Benchtop

578L
High Intensity Optical Power Meter

Features

- +27 to -50dBm measurement range is ideal for testing high output devices
- Logarithmic dB/dBm and linear Watt units
- 2mm indium-gallium-arsenide (InGaAs) photodetector
- 980nm, 1310nm, and 1550nm N.I.S.T. traceable calibration wavelengths
- High resolution—0.01dB/dBm; 0.001mW/µW/nW
- Prints customized labels with power reading, time, and date on a parallel or serial printer
- Remote control via RS-232 interface
- BNC analog output interface for convenient external monitoring
- I²C interface allows up to 16 optical power meters to be connected and controlled from a designated "reference unit"
- Snap-On Connector (SOC) interface adapts to all industry standard fiber optic connectors and other less common types
- Operates on 100 to 250VAC, 50 to 60Hz input power

Key Specifications

Detector type	2mm InGaAs
Calibration wavelengths	980, 1310, and 1550nm
Calibration traceability	U.S. N.I.S.T.
Power range	+27 to -50dBm
Absolute accuracy	±0.25dB
Resolution	0.01dB/dBm; 0.001mW/µW/nW
Measurement modes	dB, dBm, Watt

Applications

Insertion Loss and Link Loss Testing

The 578L benchtop optical power meter is a versatile instrument designed to meet the needs of customers conducting fiber optic insertion loss tests and measurements in manufacturing or laboratory settings.

With a measurement range from +27 to -50dBm, the 578L is ideal for performing measurements on CATV systems, optical amplifiers, and other high power sources. The 578L features 980nm, 1310nm, and 1550nm calibration wavelengths.

The 578L prints customized labels containing measurement, date, and time information when connected to a parallel or serial printer. Up to seven different label formats can be stored in non-volatile memory for later use.

A built-in serial port allows the 578L to be controlled remotely from a computer, enabling the automation of complex or repetitive measurements. LabView and LabWindows drivers for the instrument are available from RIFOCS Corp. Up to 16 578L optical power meters can be "daisy chained" via an integral I²C interface to make a multi-channel test system controlled by a designated "reference unit."

The 578L also features a BNC analog output interface, allowing users to perform discontinuity measurements or monitor optical switch performance without an optical-to-electrical converter. The analog output voltage is calibrated directly to the LCD readout, ensuring accurate and repeatable measurements when using an external voltmeter or chart recorder.

RIFOCS Corporation
Fiber Optic Instruments & Components

NIST, ISO, IEC, ANSI, NCSL, MIL-STD by www.raeservices.com

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Ordering Information

One Snap-On Connector (SOC) adapter, a power cord, and a user manual are included with the 578L optical power meter. Please specify the desired connector adapter type when ordering using the SOC Adapter Table, below. Additional SOC adapters may also be ordered separately.

Part No.	Description
578L	578L optical power meter

SOC Adapter Table

Adapter Code	Connector Type
1001	Blank
1010	DIN 47256
1020	NTT/FC-PC
1030	AT&T/ST-PC
1038	MIL-T-29504 optical termini
1040	HMS-10 (2.5mm)
1047	Mini-BNC
1050	Diamond HMS-0 (3.5mm)
1057	Stratos 430/Holtek 38000
1062	NTT/SC-PC
1081	Radiall VFO
1086	Diamond HMS-10A (SMA-2.5)
1087	SMA-905/906
10E0	Radiall EC
10E2	Diamond E-2000
10TB	Simplex TOSLINK/Spectran J-pin
10TD	TR/TX set, duplex TOSLINK/Spectran J-pin
10TR	Duplex TOSLINK TX
10TX	Duplex TOSLINK TR
10ZP	H-P Versalink/Spectran V/Z-pin

Accessories

930	19-inch rack-mount adapter
933	I²C cable
935	Male DB25 to female DB25 serial interface cable
936	Male DB25 to female DB9 serial interface cable

Specifications[1]

Subject to change without notice

Detector type	2mm indium-gallium-arsenide (InGaAs)
Calibration wavelengths	980nm, 1310nm, and 1550nm
Power range	+27 to -50dBm
Absolute accuracy	±0.25dB at calibration conditions
Linearity:	
±0.5dB	-45dBm to -50dBm
±0.05dB	+17dBm to -45dBm
±0.5dB	+27dBm to +17dBm
Resolution	0.01dB/dBm 0.001mW/µW/nW
Wavelength dependence:	
600 to 660nm	N/A
820 to 880nm	N/A
975 to 985nm	0.025dB/nm
1270 to 1330nm	0.033dB/nm
1500 to 1625nm	0.0016dB/nm
Connector interface	Snap-On Connector (SOC) interface
RS232 interface	Conforms to RS232C standards; DB25 connector, female
I²C interface	Conforms to Inter-Integrated Circuit (I²C) Bus specifications
Parallel printer interface	Logic level: 0 to 5V; Drives 1 TTL load; DB25 connector, female
Analog output interface	0 to 3V amplifier output; Max analog output load > 5k ohm; tr/tf < 0.1 ms for P ≥ 1µW; tr/tf < 1 ms for P ≥ 10nW
Power requirements	100VAC to 250VAC, 50 to 60Hz
Environmental:	
Operating temp.	-5°C to +55°C
Storage temp.	-15°C to +70°C
Humidity	0 to 95% RH, non-condensing
Dimensions	8 x 19 x 29 cm (3.125 x 7.375 x 11.375 in.)
Weight	2.15kg (4.75 lbs.)

[1] Within specified ambient environment of +20°C to +25°C.

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