

700 Series

To receive a calibration and/or repair quote-RMA from R.A.E. Services Inc.
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771R-Si 3mm Silicon Optical Power Meter

Features

- Single input channel
- 3mm Silicon photodetector
- 635nm, 660nm, 780nm, and 850nm N.I.S.T. traceable calibration wavelengths
- +3 to -75dBm measurement range
- Logarithmic dB/dBm and linear Watt (mW, μ W, nW) units
- ± 0.25 dB absolute accuracy at calibration conditions*
- 0.001 dB/nW measurement resolution; 0.01dBm resolution
- Optical power meters can be operated independently via the GPIB/IEEE-488 compliant RIFOCS 700R system controller
- Space efficient—up to 11 optical power meter modules and one system controller can be installed in a 19-inch rack
- Snap-On Connector (SOC) interface adapts to all industry standard fiber optic connectors and other less common types
- **Finder** button—quickly addresses selected channel during manual operation

* N.I.S.T. traceable calibration wavelengths only.



Key Specifications

Detector type	3mm Silicon
Calibration wavelengths	635, 660, 780, and 850nm
Calibration traceability	U.S. N.I.S.T.
Power range	+3 to -75dBm
Absolute accuracy	± 0.25 dB
Resolution	0.001dB/nW 0.01dBm
Stability	< ± 0.05 dB within operating temp. range

Applications

Optical Power Measurements

The 771R-Si optical power meter is based on a proven 3mm Silicon photodetector specially manufactured for RIFOCS Corp. The 771R-Si is offering a measurement resolution of 0.001 for logarithmic dB and linear nanowatt (nW) units, the 771R-Si optical power meter can capture the slightest attenuation changes, making it ideal for dense wave-division multiplexing (DWDM) component qualification and other demanding fiber optic measurements.

The 771R-Si optical power meter can measure power levels between +3 and -75dBm, well within the dynamic range of typical fiber optic systems.

Manual operation of the 771R-Si optical power meter, via the 700R controller module, is simple and intuitive. Measurement data, calibrated wavelengths, and other information is easily read on the large, backlit LCD display of the latter unit. Operators can quickly select calibrated wavelengths and measurement modes using the six ergonomically designed, multi-function buttons on the controller. A **Finder** button on each 770R Series optical power meter, and other 700 Series instruments, makes module selection easy and convenient.

A GPIB/IEEE-488 interface incorporated in the 700R controller module enables the 771R-Si optical power meter to be operated from a remote terminal using basic commands. Operation of the 771R-Si optical power meter can also be automated using **fiberWORKS** application software by RIFOCS Corp., which simplifies complex and tedious measurement tasks.

Efficient design and engineering are the hallmarks that have made RIFOCS an industry leader in the field of fiber optic instrumentation. The compact design of the 771R-Si optical power meter, and others in the series, permits up to 11 of the units to be installed in a standard 19-inch rack with a 700R controller module.

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Ordering Information

One Snap-On Connector (SOC) adapter is included with the 771R-Si 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
771R	Optical power meter module

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

Specifications¹

Subject to change without notice

Detector type	3mm Silicon
Primary calibration wavelengths	635nm, 660nm, 780nm, 850nm
Power range	+3 to -75dBm
Linearity:	
±0.5dB	-70dBm to -75dBm
±0.05dB	-3dBm to -70dBm
±0.5dB	+3dBm to -3dBm
Absolute accuracy	±0.25dB at calibration conditions for all N.I.S.T. traceable wavelengths
Stability	< ±0.02dB from 10°C to 35°C, < ±0.05dB within operating temperature range
Resolution	0.004 dB/nW, 0.01dBm
Settling time, auto-range from dark to maximum power	0.5 seconds
Readings per second (remote mode)	10 per second, typical
Measurement modes	Relative logarithmic dB, absolute logarithmic dBm, absolute linear Watt (mW, μW, nW)
Optical connector interfaces	Snap-On Connector (SOC) interface
Environmental:	
Operating temp.	0°C to +50°C
Storage temp.	-15°C to +70°C
Humidity	0 to 95% RH, non-condensing
Weight	400g (14 oz.)
Dimensions	12.9 x 3 x 26.2 cm (5 x 1.17 x 10.22 in), one slot in RIFOCS 700 Series rack

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



RIFOCS Corporation

Fiber Optic Instruments & Components



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

ISO 9001

DS-M771R-Si Rev. A

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