

U.S. DEPARTMENT OF COMMERCE  
 NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
 ELECTRONICS & ELECTRICAL ENGINEERING LABORATORY  
 Boulder, Colorado 80303

# REPORT OF CALIBRATION

FOR

FIBER OPTIC POWER METER  
 Optical Wavelength Laboratories Corporation  
 Model FO-2, Serial No. F021004

Submitted

Optical Wavelength Laboratories Corporation  
 N9623 Highway 12  
 Whitefish, WI 53190

**Calibration Summary**

The test optical power meter was calibrated at wavelengths of 851.9, 1306.9, and 1549.6 nm (with a 0.13 nm standard uncertainty for each wavelength) by comparing to a certified laboratory standard (see Figure 1). The NIST laboratory standard was an electrical calibrated electric radiometer (ECPR) which had previously been calibrated against the NIST Laser-Optimized Cryogenic Radiometer (LOCR) system. Both the single-mode (with FC/PC connectors) and multimode fibers (with ST connectors) used in this assessment were supplied by the meter's manufacturer.

Table 1. Calibration results (power: 100 μW)

Fiber Type/ connector type	Source Wavelength (nm)	Wavelength tag (nm)	Correction factor (reading/μW)	Standard deviation (%)	Expanded Uncertainty (%)
MM/ST	851.9	851.9	0.9967	0.22	±0.53
SM/FC-PC	1306.9	1306.0	0.9841	0.38	±0.50
SM/FC-PC	1549.6	1550.0	0.9950	0.23	±0.52