

# Model RP450

## Optical Power Meter



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RP450 REV C 1-28-11  
Specifications subject to change without notice

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## Introduction

Dear Valued Customer,

Thank you for choosing ODM, Inc. for your fiber optic testing requirements. Our professional staff is available to answer any questions or provide assistance that you may require. We, at ODM Inc., strive to provide premier customer care and technical support by providing timely responsiveness and training. We are proud of our quality and high standards and assure you, our customer, the most user friendly and affordable fiber optic solutions to meet individual needs.

Sincerely,

*Michael E. Schneider*

Michael E. Schneider  
President, ODM, Inc.

# ODM RP 450 Optical Power Meter

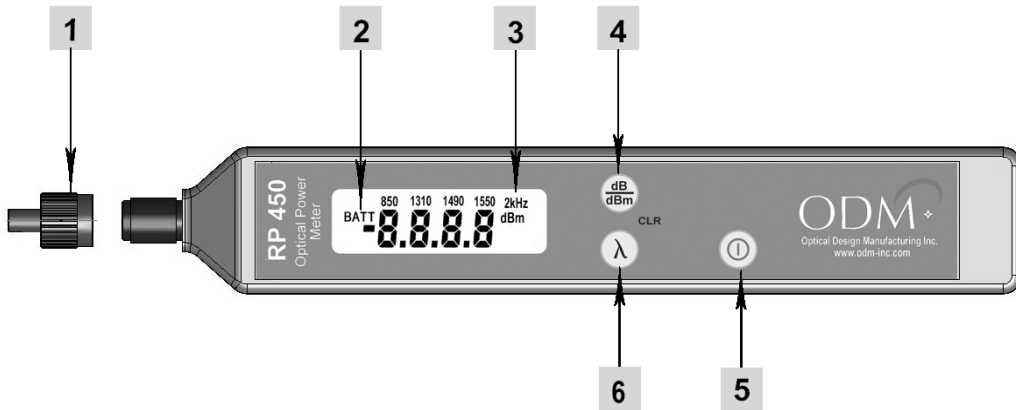


Figure 1-1

## 1.0 General Information & Operation

### 1.1 Unpacking and Inspection

The RP 450 comes supplied with a soft case, 3.0 CR 2 type battery and instruction card. Please see section 4.0 for available connector adapters from ODM.

### 1.2 Features/Display Review (see Figure 1.1)

**[1] Connector Adapter** – Connector adapters must be purchased separately. ODM offers a universal 2.5mm connector to connect to FC, ST, SC style connectors. For connection to LC or MU style connectors, please see section 4.0 for additional connector adapter accessories. For connector-specific adapters, please refer to section 4.0.

**[2] BATT** - The RP 450 is powered by a 3.0 volt CR 2 long life battery. Low battery condition exists when the BATT display flashes. Replace with a fresh CR 2 battery.

**[3] 2kHz** – The RP 450 is designed to alert the user to the presence of an incoming 2kHz tone. The incoming tone will be indicated by the flashing 2kHz and the internal audible buzzer. This

feature is quite useful when used with the ODM light source at the far end transmitting a tone on the fiber. The incoming tone is recognized and an audible tone is provided by the RP 450 indicating continuity. To disable this feature press the  $\lambda$  and dB/dBm keys simultaneously until the audible alert beeps once.

**[4] dB/dBm** –The RP 450 provides a SET REF or ZERO feature. Depress the dB/dBm key. To set the incoming signal to 0.00dB, attach the signal under test to the connector adapter and press and hold the dB/dBm key until 2 audible beeps are heard while in the dBm mode. A ZERO reference can be saved for each wavelength. The display now reads 0.00dB. For end to end loss measurement, disconnect the patch cord and take the RP 450 to the far end of the system. If the RP 450 shuts down, simply turn on the instrument and take the far end measurement. The RP 450 is designed to turn on in the same mode as it was prior to shutting down. The resultant loss measurement is displayed in dB. To switch from dBm to the saved ZERO (dB) reference, press the dB/dBm key until the unit produces one audible beep. To switch back to dBm, press the dB/dBm key until the unit produces one audible beep.

