



“Strength lies in quality.”

Friedrich Nietzsche (1844–1900), German philosopher

LASER COMPONENTS

Manufacturer ▪ Distributor ▪ Partner

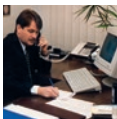
LASER COMPONENTS produces components for the laser technology and optoelectronics industries in house; many products are developed based on customer request. In addition, LASER COMPONENTS offers premium components from selected manufacturers. The range of products is enormous; indeed, it is one of the largest in the market.

LASER COMPONENTS employs more than 220 people worldwide. In addition to our headquarters in Germany, we have sales offices in the United States, France, the U.K., and in the Nordic countries. Our production facilities are located in Canada, the United States, and Germany.

This family-run business stands out due to its global teamwork. The CEOs of the entire group meet on a regular basis to discuss new developments, product lines, and market potential.

THE STORY

1982



Start
LASER COMPONENTS is founded by Günther Paul in May 1982.

1986



Optical Coatings
The first production facility opens in May of 1986. Hard dielectric coatings have been applied to laser optics in Germany ever since.

1987



Blau Optoelektronik GmbH
Günther Paul co-founds the company, which produces laser diode modules and optoelectronic measurement technology.

1993



Relocation
Move to Werner-von-Siemens-Straße in Olching, which is still the headquarters of LASER COMPONENTS today.

LASER COMPONENTS (UK), Ltd.
The first subsidiary opens in the United Kingdom.

1995



Optical Fiber Assemblies
Production facility for optical fiber assemblies.

1996

Optophotonics SA
Günther Paul co-founds French subsidiary.

2002



LASER COMPONENTS Canada, Inc.
The Canadian production facility develops and manufactures pulsed laser diodes.

2000

LASER COMPONENTS USA, Inc.
Takeover of Laser Analytics, Inc. and restructuring as a US sales subsidiary.

2003



LASER COMPONENTS Detector Group, Inc.
Production of avalanche photodiodes begins in the United States.

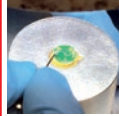
2010



Photon Counters

Single photon counters are manufactured by LASER COMPONENTS. They quickly become a bestselling product line.

2014



LASER COMPONENTS Pyro Group, Inc.
Design, development and manufacturing of pyroelectric detectors in Florida, USA.

LASER COMPONENTS Nordic AB
New sales office for Denmark, Norway, Sweden and Finland.

2020



LASER COMPONENTS Detector Group
The former units Pyro Group and Detector Group are merged and now operate under the name LASER COMPONENTS Detector Group in Arizona.

The new Detector Group manufacturing and administration building is opened in Chandler, Arizona.

2008



Precision Optics

Precision optics are now manufactured in Olching.

2013

InGaAs Photodiodes

InGaAs PIN photodiodes are developed and manufactured by LASER COMPONENTS Detector Group in Arizona, USA.

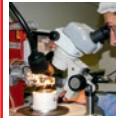
2018

LASER COMPONENTS Canada, Inc.
LASER COMPONENTS acquires full ownership of the company building in Quebec.

2007

LASER COMPONENTS S.A.S.
Takeover of Optophotonics SA and restructuring; product range at French office expanded.

2015



PbS/PbSe Detectors

The LASER COMPONENTS Detector Group expands its portfolio: PbS and PbSe detectors are now made in the United States.

