI-EUI-76 = UPC/HMS-10/AG
EI-EUI-89 = UPC/FC narrow key
EI-EUI-90 = UPC/ST
EI-EUI-91 = UPC/SC
EI-EUI-95 = UPC/E-2000
EA-EUI-28 = APC/DIN 47256[a]
EA-EUI-89 = APC/FC narrow key[a]
EA-EUI-91 = APC/SC[a]
EA-EUI-95 = APC/E-2000[a]
99 = MU connector[a]

Note

a. Only available for singlemode models.



Rugged Handheld Solutions

OPTICAL
- OTDRs
- OLTSs
- Power meters
- Light sources
- Talk sets

COPPER ACCESS
- ADSL/ADSL2+, SHDSL, VDSL test sets
- VoIP and IPTV test sets
- Ethernet test sets
- POTS test sets



Platform-Based Solutions

OPTICAL FIBER
- OTDRs
- OLTSs
- ORL meters
- Variable attenuators

DWDM TEST SYSTEMS
- OSAs
- PMD analyzers
- Chromatic dispersion analyzer

TRANSPORT AND DATACOM
- Next Generation SONET/SDH and OTN testers
- SONET/DSn (DS0 to OC-192) testers
- SDH/PDH (64 kbit/s to STM-64) testers
- T1/T3, E1 testers
- 10/100 M and Gigabit Ethernet testers
- Fibre Channel testers
- 10 Gigabit Ethernet testers

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EXFO is certified ISO 9001 and attests to the quality of these products. 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 specification sheet is accurate. All of EXFO's manufactured products are compliant with the European Union's WEEE directive. For more information, please visit **www.EXFO.com/recycle**. 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. Units of measurement in this document conform to SI standards and practices. **Contact EXFO for prices and availability or to obtain the phone number of your local EXFO distributor.**

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In case of discrepancy, the Web version takes precedence over any printed literature.

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