



QPM Low-Mid Power



QUICK POWER METER

Low-Mid Power Series



- Quick
- Accurate
- User Friendly
- Large Multifunction LCD
- Full NIST-Traceability

QPM Low-Mid Power

Gentec Electro-Optics QPM 50-500 series is a fully automatic, broadband, handheld, laser power meter designed for low to mid power lasers. It features a micro-processor based measurement technique of temperature dynamics through a broadband thermopile sensor. Measurement and data acquisition are fully automatic making this technique virtually error free.

Power Range

Three models cover from 500 mW to 500 W. Their innovative measurement concept reduces the time of measurement and display down to four seconds providing:

- Excellent accuracy ($\pm 3\%$)
- Repeatability ($\pm 1\%$)
- High resolution

Large Multifunction LCD

You will appreciate the large multifunction LCD that simultaneously indicates:

- Measured power
- Calibration wavelength (CO₂, Nd-YAG)
- Probe model
- Low-battery warning

Furthermore a bar graph shows the actual sensor temperature, which informs the operator that he can still make measurements before the sensor reaches its maximum temperature. Additionally the probe status is displayed by a two colour LED: the sensor is ready (steady green), measurement is in progress (flashing green), measurement is over (steady red), or cooling is needed (flashing red).

Ergonomic Design

The QPM has been ergonomically designed. The low profile thermopile sensor head, connected to the display body by a flexible cord, allows remote testing even in tiny spaces. The LCD display is angled for optimum operator viewing. The sensors feature a broadband low reflection coating with a high damage threshold.

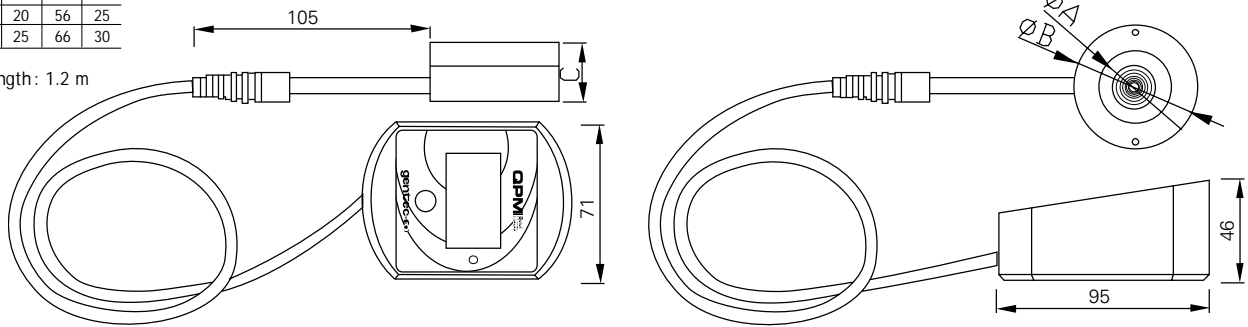
Power

A single button operates the QPM. It turns off automatically after five minutes of non operation and always stores its last measurement in memory. Two AA batteries allow a minimum of 4,000 measurements.

QPM LOW-MID POWER SPECIFICATIONS

MODEL	A	B	C
QPM-50	20	56	20
QPM-200	20	56	25
QPM-500	25	66	30

Cable length: 1.2 m



All dimensions in mm

QPM - 50

QPM - 200

QPM - 500

POWER METER SPECIFICATIONS

Spectral Range		0.25 - 11 μm	
Maximum Measurable Power	50 W	200 W	500 W
Noise Equivalent Power	0.5 W	2 W	5 W
Maximum Laser Beam Diameter	20 mm	20 mm	25 mm
Maximum Average Power Density @ 250 W (10 J, 0.5 ms, 25 Hz) at 1064 nm (YAG)		10 kW/cm ²	
Maximum Average Power Density @ full scale 10.6 μm (CO ₂)		2.5 kW/cm ²	
Resolution	0.01 W	0.1 W	0.1 W
Measurement Accuracy		$\pm 3\%$	
Maximum Allowable Absorber Temp. ($^{\circ}\text{C}$)		70 $^{\circ}\text{C}$	
Response Time (Full Power Scale)		4 s	

GENERAL SPECIFICATIONS

Digital Display	45 X 25 mm		
Battery	2 x AA batteries, 3.0 V		
Battery Life	200 hours		
Operating Temperature range	10 to 40 $^{\circ}\text{C}$		
Storage Temperature range	-10 to 60 $^{\circ}\text{C}$		

PHYSICAL CHARACTERISTICS

Effective Aperture Diameter		20 mm	20 mm	25 mm
Dimensions	Sensor Head	56 Diam. x 20 mm	56 Diam. x 25 mm	66 Diam. x 30 mm
	Monitor	95 x 71 x 46 mm	95 x 71 x 46 mm	95 x 71 x 46 mm
Weight		514 g	536 g	616 g

ORDER NUMBER

100-200267	Quick Power Meter	50 W
100-200268	Quick Power Meter	200 W
100-200269	Quick Power Meter	500 W

Specifications subject to change without notice.



