gentec-eo
PARTNERS for ACCURACY

POWER & ENERGY METERS

BEAM PROFILING

THZ MEASUREMENT

COMPANY PROFILE

WHO WE ARE

A LONG HISTORY OF ACHIEVEMENTS

The history of Gentec-EO is punctuated by numerous innovations. As a former laser manufacturer, the company is very close to the needs of its customers. The first laser energy measurement products were developed by Gentec Inc. in 1972 for internal use, as the company manufactured the first high repetition rate TEA CO_2 lasers on the market place. Gentec Inc. was also the first to introduce pyroelectric joulemeters and to manufacture both pyroelectric and thermopile laser power and energy detectors. In the mid-1990's, the company introduced the WB series of detectors (now known as the W5 and W9 series), which are characterized by an average power density damage threshold over 100 kW/cm^2 that is still unrivalled nowadays. Also, since it can measure 25 kW and even up to more than 50 kW, the HP series of detectors is a market leader in the measurement of high power lasers.

In 2000, Gentec Electro-Optics Inc. was born from Gentec Inc. so it could dedicate all its efforts to the development of laser beam measurement devices. More recently, in 2010, the company came up with its MAESTRO, the first touch screen monitor of the market. During the same year, the acquisition of Spectrum Detector Inc. allowed the company to add, among others, measurement solutions to the new and rapidly expanding THz market, ultra-sensitive optical joulemeters (down to femtojoules), and pulse to pulse energy measurement devices for lasers with repetition rates up to 200 kHz.

OUR ESSENCE

HIGH STANDARDS

We meet high standards on a daily basis thanks to our focus on quality and the satisfaction of a well done job, with no half measures and no room for compromises.

ADAPTABILITY

Adaptability is part of our everyday activity both in the way we approach a problem and in the way we solve it. We continuously adapt not only the modifications made to a product but also our work methods.

PARTNERSHIP

A spirit of partnership guarantees that our clients receive personalized assistance throughout the entire process, from purchase to product selection to product implementation.

OUR PROMISE

RIGOR

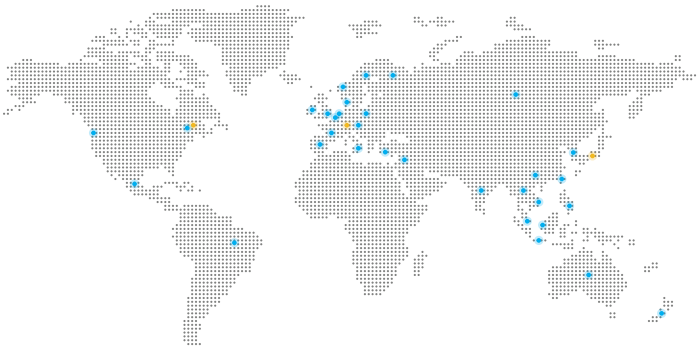
Rigor in everything we do in order to deliver the accuracy you expect and the product you are looking for.

CUSTOMIZATION

There is a large number of laser companies because there is an even larger number of applications. Our promise is to listen to your special demands and deliver the custom product you need.

WORLDWIDE PRESENCE

- Offices in the US and Canada
- Calibration Centers on 3 Continents
- Products Sold in Over 50 Countries

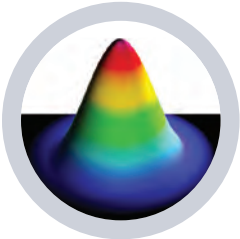


WHO WE ARE

OUR FIELDS OF EXPERTISE

LASER POWER & ENERGY METERS

We have the most complete range of laser measurement products in the industry. Our energy detectors cover from just a few fJ to several kJ and our power detectors span a wide range, from a few pW to tens of kW.



BEAM PROFILING

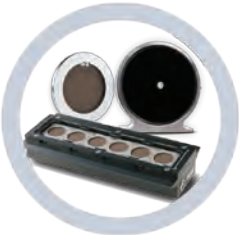
Measuring the power or energy of your laser is not always sufficient. If you need to know more about your beam diameter, intensity profile and divergence we have a full range of beam profilers, including cameras and scanning systems.

LARGE AREA CALORIMETERS

A Gentec-EO calorimeter is the only reliable solution available for the largest and highest energy laser beams. Through cooperation with several leading research facilities around the world, Gentec-EO has become the expert in manufacturing, calibrating and servicing high energy calorimeters.

THZ MEASUREMENT

We are proud to offer an extensive line of power and energy detectors for the terahertz spectrum. Our product line features easy plug-and-play solutions and complete application software.



CUSTOMIZED PRODUCTS & OEM APPLICATIONS

After more than 40 years in the laser beam measurement business, we have developed many customized solutions, sometimes for very unusual applications. Whether your project is big or small, do not hesitate to send us your requests, we will listen to your needs.

TRACEABLE CALIBRATION

At Gentec-EO we use only Gold Calibration standards, guaranteeing our customers the best accuracy on the market. We also offer our in-house calibration expertise to customers outside the laser market so do not hesitate to bring us all your calibration needs.

