Backreflection Meter

The JDS Uniphase Backreflection Meter is a portable, directdisplay instrument used for the convenient measurement of backreflection, insertion loss, and power of connectors, components, and systems. With a single output port, the meter is ideal for jumper manufacturers.

The meter can be equipped with one or two built-in laser sources. Sources available are: 850 and 1310 nm for multimode meters, and 980, 1310, 1480, 1550, 1625, and 1650 nm for single-mode meters.

The use of an FC/APC ultra-low backreflection connector on the output port enables the use of hybrid jumpers to accommodate measurements with various connector types without compromising the backreflection measurement range. When a device under test (DUT) is connected to the jumper and the DUT output is terminated, the backreflection of the DUT is displayed. The meter's superior optics are very stable at low backreflection levels. Insertion loss and power can be measured to - 80 dBm.

Other features include compensation for extraneous backreflection, user-adjustable calibration, an internal rechargeable battery for field portability, a transit carrying case, and a convenient foot pedal for data logging to a computer or serial printer via the instrument's serial port.

Safety Information

Complies to FDA 21CFR 1040.10 for Class I Lasers

CLASS 1 LASER PRODUCT



Key Features & Benefits

Wide wavelength range

Insertion loss and backreflection capability

Typical backreflection power sensitivity of - 75 dB

Insertion loss and power measurements to - 80 dBm

Convenient foot pedal for data logging

Multiple connector test system (MCTS) application software

Direct display of measured backreflection, power, or insertion loss

Compensation for extraneous backreflection for accurate backreflection measurements

Calibration can be verified using calibrated reference jumpers

User-calibration mode

Transit case for safer and easier portability

Optional RS232 to GPIB converter

CE compliant

Applications

Connector backreflection/loss testing

Component testina

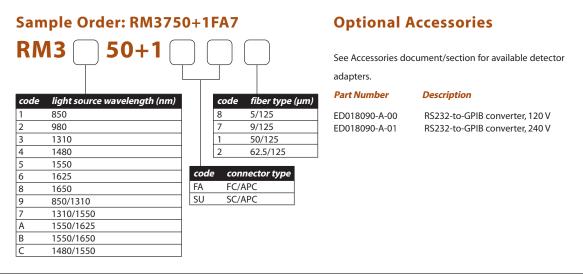
Installation verification

Quality assurance acceptance testing

Specifications

PARAMETER		SINGLE-MODE		MULTIMODE
		(5/125 µm)	(9/125 μm)	(50/125 μm and 62.5/125 μm)
Operating wavelengths		980 ± 10 nm	1310, 1480, 1550, 1625, 1650 ± 10 nm	850, 1310, 1550 ± 20 nm
Backreflection range		0 to - 65 dB1	0 to - 75 dB	0 to - 40 dB1
Relative accuracy	backreflection	± 0.4 dB ²		± 0.7 dB ³
Detector type		2 mm InGaAs		3 mm InGaAs
Power range		0 to - 80 dBm		0 to - 60 dBm
Absolute power accuracy		± 0.25 dB (typical) at - 10 dB ^{4,5}		± 0.25 dBm (typical) at - 10 dBm ⁵
Relative accuracy	power	± 0.05 dB (< 5 dB loss),± 0.15 dB (> 5 dB loss) ⁴		± 0.15 dB ^{5,6}
Remote interface		RS232 (GPIB optional)		
Input voltage		100-240 V AC, 50-60 Hz		
Power consumption		25 VA maximum		
Display		16 character LCD		
Dimensions W x H x D		26 x 11 x 26 cm		
Weight		4 kg		
Operating temperature		0 to 40 °C		
Storage temperature		- 40 to 70 °C		
Humidity		Maximum 95% RH from 0 to 40 °C		

- 1. Reduced backreflection accuracy in the last 10 dB of range based on termination effectiveness. Depending on the measurement setup, measurements with lower levels are possible at reduced accuracy.
- 2. For a typical application add \pm 0.4 dB for readings between 60 and 67 dB. Add \pm 0.8 dB for readings between 67 and 72 dB. Add \pm 1.5 dB for readings between 72 and 75 dB.
- 3. Following the user-calibration procedure at the recommended interval. For simple reflections, such as flat-end connectors.
- 4. Add \pm 0.1 dB between 70 and 80 dBm.
- 5. Immediately after performing a dark measurement. Not including the 1650 nm source.
- 6. Add \pm 0.1 dB between 0-3 dBm and between 35 and 40 dBm.



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