

Product Features

Measures power and wavelength from 950 to 1650nm, 1W (6727B)

Measures power only from 800 to 1600nm, 100mW (6708B)

NIST traceable calibration

Integrating sphere-based measurements

Temperature-controlled InGaAs photodetectors

Free-space and fiber-coupled measurements

The OMH-6700B InGaAs Power/ Waveheads provide the flexibility to easily and accurately measure the optical power and wavelength of laser sources in the near infrared spectrum. These products incorporate ILX's unique integrating sphere-based power and wavelength measurement capability. The OMH-6727B allows free-space power and wavelength measurement from 950 to 1650nm, while the OMH-6708B allows power only measurements from 800 to 1600nm, up to 1W and 100mW, respectively.

Measure with Confidence

The OMH-6700B InGaAs Power/Waveheads 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/wavehead measurements.

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. Filtered detectors on the interior of the sphere receive an equal distribution of incident light, ensuring that the calibration and resultant measurement accuracy are independent of the beam profile.

Repeatable, Accurate Measurements

The detectors in the 6700B power/waveheads are temperature controlled to ensure that repeatable measurements are made independent of the measurement environment. Temperature controlling the detectors increases the signal-to-noise ratio, improving the accuracy of the measurements.

Measurement Flexibility

Each measurement head can be easily configured for fiber-coupled measurements. A choice of adapters is available for FC and ST connectors. Bare fiber measurements are also possible with a bare fiber holder and adapter ring.

OMH 6700B

InGaAs Power/ Waveheads

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Specifications¹

WAVELENGTH MEASUREMENT

Wavelength Range:	950 to 1650nm	OMH-6727B	OMH-6708B
Accuracy: ²	±1.0nm ³		-----
Detection (minimum power required):	-20dBm		-----

POWER MEASUREMENT

Wavelength Range:	950 to 1650nm	800 to 1600nm
Power Range: ⁴	-40 to +30dBm	-50 to +20dBm
Damage Threshold:	+37dBm	+37dBm
Accuracy: ⁵	±5.0% ⁶	±5.0%
Entrance Aperture:	6mm	6mm
Sensor Type:	InGaAs	InGaAs
Noise:	5nW p-p (typ.) ⁷	5nW p-p (typ.) ⁷
Temperature Coefficient:	-0.1%/°C (typ.)	-0.1%/°C (typ.)

GENERAL

Environment		
Operating Temperature:	+10°C to +40°C	+10°C to +40°C
Storage Temperature:	-40°C to +70°C	-40°C to +70°C
Humidity:	<85% RH, non-condensing	<85% RH, non-condensing
Compatible Connector Types:	FC, ST, Bare Fiber	FC, ST, Bare Fiber
Dimensions:	69mm (dia.) x 30mm (thick)	69mm (dia.) x 30mm (thick)
Weight:	13.3 ounces	13.3 ounces

NOTES

Typical values provide supplemental information beyond guaranteed specification limits.

- 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.
- This instrument's wavelength measurement technology provides "power-averaged" wavelength (i.e., spectral contributions to which detectors are sensitive are measured).
- +1.5nm for 950 to 1000nm range.
- Typical photodiode response is linear over a 60 to 70dB range between the effects of thermal noise and saturation of the diode. ILX power meter heads are calibrated above the noise threshold, and linearity is verified in order to produce an accurate calibration for optical power measurements to 1W.
- 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 specifications are verified with the wavelength entered manually (instrument not in auto-wavelength mode).
- For input power > 100mW, add ±0.05%/100mW.
- Measured over one minute, in gain range seven, medium filter mode.

In keeping with our commitment to continuing improvement, ILX Lightwave reserves the right to change specifications

ORDERING INFORMATION

OMM-6810B-100V	Optical Multimeter (Includes GPIB Interface), 100V
OMM-6810B-120V	Optical Multimeter (Includes GPIB Interface), 120V
OMM-6810B-220V	Optical Multimeter (Includes GPIB Interface), 220V
OMM-6810B-240V	Optical Multimeter (Includes GPIB Interface), 240V

OMH-6727B	Power/Wavehead, 950-1650nm
OMH-6708B	Power Measurement Head, 800 to 1600nm

Accessories

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



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