



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<sub>2</sub> 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<sup>2</sup> 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

#### RIGOR

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

#### 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

#### HIGH STANDARDS

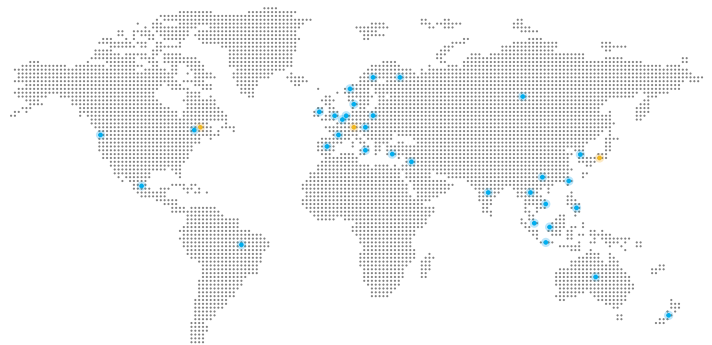
We meet high standards on a daily basis thanks to our focus on quality and the satisfaction of a well done job, with no half measures and no room for compromises.

#### 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 USA, Canada and Japan
- Calibration Centers on 3 Continents
- Products Sold in Over 50 Countries



MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

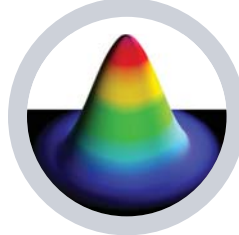
# WHO WE ARE

## 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

### WIRELESS



**S-LINK & M-LINK**  
Power & Energy Monitor  
1 or 2 Channels  
Noise Suppression Algorithm  
(M-Link only)



**P-LINK**  
Power Monitor  
1 or 4 Channels



**INTEGRA**  
Integrated Monitor  
Available with Power, Energy  
and Photo Detectors  
Optional: RS-232 and External Trigger



**BLU**  
Integrated Wireless Monitor  
Available with Power Detectors  
For Smartphone, Tablet or PC

## ENERGY DETECTORS

### LOW ENERGY

### MID TO HIGH ENERGY

Available with  
 integra

Available with  
 integra

Available with  
 integra



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



**QE-MB**  
0.7  $\mu$ J - 250 J  
12, 25, 50, 65 and 95 mm  
Long Pulse Capability



**QE-MT**  
0.8  $\mu$ J - 44 J  
12, 25 and 50 mm  
High Repetition Rates

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

# OUR PRODUCTS

## POWER DETECTORS

### LOW POWER

Available with  
 



#### XLP12 & UM9B

5 nW - 3 W  
 9 and 12 mm Ø

### MID POWER

Available with  
 



#### UP-H

1 mW - 500 W  
 10, 12, 17, 19, 25 and 55 mm Ø

### MID TO HIGH POWER

Available with  
 



#### UP55-HD

45 mW - 2,500 W  
 55 mm Ø

## MID POWER - HIGH DAMAGE TRESHOLDS

Available with  
 



#### UP-W

1 mW - 50 W  
 17 and 50 mm Ø  
 100 kw/cm<sup>2</sup>

Available with  
 



#### UP-VR

2 mW - 200 W  
 18 and 55 mm Ø  
 40 J/cm<sup>2</sup>

## POCKET-SIZE



#### Pronto-250 & Pronto-250-PLUS

10 mW - 250 W  
 Instantaneous Measurements  
 YAG and CO<sub>2</sub> Calibrations  
 Compact Power Probe with Touch Screen

## HIGH POWER SOLUTIONS

### HIGH POWER



#### HP & SUPER HP

3 W - 100,000 W  
 From 60 to 400 mm, Custom Sizes

### HANDHELD



#### Pronto & Pronto-IPL

0.1 W - 10,000 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  $\mu$ W - 200  $\mu$ W  
5 and 10 mm  $\varnothing$   
Si and Ge Sensors

Available with  
*integra*



**PH**

60  $\mu$ W - 750 mW  
5 and 10 mm  $\varnothing$   
Si and Ge Sensors  
Attenuators Available

### ENERGY

Available with  
*integra*



**PE-B**

8 fJ - 150 nJ  
3, 5 and 10 mm  $\varnothing$   
Si, Ge and InGaAs Sensors  
Ultra-Low Energy Readings

### POCKET-SIZE



**Pronto-Si**

0.3 nW - 800 mW  
Compact Power Probe with Touch Screen  
Integrated Slide-In Attenuator  
Flips Close to Protect the Screen and Sensor

## THZ DETECTORS

### THERMAL



**THZ-D**

1  $\mu$ W - 3 W  
Works with Universal Monitors

### PYROS



**THZ-I-BNC**

1 nW - 200 mW  
Integrated Module



**THZ-B**

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

MONITORS  
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# OUR PRODUCTS

## SPECIAL PRODUCTS

### ULTRAFAST JOULEMETERS

### BEAM POSITIONING

### DISCRETE PYROS



#### Mach Series

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



#### QUAD

Measure, Track and Align your  
Beam in Real Time



#### Discrete or Hybrid Pyroelectric Detectors

Small T05/T08 Packages  
Evaluation Test Box Available

## 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

## BEAM DIAGNOSTICS

### USB3.0 BEAM PROFILING CAMERAS



#### Beamage-3.0

2.2 MPixels Resolution  
5.5  $\mu$ m Pixels  
6.0 x 11.3 mm Sensor  
Available for Vis-NIR or IR



#### Beamage-4M

4.2 MPixels Resolution  
5.5  $\mu$ m Pixels  
1.3 x 11.3 mm Sensor  
Available for Vis-NIR or IR



#### Beamage-4M-FOCUS

4.2 MPixels Resolution  
10  $\mu$ m Effective Pixels  
20.5 x 20.5 mm Effective Aperture  
Perfect for Large Beams



#### Beamage M2

Automated laser beam quality  
measurement system  
50 mm apertures  
Flexible & intuitive software



WWW.GENTEC-EO.COM

# LEADER IN LASER BEAM MEASUREMENT **SINCE 1972**

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