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The RIFOCS 550B series of true palm-sized optical power meters cover the full range of optical fiber applications.

All 550B series power meters utilize the RIFOCS Snap-On Connector (SOC) interface. All industry standard fiber optic connectors can be accommodated via a complete line of snap-on adapters.

This extraordinary design combines a state-of-the-art signal processor and microcomputer electronics to provide superb performance as well as simple and elegant operation with just three controls: ON/OFF, dBm/dB and λ. A reference value can be set and also saved for each wavelength.

Key Features:

- **Relative dB mode** for direct attenuation and insertion loss measurements
- **Highly wavelength insensitive**
- **Set and store reference for different wavelengths**
- **Splash resistant**
- **N.I.S.T. traceable**
- **Easy User-Recalibration**
- **>100 hours battery life**
- **User selectable Auto Shutoff**

- **555B +3dBm/-60dBm InGaAs** for general purpose fiber optic applications
- **557B +3dBm/-60dBm Si(3x3.5mm)** for near-infrared and visible application, including POF and large core glass fibers
- **558B +27dBm/-30dBm CATV** 980nm : +30dBm to - 27dBm CATV, High Power WDM applications

Digital Signal Processing

Proprietary micro controller circuitry eliminates the traditional transimpedance amplifier and decade ranging. Photonic energy is directly analyzed through digital signal processing. The result is very fast readout settling time. The instrument settles within less than 2 seconds upon applying a 0dBm power level. Quick readout stabilization becomes very important when performing repetitive measurements or splice alignment.

LCD Display

The extended temperature range display



offers 0.01dB resolution. dB, dBm and wavelength annunciators indicate current operating mode. All features rival functions otherwise only found in top of the line laboratory instruments.

Structural Integrity

The 550B series instruments can take falls and are highly crush resistant. The units provide reliable and accurate measurements from -15°C to +50°C.

Splash Resistancy

The 550B series meet outside plant requirements and environmental concerns.Any kind of moisture the unit is subjected to does neither harm the instrument nor impact its performance.

Wavelength Select

Model 555B is calibrated at 850nm, 1310nm and 1550nm.

Models 557B is calibrated at 630nm, 780nm and 850nm.

Model 558B offers calibration at 980nm, 1310nm and1550nm.

The default wavelength may be defined by the user, by simply selecting the desired wavelength and pressing the dBm/dB button, while holding the λ button.

Dust Cap

When the instrument is not in use, the permanently attached dust cap simply snaps in place. There is no need to remove the connector adapter; the dust cap fits over all adapters and protects the interface against shock or dirt.

Absolute and Relative Measurements

Absolute measurements are useful for verifying transmitted power or measuring the power of fiber optic sources.

To measure relative losses the 550B series provide the dB function. The user simply presses the dB button and all subsequent readings are displayed relative to the reference power level.

Snap-On Connector Interface

The precise Snap-On Connector interface allows the user to quickly adapt to any industry standard connector.

The RIFOCS SOC adapter is designed to position the connector ferrule at the exact center position for best repeatability. Unlike threaded adapters, the SOC adapter aligns on the cylindrical surface and, thus, greater repeatability is achieved.

The SOC adapter may be removed for cleaning the detector window, or it may be interchanged to accommodate a number of connector adapters.

Very Low Power Consumption

Two commonly available AA flashlight batteries power the unit for over 100 hours. A battery status indicator displayed on the LCD screen provides ample warning to change batteries.

User Selectable Auto Shut Off

In order to further conserve battery power the 550 series OPMs turn themselves automaticaly off after 15Min. of idling. The user can override the setting by simply pushing a combination of buttons.

The RIFOCS Calibration Concept

All RIFOCS power meters are calibrated and traceable to the US National Institute for Standards and Technology (N.I.S.T.). NPL traceable calibrations are available on demand.

While initial accurate and consistent calibrations are an important consideration when purchasing power meters, it is equally important to consider subsequent maintenance and recalibration.

Each RIFOCS Power Meter contains the necessary software to recalibrate its own non-volatile memory. The user simply enters the calibration mode by setting a switch within the battery compartment. Sub-sequently a known power level is applied to the unit and the instrument will calculates its own calibration points and stores the result. There is no need to open up the instrument and, thus, void the factory warranty.