VERTICAL INTEGRATION

FROM R&D

TO MANUFACTURING

TO CALIBRATION

NIST Traceable

OUR PRODUCTS

POWER & ENERGY MONITORS

WITH DISPLAY

MAESTRO
Universal Monitor
Touchscreen Controls

TUNER
Power Monitor
Super-Fast Tuning Needle

UNO
Power Monitor
Economic Model

PC BASED

S-LINK
Power & Energy Monitor
1 or 2 Channels

P-LINK
Power Monitor
1 or 4 Channels

M-LINK
Universal Monitor
Noise Suppression Algorithm

INTEGRA
Integrated Monitor
Available with Power, Energy and Photo Detectors

ENERGY DETECTORS

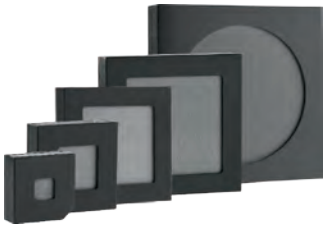
LOW ENERGY

Available with integra

QE-B
50 nJ - 4 mJ
8 mm
Very Low Noise Level

MID TO HIGH ENERGY

Available with integra



QE-MB
1 µJ - 250 J
12, 25, 50, 65 and 95 mm
Long Pulse Capability

Available with integra

QE-MT
1 µJ - 44 J
12, 25 and 50 mm
High Repetition Rates

OUR PRODUCTS

POWER DETECTORS

LOW POWER

Available with integra

XLP12

1 µW - 3 W
12 mm Ø

MID POWER

Available with integra

UP-H

1 mJ - 500 W
12, 19, 25 and 55 mm Ø

MID TO HIGH POWER

Available with integra

UP55-HD

45 mW - 2,500 W
55 mm Ø

MID POWER - HIGH DAMAGE TRESHOLDS

Available with integra

UP-W

1 mW - 50 W
17 and 50 mm Ø
100 kw/cm^2

Available with integra

UP-VR

1 mW - 200 W
18 and 55 mm Ø
40 J/cm^2

HANDHELD

Pronto-250

1 W - 250 W
Instantaneous Measurements
YAG or CO_2 Calibration

HIGH POWER SOLUTIONS

HIGH POWER

HP & SUPER HP

3 W - more than 25,000 W
60 and 100 mm Ø or Custom Size

HANDHELD

FLASH and FLASH-IPL

1 W - 500 W / 2 J - 350 J
55 mm Ø

BEAM DUMPS

BD Series

4,000 and 12,000 W
100 mm Ø

OUR PRODUCTS

PHOTO DETECTORS

POWER

PH-B
40 pW - 200 µW
5 and 10 mm Ø
Si and Ge Sensors

Available with integra

PH
600 pW - 750 mW
5 and 10 mm Ø
Si and Ge Sensors
Attenuators Available

ENERGY

Available with integra

PE-B
8 fJ - 150 nJ
3, 5 and 10 mm Ø
Si, Ge and InGaAs Sensors
Ultra-Low Energy Readings

THZ DETECTORS

THERMAL

THZ-D
1 µW - 3 W
Works with Universal Monitors

THZ-I-BNC
1 nW - 200 mW
Integrated Module

PYROS

T-Rad
THz Pyro Detectors
and Module

QS-THZ
Hybrid Pyros

OEM DETECTORS

DISKS

UD Series
Thermal Sensor Disks
External PCB Available

SENSOR HEADS

UP Series
Complete Sensor Heads
Choice of Connectors

WITH PCB

UP Series with PCB
Complete Sensor Heads
With Internal PCB
Choice of Connectors

OUR PRODUCTS

SPECIAL PRODUCTS

ULTRAFAST JOULEMETERS

Mach Series

200 kHz Pulse-to-Pulse
The Fastest on the Market!

BEAM POSITIONING

QUAD

Measure, Track and Align your
Beam in Real Time

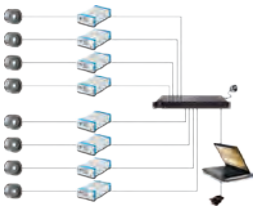
DISCRETE PYROS

Discrete or Hybrid Pyroelectric Detectors

Small TO5/TO8 Packages
Evaluation Test Box Available

CUSTOM PRODUCTS

MULTI-CHANNELS



OCTOLINK

8-Channel Software
Compare Data in Real Time

MULTI-SENSORS

6-Element Detector Bar

Instantaneous Measures
of all the Elements

CUSTOM SHAPES

"Hollow" Detector

Large Diameter with Center Hole
Option for eBeam Monitoring

CALORIMETERS

FOR HIGH ENERGY LASER EXPERIMENTS

Photo courtesy of Lawrence Livermore National Laboratory

Preferred Supplier

We work with the leading research
facilities around the World

State-of-the-Art

We offer a wide range of materials and surface
coatings for all applications

Customized

Any desired shape and size, as large as
420 x 427 mm and up to 16,000 Joules

OUR PRODUCTS

BEAM DIAGNOSTICS

USB3.0 BEAM PROFILING CAMERAS

Beamage-3.0

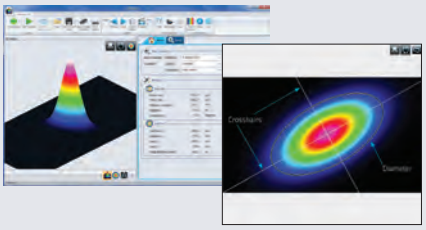
2.2 MPixels with 5.5 µm Pixels
6.0 x 11.3 mm Sensor
For 350 - 1150 nm

Beamage-3.0-IR

2.2 MPixels with 5.5 µm Pixels
6.0 x 11.3 mm Sensor
For 1495 - 1595 nm

Beamage-4M

4.2 MPixels with 5.5 µm Pixels
11.3 x 11.3 mm Sensor
For 350 - 1150 nm



Intuitive Software

Easy to navigate interface, with many displays and control features: 2D, 3D and XY Displays, Background Subtraction Function, Gaussian Fit, Semi-Log Graph and more.

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LEADER IN LASER BEAM MEASUREMENT **SINCE 1972**

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