

Features

- Measures single-mode return loss at 1310nm using the optical continuous wave reflectometry (OCWR) method
- Completely self-contained—incorporates a stable laser source and optical power meter
- 0 to 70dB return loss measurement range
- Logarithmic dB/dBm units
- High resolution—0.01dB/dBm
- Multi-function LCD display
- Prints customized labels with measurements, 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 enables 585RL to be “daisy chained” with 570L Series optical power meters for insertion loss measurements
- High-performance 8° angle-polished connector (APC) optical interface
- Operates on 100 to 250VAC, 50 to 60Hz input power
- Reference cables included



Applications

Single-mode Return Loss Testing

The 585RL return loss test set is a completely self-contained instrument designed to measure back-reflections caused by fiber optic connectors and other single-mode devices. The 585RL employs the Optical Continuous Wave Reflectometry (OCWR) method to measure return loss from 0 to 70dB in the 1310nm wavelength region.

After the 585RL is zeroed and referenced, the operator measures return loss by taking the optical fiber immediately after the device under test and wrapping it around a supplied mandrel.

The 585RL 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 585RL 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.

The 585RL can also be connected to a 570L Series benchtop optical power meter using the built-in I²C interface for efficient insertion loss and return loss testing in manufacturing or laboratory settings.

In addition, the 585RL features a BNC analog output interface for convenient external monitoring.

Key Specifications

Measurement wavelength	1310nm
Measurement range	0 to 70dB
Accuracy:	
0 to 55dB	< ±0.5dB
55 to 60dB	< ±1.0dB
61 to 65dB	< ±2.0dB
66dB and higher	< ±3.0dB
Resolution	0.01dB/dBm
Measurement modes	dB, dBm
Optical interface	FC-APC

Ordering Information

One 5900 Series reference cable, a compatible bulkhead or hybrid adapter, a power cord, and a user manual are included with the 585RL return loss test set. Please specify the desired connector type for the cable when ordering using the Reference Cable Codes table, below. Customers may specify either Diamond tungsten/nickel-silver or standard ceramic connector types. Additional 5900 Series reference cables may also be ordered separately.

Part No.	Description
585RL	585RL return loss test set

Reference Cable Codes

Connector Type	Diamond Code	Ceramic Code
DIN-PC/SPC	591U	—
DIN-APC	5916	—
FC-PC/SPC	5926	592K
FC-APC, narrow key	—	592J
FC-APC, wide key	5928	592W
ST-PC/SPC	5936	593K
SC-APC	5961	596J
SC-PC/SPC	5966	596K
D4-PC/SPC	—	5989

Accessories

930	19-inch rack-mount adapter
933	I ² C cable
935	Male DB25 to female DB25 serial interface cable
936	Male DB25 to female DB9 serial interface cable
59XX	5900 Series reference cable—XX = connector code

Specifications¹

Subject to change without notice

Output wavelength	1270nm to 1330nm
Spectral width	< 5nm
Laser output power:	
Minimum	20dBm
Typical	-10dBm ±1dB
Laser power stability:	
2 hours at 22°C	0.05dB
24 hours at 22°C	0.10dB
Measurement range	0 to 70dB
Accuracy:	
0dB to 55dB	< ±0.5dB
56dB to 60dB	< ±1.0dB
61dB to 65dB	< ±2.0dB
66dB and higher	< ±3.0dB
Resolution	0.01dB/dBm
Optical power meter linearity, -17dBm to -65dBm	< 0.5dB
Connector interface	FC-APC, 8° angle-polished connector
RS232 interface	Conforms to RS232C standards; DB25 connector, female
I ² C interface	Conforms to Inter-Integrated Circuit (I ² C) 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
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.

