

## Product Features

Measures optical power from 400 to 1600nm

NIST traceable calibration

Integrating sphere-based measurements

Free-space and fiber-coupled measurements

The OMH-6700B Power Only Measurement Heads provide the flexibility to easily and accurately measure the optical power of laser sources from 400 nm to 1600nm. These products are integrating, sphere-based power measurement heads for either free-space or fiber coupled measurements. The OMH-6703B Silicon Power Head measures from 400 to 1000nm while the OMH-6708B uses an InGaAs detector to measure from 800 to 1600nm.

The OMH-6703B and the OMH-6708B are intended for use with the ILX Lightwave OMM-6810B power meter. With the 6703B and 6708B, the OMM-6810B measures the optical power of short and long wavelength semiconductor lasers. In addition to precision power measurements, the OMM-6810B offers features such as log/linear display modes, auto ranging, user calibration, and reference measurement capability. With an IEEE standard GPIB interface, these features combine to make this instrument a cost-effective laser diode development or production test tool.

# OMH 6700B

## Power Only Measurement Head



# OMH 6700B

## Power Only Measurement Heads

### Simplify Optical Measurements

Integrating spheres simplify optical power measurements of laser diodes and LEDs by eliminating measurement problems related to detector saturation, alignment beam profile, polarization, and back reflection. Integrating spheres are inherently insensitive to beam profiles, providing you with more flexibility in laser type and launch conditions. Detectors on the interior of the sphere receive an equal distribution of incident light, ensuring the calibration and resultant measurement accuracy are independent of the beam profile.

### Measure with Confidence

The OMH-6700B Power Only Measurement Heads are calibrated to NIST traceable standards in ILX's own calibration laboratory, where accuracy

and traceability are its primary concerns. ILX's documented quality system ensures conformance to continuous traceability and ultimately your confidence in the power measurements.

### Measurement Flexibility

Each measurement head can be configured for free-space or fiber-coupled measurements. A choice of adapters for fiber coupled measurements is available for FC, SC, ST, and DIN connectors. Bare fiber measurements are also possible with a bare fiber adapter. Configuration of the measurement heads with the desired adapter is simple.

Each head can be ordered with a head mounting kit that comes with an adjustable mounting post so the head integrates easily into your measurement setup.

## Specifications

### POWER MEASUREMENT

Wavelength Range:	400 to 1100nm
Power Range:	-40 to +30dBm
Damage Threshold	+42dBm
Accuracy <sup>3</sup> :	±5.0% <sup>4</sup>
Entrance Aperture:	6mm
Sensor Type:	Silicon
Noise:	1nW p-p (typical) <sup>5</sup>
Temperature Coefficient:	0.1%/°C (typical)

### OMH-6703B

### OMH-6708B

Wavelength Range:	800 to 1600nm
Power Range:	-50 to +20dBm <sup>2</sup>
Damage Threshold	+42dBm
Accuracy <sup>3</sup> :	±5.0%
Entrance Aperture:	6mm
Sensor Type:	InGaAs
Noise:	1nW p-p (typical) <sup>6</sup>
Temperature Coefficient:	0.1%/°C (typical)

### GENERAL

Operating Temperature:	-10°C to +40°C	-10°C to +40°C
Storage Temperature:	-20°C to +60°C	-20°C to +60°C
Humidity:	<85% RH, non-condensing	<85% RH, non-condensing
Compatible Connector Types:	FC/PC, FC/APC, SC, ST, DIN, Bare Fiber	FC/PC, FC/APC, SC, ST, DIN, Bare Fiber
Dimensions:	69mm (dia) x 28mm (thick)	69mm (dia) x 28mm (thick)
Weight:	13.3 ounces	13.3 ounces

### NOTES

Typical values provide supplemental information beyond guaranteed specification limits.

1. Unless otherwise noted, all specifications measured at 23°C ±3°C after one hour warm up period. Fiber optic head specifications applicable for 9/125 to 110/140µm fiber, NA = 0.3.
2. Minimum sensitivity -40dBm from 800 to 1100nm.
3. Includes traceability to NIST. Calibrated to 21°C ±3°C at 10nm intervals. Uncertainty evaluated according to NIST Technical Note #1297: "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results." Accuracy specification are verified with the wavelength entered manually (instrument not in auto-wavelength mode).
4. Add ±0.5% for <440nm and >1000nm.
5. Measured over one minute, in gain range seven, medium filter mode.
6. At 980nm.

### ORDERING INFORMATION

OMM-6810B-120V	Optical Multimeter (includes GPIB), 120V
OMM-6810B-240V	Optical Multimeter (includes GPIB), 240V
OMM-6810B-220V	Optical Multimeter (includes GPIB), 220V
OMM-6810B-100V	Optical Multimeter (includes GPIB), 100V
OMH-6703B	Silicon Power Head
OMH-6708B	InGaAs Power Head

### ACCESSORIES

AO271	FC Adapter Assembly
AO273	ST Adapter Assembly
AO120	Bare Fiber Adapter Ring
BF-820	Bare Fiber Holder (requires AO120)



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