PDL/OL METER

IQS-3400B

R&D AND MANUFACTURING–OPTICAL

- Reliable solution for coupler characterization
- Efficiently characterizes wideband passive components
- High spectral range: 1260 nm to 1635 nm

High-Performance PDL Testing

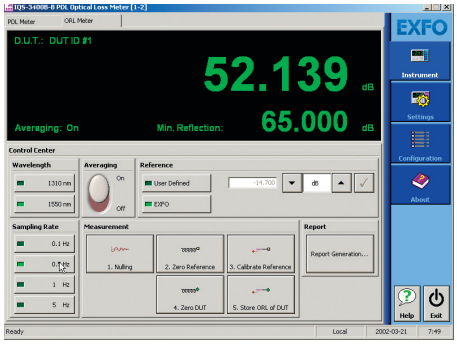
Polarization-dependent loss (PDL) is a critical parameter in passive component manufacturing today. Stringent PDL specifications mean you have to check couplers, fixed attenuators, isolators and other components on the production floor. You need a PDL test solution you can rely on.

RELIABLE BACKUP

Back up your PDL measurements with the IQS-3400B's optical return loss (ORL) test function. PDL can be caused by ORL from a scratched connector. If the PDL reading on a connectorized device seems unusually high, the ORL tester lets you check for loss due to connector damage.

STREAMLINED SETUP

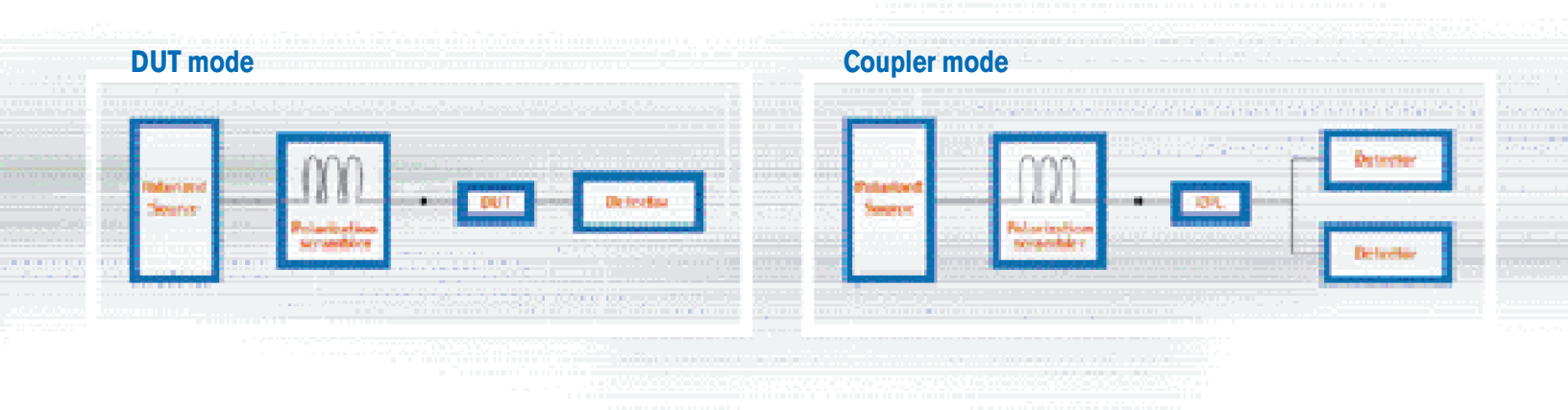
The IQS-3400B PDL/OL Meter uses the scanning method for simple, flexible component characterization on the production floor. Start with a laser source, use the IQS-5100B to scramble the polarization state of the signal, and then take a power acquisition with the IQS-3400B. Getting reliable PDL measurements is easy with the streamlined IQS PDL test setup.



ORL measurement

KEY FEATURES

- Average and standard deviation reporting on multiple measurements
- 0.001dB resolution at 2500 samples per second
- Variable scan time period
- Remote control via GPIB Ethernet or RS 232
- LabView drivers and COM/DCOM libraries available



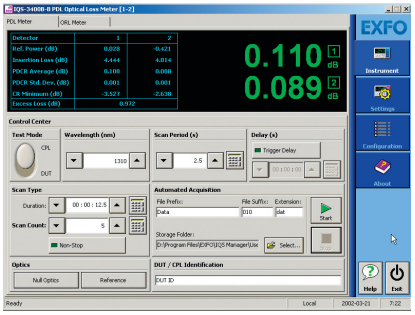
AUTOMATED FEATURES

THE IQS-3400B PERFORMS THE FOLLOWING MEASUREMENTS AUTOMATICALLY:

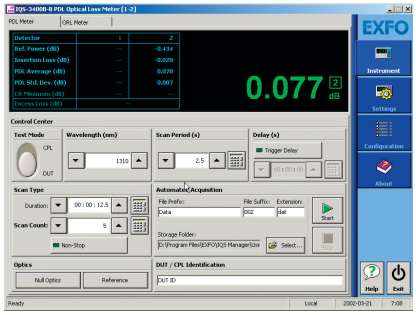
- Three-port device characterization
- Polarization-dependent coupling ratio (PDCR)
- Coupling ratio
- Excess loss
- Insertion loss for each branch of a coupled fiber

FLEXIBLE SOFTWARE

The IQS-3400B PDL Meter comes with a Visual IQS software application that gives you more flexibility in managing your test configurations.



