558B | High Intensity Optical Power Meter

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APPLICATIONS:

Insertion Loss and Link Loss Testing

The 558B 2mm InGaAs optical power meter is capable of measuring significantly higher power levels than the 555B (1mm InGaAs) and 557B (3 x 3.5mm Si) instruments. With a measurement range of +25 to -30dBm1, the 558B is particularly suited for performing measurements on CATV systems, optical amplifiers, and other high power devices.

Paired with a 250 Series LED source or 260 Series laser source, the 558B optical power meter is ideal for insertion loss testing of multimode and single-mode fiber optic cables and connectors. The 558B optical power meter can also be used for link loss testing of installed cable plants.

The multi-wavelength reference storage capability of the 558B optical power meter permits convenient insertion and link loss testing at different transmission windows if a 252A/252B dual LED source or 262A dual laser source is used.

Output Power Measurements

The 558B optical power meter simplifies output power measurements of optical amplifiers, transmitters, and other high output light sources. The three calibration wavelengths, 2mm InGaAs photodetector, and wide dynamic range also make the 558B suitable for a variety of other high power measurements.

In addition, a broad range of Snap-On Connector adapters for both industry standard fiber optic connectors, and other less common types, makes the 558B an indispensable tool for technicians and others working with light-based transmission systems.

FEATURES

- +25 to -30dBm measurement range1
- 980nm, 1310nm, and 1550nm N.I.S.T. traceable calibration wavelengths
- 0.01dB measurement resolution
- 2mm indium-gallium-arsenide (InGaAs) photodetector
- Easy to use—three buttons control all functions
- Relative logarithmic dB and absolute logarithmic dBm units
- Multi-wavelength reference storage—stores and recalls reference power levels for faster, more efficient measurements
- Snap-On Connector (SOC) interface adapts to all industry standard fiber optic connectors and other less common types
- Long battery life—more than 100 hours of continuous operation
- User-selectable auto-shutoff
- AC power converter and adapter available for prolonged or benchtop use
- Splashproof

KEY SPECIFICATIONS

Detector type	2mm InGaAs
Calibration wavelengths	980, 1310, and 1550nm
Calibration traceability	U.S. N.I.S.T.
Power range	+25 to -30dBm[1]
Absolute accuracy	±0.25dB
Resolution	±0.01dB
Polarization dependence	< 0.1dB

[1] At 1310nm and 1550nm. +25 to -27dBm measurement range at 980nm. To avoid thermal damage, limit exposure high power (greater than +23dBm) to less than 30 minutes.

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SPECIFICATIONS[1]

Subject to change without notice

Detector type	2mm indium-gallium-arsenide (InGaAs)
Calibration wavelengths	980nm, 1310nm, and 1550nm
Power range	+25 to -30dBm (1310nm and 1550nm) +25 to -27dBm (980nm only)
Linearity at 1310nm and 1550nm:	
±1.0dB	+25dBm to +22dBm
±0.5dB	+22dBm to +18dBm
±0.2dB	+18dBm to +10dBm
±0.05dB	+10dBm to -30dBm
Absolute accuracy	±0.25dB at calibration conditions
Wavelength dependence:	
975 to 985nm	0.025dB/nm
1270 to 1330nm	0.0033dB/nm
1500 to 1625nm	0.0016dB/nm
Polarization dependence	< 0.1dB
Resolution	±0.01dB
Power requirements	Two AA-size 1.5V alkaline batteries provide approx. 100 hours of continuous operation
Connector interface	Snap-On Connector (SOC) interface
Environmental:	
Operating temp.	-15°C to +55°C
Storage temp.	-35°C to +70°C
Humidity	0 to 95% RH, non-condensing
Dimensions	7.2 x 14.2 x 3.5 cm (2.8 x 5.6 x 1.4 in.)
Weight	250g (8.9 oz)

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

ORDERING INFORMATION

User will need to purchase a Snap-On Connector (SOC) adapter for use of the instrument. Please specify the desired connector adapter type when ordering (see Adapter Table below). Additional adapters may also be ordered separately.

Part No.	Description
558B	558B optical power meter
90AC	AC power converter

SOC Adapter Table

Part No.	Description
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

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