



European Calibration Center for Gentec Products

Since 2004, LASER COMPONENTS offers an in-house calibration service for laser power detectors. In 2015, we extended our service to include energy detectors as well.

Our calibration center was established in close cooperation with Gentec-EO and operates according to ISO 17025 standards.

Gentec's unique measurement accuracy over a broad wavelength range is a result of combining a basic calibration at 1064 nm with an individual measurement of the absorption characteristics from the UV to IR wavelength range for each detector by using a spectrophotometer (personal wavelength correction, "PWC").

Instead of supplying you with "typical values" only (as otherwise standard practice), Gentec offers you a genuine, traceable calibration for the whole wavelength spectrum between 250 nm and 2100 nm (up to 2500 nm upon request).

Performing subsequent calibrations in regular intervals ensures that you can rely on this outstanding accuracy for the entire lifecycle of your measurement equipment.

In order to obtain and maintain an ISO 9001 certificate, many laser applications require a regular calibration of the employed measurement tools. A typical time frame for this comprises 12 months.

The calibration we offer is NIST/PTB traceable, meaning all devices we use are calibrated by the National Institute of Standards and Technology or the Physikalische Technische Bundesanstalt (Federal Physical-Technical Institute) / DKD.

Calibration at LASER COMPONENTS offers the following benefits:

- Visual inspection (incoming inspection)
- Determining the individual wavelength profile by spectrophotometer (detectors with PWC)
- Calibration against the "gold standard" reference, NIST/PTB traceable (all detectors)
- Verification measurement (max. allowed deviation is 1%)
- Storing the sensitivity value and PWC factors in the detector EEPROM
- Calibration certificate incl. PWC sheet and variance report

The calibration itself is performed using a suitable laser source at 1064 nm vs. a "gold standard" detector head. This reference detector is periodically calibrated at NIST or PTB. Thanks to the exclusive use of a "gold standard" reference, LASER COMPONENTS - much like Gentec-EO - achieves an unrivaled calibration precision (first level calibration).

Most other vendors calibrate a detector using only a "silver standard" detector, i.e., a self-made "copy" of the "gold standard" with all its inaccuracies (second level calibration).

All German and European users of laser measurement devices from Gentec-EO benefit from the calibration offered by LASER COMPONENTS. The close proximity to our customers translates into reduced cost and saved time because the units do not have to be sent to Canada.

Germany and Other Countries Laser Components Germany GmbH

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www.lasercomponents.fr



Overview of Gentec-EO products which can be calibrated at LASER COMPONENTS in Olching

Monitors:

- MAESTRO
- UNO
- P-Link USB / RS-232
- Solo PE / Solo 2
- DUO
- TPM300-CE (CE Version only)

Thermal Power Detectors, Calibrated in Power Mode @ 1064 nm, with Personal Wavelength Correction (no PWC for FLASH / QPM Series):

- XLP12 series
- UP12-H series
- UP17-H / -W series
- UP19-H / -W / -VR / -VM series
- UP25-H series
- UP50-W series
- UP55-H / -HD series and similar UP60 versions
- FLASH-500 / -3K / -6K (additional wavelengths between 250 - 2500 nm upon request)
- QPM-50 / -200 / -500
- PS-1K / -1.5K
- PS-300 / -310 / -310 EI / IR / WB / Heatsink / WB Heatsink
- PS-330 / -330WB / -350WB
- SV-3103 / -3103 Heatsink / -3303

Pyroelectric Energy Detectors, Calibrated @ 1064 nm, with PWC (with and without -QED Option):

- QE12 series
- QE25 series
- QE50 series
- QE65 series
- QE95 series

CERTIFICATE OF CALIBRATION



Certificate #: 159987070606 Culitomer Name Opton Laser International MP-02 Model Number: UP19K-30H-H5-DO instrument ID: Serial Number: 159987 Date of Calibration: 07.J OH 2006 K10.1 Cal. Procedure: Calibration Due Date

Additional Cata

Calibration								
3	Sensibility		inio Load	Power Level		Ambleni	Relative	Beam Ø 🚳 1/eZ
				Power	Rep. Rate	Temp.	Humidily	(mullimode)
jm.	m V/MV	%	c	Walk	HI	٥	*	mm
1.064	P (0.) 50038 7	± 25	100 k	15.4	OW.	21.4	88	12.1

Value Corrected According To Special Abox pion Curve

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P(L.).Power adjusted to new wavelength S(L.).Senativity at new wavelength, liver from about pion table and plot

Test Equipment and Standards Used

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54.1	Rolin Brazze Largeri ach, Model SMP 100, NBM NG, CN-Large	10010021922	da	2	da .
KEODT	Hewali Packed, HPS4401 A, Mullimal e	9148798003 0000590	111012005	KEE	1588 DK D4K-01 101105-01
KEODS	Hewall Packed, HPSMOI A, Mulmala	US 2001 (241 D000595	111012005	KEE	1589 DK D4K-01 101105-01
KB012	Center, UP25N-200N-HS, Wallmale	1804.38	120 012 005	NIST	21/2/2-05

Declaration of Conformity

Laser Components Ombit certifies that, at the time of calibration, the above its led instrument meets or exceeds all of the specifications defined in the calibration procedure(s) or customer specifications(s). The above its entire in its fument has been calibrated using standards inaccepted to the Mallored his live of Standards and Technology (NST) or he Mallored Methology he Intel of Germany (PTB). The procedures and setups used for calibration conform to methods and standards approved by GentechBo.

Quality Assurance

Variance Report

	La ctoalibra fon	New Call brafton
Date		07/06/2005
Sensitially (m/V/VI)	0.993149	Прикор
Difference (from last calibration)		0.010721
Change (%)		12

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Tor Carlomor Oro Carry
The calibration interest of his instrument begins on the date of receipt by the customer. The recommended calibration
Internal is 12 months. Please fit in appropriate dates as indicated.

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Important General Notes:

- We can calibrate "standard" detectors from Gentec-EO only (with DB-15 connector for use with Gentec-EO monitors).
- For calibration of customized products, or if you need any customized or special calibration (recognizable
 in your original calibration certificate from Gentec), please contact us in advance and provide a copy of the
 original certificate.
- In case an extension cable is used (power detectors only), please send it together with the corresponding detector; we will need to update its integrated EEPROM, too.
- Damaged items or items outside of their technical specifications (caused e.g. by overheating, degradation
 effects, or mechanical/electronic defects) cannot be calibrated successfully. In this case, we will provide an
 error report and, if requested, a quotation for further evaluation at Gentec-EO Canada.
- Usually, our calibration certificates are issued in the name of the contracting principal. If you need a different name on the document, please provide this information in advance.

Do you need a quote for a calibration?				
Please click here:				
Please provide me with a quote for a calibration of	Sender: Company			
☐ Power meter (Gentec-EO)	Department			
☐ Energy meter (Gentec-EO)	Contact person			
☐ Monitor (Gentec-EO)	Street / ZIP code / City			
Type of device:	Phone Fax			
Serial number(s):	E-mail			

For further information please contact our product engineer:

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