PDL test system



IQS-3400B general interface

Select the automatic configuration for quick, simple testing at one of three settings: Normal mode, for quick and efficient testing; Precision mode, for more detailed, accurate results; and High PDL mode, for testing PDL values higher than 10 dB.

To configure advanced settings adapted to your specific testing needs, you can customize your own mode.

COMPLETE SOLUTION

The IQS-5100B Polarization Scrambler teams up with the IQS-3400B PDL/OL Meter for a streamlined, reliable PDL solution. With solid construction and low activation loss, the IQS-5100B offers the sturdiness and versatility you need for passive component testing.

THE IQS-500 INTELLIGENT TEST SYSTEM

The new IQS-500 Intelligent Test System provides a flexible approach to optical test and measurement for manufacturing, automation, optical qualification and R&D. It combines powerful features and control capabilities for up to 100 modules.

Based on standard industrial PC architecture, the IQS-500 Intelligent Test System is a scalable modular platform that includes controllers, expansion units and a comprehensive range of plug-in test modules. The IQS-500 is also backward-compatible with most of EXFO's IQ-generation modules, allowing you to maximize the return on previous investments. The IQS-500 Intelligent Test System offers a powerful, easy-to-use environment to match your most demanding needs.

GENERAL SPECIFICATIONS

Temperature		
operating	0 °C to 50 °C	(32 °F to 122 °F)
storage	–40 °C to 70 °C	(–40 °F to 158 °F)
Relative humidity	0 % to 95 % (non-condensing) up to 40 °C	
Dimensions (H x W x D)	125 mm x 36 mm x 282 mm	(4 $^{15}/_{16}$ in x 1 $^{7}/_{16}$ in 11 $^{1}/_{8}$ in)
Weight	0.64 kg	(1.45 lb)
Recommended sources	IQS-240x M5	(DFB laser O–, C– or L–band)
	IQS-2600	(Tunable laser C–band)
	IQS-2600B	(Tunable laser C+L–band)
	IQS-21xxBP	(Polarized LED)

SPECIFICATIONS [a]

General	
Wavelength range (nm)	1260 to 1635
Detector type	Germanium (2 mm)
Dynamic range (dBm)	9 to – 55
Fiber type	9/125 µm
Display resolution (dB)	0.01 and 0.001
Measurement time (s)	1.0 to 9999.0 (typ. 2.5)
Normal Mode	
PDL range (dB)	0.010 to 30
PDL uncertainty[b] (dB)	+0.01/–0.005 –3 % of PDL
Insertion loss uncertainty[c, e] (dB)	± (0.05 + 5 % of PDL)
Insertion loss repeatability [e] (dB)	± (0.01 + 5 % of PDL)
Coupler Mode	
PDCR range (dB)	0.005 to 30
PDCR uncertainty[e] (dB)	± (0.005 + 10 % of PDCR)
Coupling ratio uncertainty[e] (dB)	± 0.1
Coupling ratio repeatability[d, e] (dB)	± 0.01
Insertion loss uncertainty[c, e] (dB)	± (0.05 + PDCR)
Insertion loss repeatability[e] (dB)	± (0.015 + PDCR)
ORL Measurement	
Dynamic range[f] (dB)	0 to 55
Uncertainty[g] (dB)	0 to 35: ± 0.5 35 to 45: ± 0.7 45 to 55: ± 1.2

NOTES

a. At 23 °C and 1550 nm, all uncertainties are reported with a confidence level of 95 %, with an IQS-5100B and recommended source.

b. For PDL < 1 dB, for 2.5 s measurement time.

c. Plus connector repeatability.

d. For coupling ratio higher than 20 %.

e. When the power of detector D2 goes down to –35 dBm, a remnent noise from the power meter adds uncertainty to the measurements

f. Using a 10 dBm optically isolated source with ± 0.001 dB stability.

g. Includes linearity, polarization sensitivity and connector repeatability.

ORDERING INFORMATION

MODULE

IQS-3400B-B-XX

Connecter Code
89 = FC/UPC
90 = ST/UPC
91 = SC/UPC

Also available for the IQ-200 Optical Test System

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Printed in Canada 06/11

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