**[5] POWER ON** – Depressing the POWER key for approximately two seconds powers on the RP 450. The display indicates the most recent version of software. The instrument powers on in the last used mode of operation. The RP 450 is designed to shut down automatically in 5

minutes after initial power on. After power on, each depression of any key will be confirmed by a brief audible alert from the internal buzzer. To disable this feature hold down the dB/dBm key prior to depressing the POWER ON key. This disable feature will be confirmed by one short beep. To enable the key stroke audible alert once again, follow the disable procedure by depressing the dB/dBm key and then the POWER ON key. This key stroke sequence is done while in the OFF mode.

To power on the RP 450 for indefinite operation, press and hold the POWER ON key for three seconds. Confirmation of the continuous “On” mode is signaled by two short beeps.

**[6]  $\lambda$**  - Wavelength selection is provided by depressing the  $\lambda$  key. 850, 1310, 1490 and 1550nm wavelengths are available. The wavelength selected will be displayed in the upper portion of the LCD display.

## 2.0 Maintenance

**2.1 Warranty** – All ODM products are warranted for a period of two years from date of manufacture. Buyer must obtain a RMA before returning defective products. ODM will repair or replace the defective equipment at its discretion. Please contact ODM Inc. for more information.

**2.2 Low Battery** – The RP 450 is designed to provide more than 1000 operations under normal conditions. When the BATT segment in the display illuminates, the battery should be replaced. All data in memory is saved while the battery is removed and replaced. Replace the battery with a long life CR 2, 3.0 Volt battery.

**2.3 Optical Connector Interface** – The RP 450 is equipped with a universal connector adapter which allows the interface of many popular style connectors. This connector adapter interface should be kept covered and protected from contamination. Care must be taken to avoid objects that could damage the glass surface of the detector mount. If scratches or breaks occur on the surface, please contact ODM for proper service.

**2.4 Calibration** – ODM Inc. recommends this instrument be calibrated each year to ensure NIST traceable measurements. Please contact ODM Inc. for a return material authorization number.



### 3.0 Specifications

Wavelength	800nm to 1600nm	
Detector Type	RP 450-02	Germanium
	RP 450-03	InGaAs
	RP 450-04	Filtered InGaAs
Optical Interface	Universal Interface Order connector adapters separately	
Measurement Range	RP 450-02	+3 to – 60dBm
	RP 450-03	+3 to –70dBm
	RP 450-04	+23 to – 40dBm
Absolute Accuracy	+/- .24dB	
Resolution	.01dB	
Battery	CR 2, 3.0Volt	
Operating Temp.	-10° C to + 55° C	
Storage Temp.	- 30° C to + 70° C	

Physical            6.10 (15.5cm) H  
                          .940 (2.38cm) W  
                          .750 (1.90cm) D

Weight             3.0 oz (8.5g)

#### 4.0 Accessories

##### Adapters

AC 020	2.5mm Adapter for Optical Power Meter
AC 021	1.25mm Adapter for Optical Power Meter
AC 026	SC Adapter for Optical Power Meter
AC 027	ST Adapter for Optical Power Meter
AC 028	FC Adapter for Optical Power Meter
AC 029	LC Adapter for Optical Power Meter

### Cleaning Kits

CK125	Cleaning Kit includes fiber cleaning solution, wipes, 1.25mm swabs, 2.5mm swabs for 200 connectors and adapters
CK250	Cleaning Kit includes fiber cleaning solution, wipes, 1.25mm swabs, 2.5mm swabs for 400 connectors and adapters

### Carry Cases

AC 010	Single Instrument padded pouch fits all power meters, light sources and VFI's
AC 011	Hard Case for up to four instruments

## 5.0 Contact Information

Customer Service and Technical Assistance

Phone: (603) 524-8350

FAX: (603) 524-8332

E-mail: [tech.support@odm-inc.com](mailto:tech.support@odm-inc.com)

Visit our website: [www.ODM-INC.com](http://www.ODM-INC.com)

