Multichannel Backreflection Meter

The JDS Uniphase Multichannel Backreflection Meter performs a wide range of single-mode or multimode return loss (RL) and loss measurement functions, ranging from single component testing to automated multifiber testing. The primary functions of high sensitivity RL measurements and power measurements can be augmented by the addition of multiple output ports and multiple internal light sources.

The meter is available with 1, 4, 8, 12, 16, 20, or 24 output ports. A multidisplay mode lets the viewer see multiple test results at a glance.

The meter is used for single fiber and ribbon fiber connector measurements. Use of hybrid jumpers allow a quick change of the connector type without limiting the RL range. The meter is also available with 2 or 3 internal sources for measurements at 850, 1310, 1480, 1490, 1550, 1625 or 1650 nm.

The 2 mm InGaAs detector is particularly useful for high sensitivity single fiber applications. The 5 mm Ge detector is an economical solution for measurements of ribbon fiber connectors and can accurately measure connectors with up to 8 multimode and 12 single-mode fibers. The large surface 10 mm InGaAs detector is ideal for measurements of larger fiber count ribbon connectors, and can be used with wavelengths extending in the L-band. One FC detector adapter is supplied with the unit, and other adapters, such as MTP/MPO or MU for ribbon fiber connector types, are also available.

The meter is supplied with one calibrated hybrid jumper for calibration purposes and one hybrid test jumper for measurement purposes. Both jumpers are equipped with an FC/APC connector on one end, for the output port of the meter, and an FC/PC connector on the other end. Uncalibrated hybrid jumpers for measurements with other connector types are also available.

The Multiple Connector Test System (MCTS) software automates insertion loss and RL measurements of optical connectors. It also provides the ability to print labels, manage data, define pass/fail testing criteria, identify the device under test, and set up multiple channel measurements, all of which increase testing productivity.

Key Features & Benefits

Single-mode and multimode models available

Measurements at 850, 1310, 1480, 1490, 1550, 1625, or 1650 nm

Integrated switch included in the calibration

Multidisplay mode

MCTS application software

Applications

Single-mode fiber connector and component testing

Ribbon fiber measurements

Multimode fiber connector testing

Safety Information

Complies to CE requirements plus UL3101-1 and CAN/CSA-C22.2 No. 1010.1

Meets the requirements of Class 1 in standard IEC 60825-1(2002) and complies with 21CFR1040.10 except deviations per Laser Notice No. 50, July 2001.

CLASS 1 LASER PRODUCT
(IEC 60825-1, 2002)

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Specifications

PARAMETER	SINGLE-MODE			MULTIMODE		
Operating wavelengths	1310, 1480, 1490, 1550, 1625, 1650 ± 10 nm			850, 1310, 1550 ± 20 nm		
Outputs	1, 4, 8, 12, 16, 20, or 24					
Detector type	2 mm InGaAs	5 mm Ge[8]	10 mm InGaAs	3 mm InGaAs	5 mm Ge[8]	10 mm InGaAs
Power range[1]	3 to - 80 dBm	3 to - 40 dBm	- 5 to - 40 dBm	3 to - 60 dBm	3 to - 40 dBm	- 5 to - 40 dBm
Relative Power accuracy[5, 9]	± 0.15 dB[6]			± 0.15 dB[7]		
Relative Power accuracy (5 dB range)[5, 9]	± 0.05 dB[6]			± 0.15 dB[7]		
Backreflection range[1, 2, 9]	0 to - 75 dB			0 to - 40 dB		
Relative backreflection accuracy[3, 9]	± 0.4 dB[4]			± 0.7 dB		
Relative backreflection accuracy (5 dB range)[3, 9]	± 0.3 dB[4]			± 0.7 dB		
Absolute power accuracy	± 0.25 dB typical at - 10 dBm					
Backreflection resolution	0.1 dB					
Power resolution	0.01 dB					
Input voltage	100 - 240 V AC, 50 - 60 Hz					
Power consumption	80 VA maximum					

1. Depending on the measurement setup, measurements with lower levels are possible at reduced accuracy.
2. 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.
3. Following the user-calibration procedure at the recommended interval.
4. For a typical application add ± 0.4 dB for readings between - 60 and - 67 dB. Add ± 0.8 dB for readings between - 67 and - 72 dB. Add ± 1.5 dB for readings between - 72 and - 75 dB.
5. Immediately after performing a dark measurement.
6. Add ± 0.1 dB between 0 and 3 dBm and in the last 10 dB of the range.
7. Add ± 0.1 dB between 0 and 3 dBm and in the last 5 dB of the range.
8. 5 mm Ge detector can accurately measure ribbon fiber connectors with up to 8 multimode or 12 single-mode fibers at wavelengths up to 1600 nm.
9. Measured at ambient temperature ± 3 °C. Not including 1650 nm source.

Ordering Information

SAMPLE ORDER: RX3070+1122FA7

RX30 ☐ 0+1 ☐ ☐ ☐ ☐ ☐ ☐

code	source wavelength (nm)
1	850
3	1310
4	1480
5	1550
6	1625
8	1650
9	850/1310
7	1310/1550
A	1550/1625
B	1550/1650
C	1480/1550
D	1310/1480/1550
E	1310/1550/1625
F	1480/1550/1625
G	850/1310/1550
H	1490/1550
J	1490/1625
K	1310/1490/1550

code	detector type
1	2 or 3 mm InGaAs
2	5 mm Ge
3	10 mm InGaAs

code	number of output channels
01	1 output channel
04	4 output channels
08	8 output channels
12	12 output channels
16	16 output channels
20	20 output channels
24	24 output channels

code	fiber type (µm)
7	9/125
1	50/125
2	62.5/125

code	connector type
FA	FC/APC
SU	SC/APC

Indicate your requirements by selecting one option from each configuration table. Print the corresponding codes in the available boxes to form your part number.

Optional Accessories

See Accessories document/section for available detector adapters

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