The only tools the user is required to have are a stable LED source and a reference detector traceable to the required standards body.

Specifications

MODEL	555B	558B	557B
Sensor Type	InGaAs (1mm)	InGaAs (2mm)	Si (3.5mm)
Power Range	+3 to -60dBm	+27 to -30dBm (+30 to -27dBm @980nm)	+3 to -60dBm
Cal Wavelengths	850/1310/1550nm	980/1310/1550nm	630/780/850nm
Absolute Accuracy	±0.25dB at Calibration Conditions		
Linearity	± 0.1dB	± 0.05dB (+24dBm to-27dBm)	
Wavelength Dependence			
600nm to 660nm	N/A	N/A	0.30dB
820nm to 880nm	2.00dB	N/A	0.25dB
975nm to 985nm	0.25dB	0.25dB	0.15dB
1270nm to 1330nm	0.30dB	0.20dB	N/A
1500nm to 1625	0.30dB	0.20dB	N/A
Polarization Dependence	<0.1dB		
Display	Custom tri-plexed liquid crystal display with 4-digit data field (0.01dB resolution) and simultaneous display of cal wavelength. Display incorporates the following distinct annunciator's: 630, 780, 850, 1300, 1550, dB, dBm, B (LowBat) and C (CAL).		
Function	**dBm** (Absolute power), **dB** (Relative power), **λ** (Select CAL wavelength, also used to set default/CAL wavelength), **CAL**(Calibrate unit)		
Calibration Data	Data stored in non-volatile memory		
Recalibration	Unit can be recalibrated by user, following published procedures and controlled via CAL override switch accessible from battery compartment.		
Reference Storage	dB reference value is stored indefinitely in EEPROM		
Auto Shut Off	Unit powers down 70 Min. after last key has been depressed (can be disabled by operator)		
Connector Interface	Rifocs Snap-On Connector (SOC) series. See ordering information below.		
Power	2 AA alkaline batteries (>100 hours battery life)		
Operating Temperature	-15°C to +50°C, 0-95% RH (Non-condensing)		
Storage Temperature	-35°C to +70°C, 0-95% RH (Non-condensing)		
Weight/Dimensions	160g (5.5oz), 60 x 140 x 25mm (without protective housing)		
Basic Instrument	350g (12oz), 140 x 240 x 35mm (without protective housing)		

Specifications subject to change without notice

Ordering Information

A) *Choose Power Meter Model:*

555B Medium power, long wavelength OPM(850/1310/1550nm)

557B Medium power, short wave length OPM(630/780/850nm) for for all large core applications, both glass and plastic optical fiber

558B High power, long wavelength OPM (980, 1310, 1550nm)

B) *Select Proper Connector Adapter:*

All instruments are complemented by a number of SOC adapters. The purchase of any OPM includes one SOC adapter (at no additional charge) which must be specified at time of order:

For example:
555B Optical Power Meter with an ST adapter, specify:

QTY-1 **555B/1030**

Additional adapters can be ordered separately. To order the same **555B OPM** configuration as above plus an additional FC-PC adapter, specify:

QTY-1 **555B/1030**
QTY-1 **1020**

Accessories:

901A Unbreakable resin molded watertight carrying case
913A Belt pouch for 2 instruments
NOTE: RIFOCS is continuously adding new adapters to the SOC line. Please check with RIFOCS or any of our distributors for the latest list of adapters currently available.

RIFOCS SOC Adapters

1001 Blank Adapter - for custom design applications
1010 DIN 47256
1020 FC-PC/FC-APC
1030 ST
1038 38999 Contact Receptacle
1040 Diamond HMS-10/HP
1050 Diamond HMS-0 (3.5mm)
1062 SC-PC/APC
1081 Radiall VFO
1082 Biconic
1086 Diamond HMS-10/A (2.5mm SMA)
1087 SMA 905/906
1089 D4
10EO Radiall EC
10TB Simplex FO7/TOSLINK/ SPECTRAN J-Pin adapter
10ZP H-P VERSATILE LINK/ SPECTRAN V/Z-Pin
10TD DUPLEX F07/TOSLINK/ SPECTRAN J-Pin adapter set (2pcs), 10TX &10TR
10TR Duplex TOSLINK TX
10TX Duplex TOSLINK TR

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