QPM High Power

QUICK POWER METER

High Power Series



- Quick
- Accurate
- User Friendly
- Large Multifunction LCD
- Full NIST-Traceability

QPM High Power

Gentec Electro-Optics QPM High Power Series is a fully automatic laser power probe that calculates laser power by measuring temperature dynamics using a microprocessor. Its measurement and acquisition technique determines the time needed to carry out a measurement. Data acquisition is triggered and stopped by detecting set heat parameter thresholds. This technique is virtually error free and allows for multiple measurements without absorber forced cooling.

Power Range

Three models cover the full-scale powers from 30W to 10kW. Their innovative measurement concept cuts the time to measure and display down to ten seconds on all probe models providing:

- Excellent accuracy ($\pm 4\%$)
- Repeatability ($\pm 2\%$)
- High resolution

Large Multifunction LCD

The QPM features a large multifunction LCD that simultaneously indicates:

- Measured power
- Actual accuracy
- Calibration wavelength (CO₂, Nd-YAG, Diodes)
- Maximum power range
- Low-battery warning

A bar graph shows the actual absorber temperature, which informs the operator that he can still make measurements before the absorber reaches its maximum temperature. Additionally a two colour LED indicates the probe status: probe is ready (steady green), measurement is in progress (flashing green), measurement is over (steady red) or cooling is needed (flashing red).

Ergonomic Design

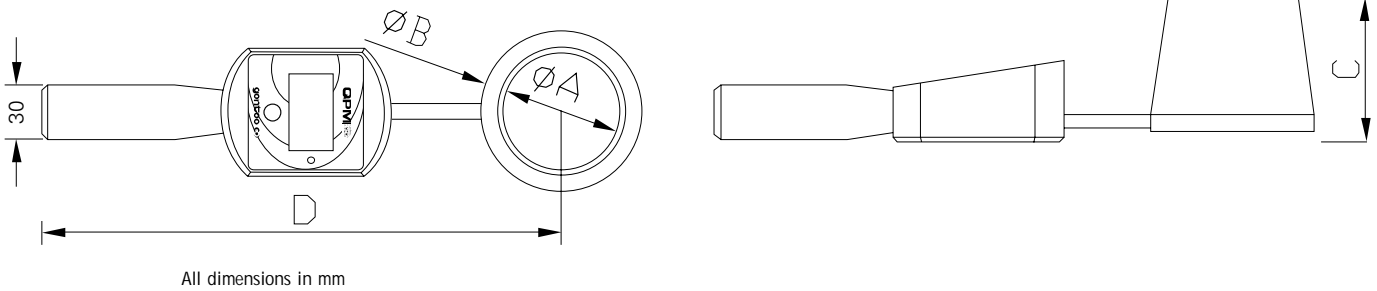
The QPM is ergonomically designed in all its details, such as the LCD display, which is angled for optimum operator viewing. The weight distribution provides a comfortable and safe operation. The absorbers feature high damage thresholds and low reflection coatings.

Power

A single button operates the QPM. It turns off automatically after five minutes of non operation. When you turn it back on you will see the last measurement. Two AA batteries allow a minimum of 5,000 measurements.

QPM HIGH POWER SPECIFICATIONS

MODEL	A	B	C	D	ACTIVE AREA
1.5 kW	40	50	35	300	Flat
5 kW	55	75	65	310	Conic
10 kW	65	90	75	320	Conic



	QPM - 1.5K	QPM - 5K	QPM - 10K
--	------------	----------	-----------

POWER METER SPECIFICATIONS

Typical lasers	CO ₂ YAG, laser diode		
Maximum Measurable Power	1,500 W	5,000 W	10,000 W
Noise Equivalent Power	30 W	100 W	200 W
Maximum Laser Beam Diameter	40 mm	55 mm	65 mm
Maximum Average Power Density ^a	2.6 kW/cm ²	1.9 kW/cm ²	1.5 kW/cm ²
Measurement Accuracy	±4%		
Resolution	1 W		
Maximum Allowable Absorber Temp. (°C)	150 °C		
Response Time (Full Power Scale)	10 s		
Response time (Min. Power Scale)	15 s		

GENERAL SPECIFICATIONS

Digital Display	45 X 25 mm
Battery	2 x AA batteries, 3.0 V
Battery Life	200 hours
Operating Temperature range	10 to 40 °C
Storage Temperature range	-10 to 60 °C

PHYSICAL CHARACTERISTICS

Effective Aperture Diameter	40 mm	55 mm	65 mm
Dimensions	300 X 50 X 35 mm	310 X 75 X 65 mm	320 X 90 X 75 mm
Weight	480 g	950 g	1300 g

ORDER NUMBER

100-200270	Quick Power Meter	1.5 kW
100-200271	Quick Power Meter	5 kW
100-200272	Quick Power Meter	10 kW

a. At full scale at CO₂ wavelength

Specifications subject to change without notice.



Headquarters

445 St-Jean-Baptiste, Suite 160
Québec, QC, G2E 5N7, Canada
Telephone : (418) 651-8003
Fax : (418) 651-1174
1.888.5Gentec (543.6832)
E-mail : info@gentec-eo.com

Calibration centers

Quebec city, Canada
Olching (Munich), Germany

www.gentec-eo.com

LEADER IN LASER BEAM MEASUREMENT SINCE 1972