LASER COMPONENTS Worldwide



Headquarters, R&D and Production
ISO 9001 and EN ISO 13485 certified



R&D and Production
All production facilities are ISO 9001 certified



Sales and Marketing



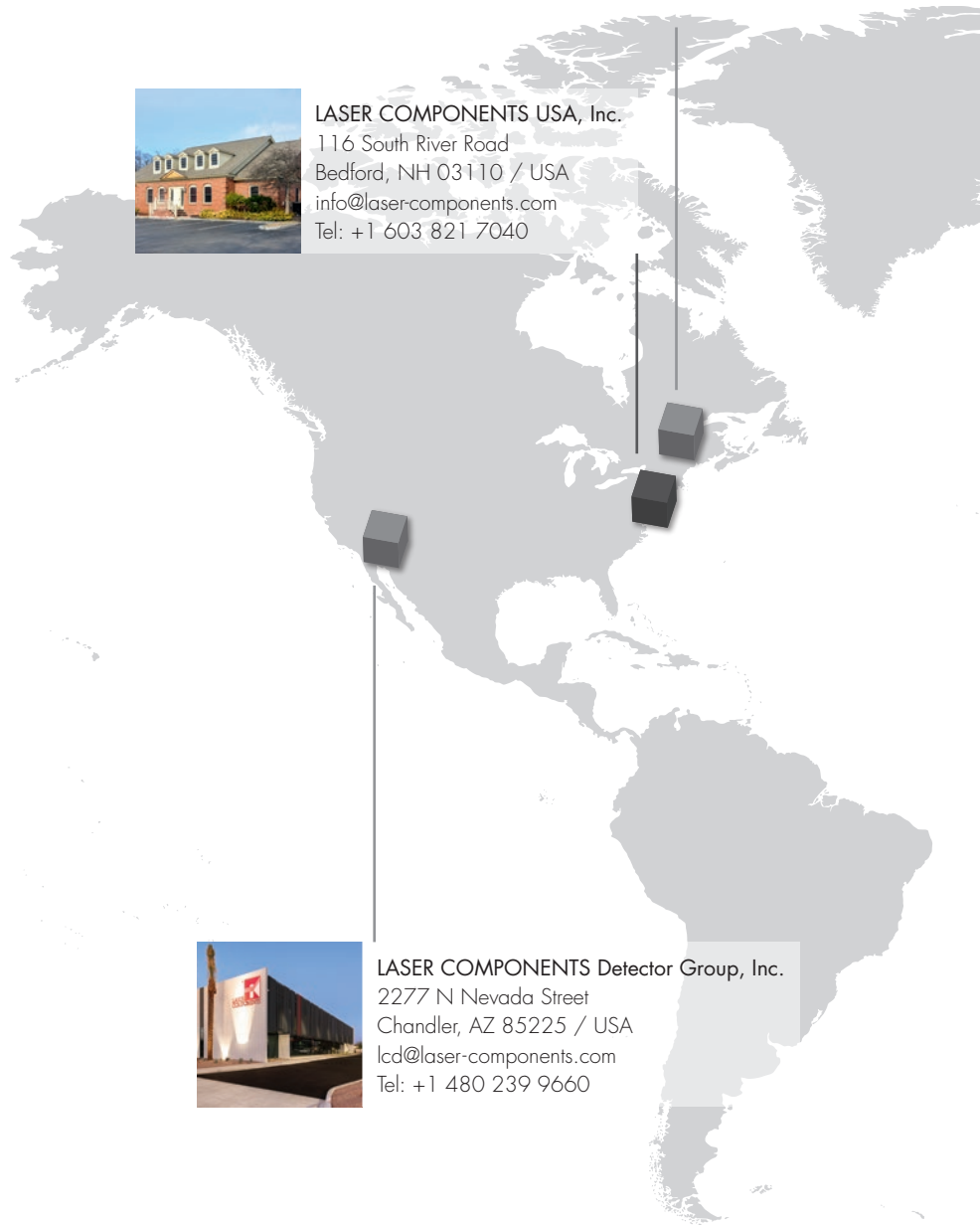
LASER COMPONENTS Canada, Inc.
195 Joseph Carrier J7V 5V5
Vaudreuil-Dorion, Quebec / Canada
lcc@laser-components.com
Tel: +1 450 455 8270



LASER COMPONENTS USA, Inc.
116 South River Road
Bedford, NH 03110 / USA
info@laser-components.com
Tel: +1 603 821 7040



LASER COMPONENTS Detector Group, Inc.
2277 N Nevada Street
Chandler, AZ 85225 / USA
lcd@laser-components.com
Tel: +1 480 239 9660



LASER COMPONENTS (UK), Ltd.
Goldlay House 114 Parkway
Chelmsford Essex CM2 7PR / UK
info@lasercomponents.co.uk
Tel: +44 1245 491 499



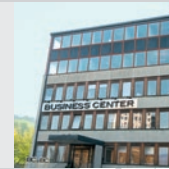
LASER COMPONENTS S.A.S.

45 Bis Route des Gardes
92190 Meudon / France
info@lasercomponents.fr
Tel: +33 1 39 59 52 25



LASER COMPONENTS Nordic AB

Skårs led 3
41263 Göteborg / Sweden
info@lasercomponents.se
Tel: +46 31 703 71 73



LASER COMPONENTS GmbH

Wernervon-Siemens-Str. 15
82140 Olching / Germany
info@lasercomponents.com
Tel: +49 8142 28640

PRODUCTION

LASER COMPONENTS is unique!

Why is that? Although we all put our pants on one leg at a time, we have one basic advantage over our competitors: LASER COMPONENTS is both manufacturer and distributor, knowing the business from both sides. We offer competent advice as technological leader, we know the needs of our customers, and we can estimate the feasibility of new products. We are particularly successful due to the collaboration between each of the different production facilities: In just one year, five departments worked together to make the COUNT® photon counters marketable; and just another year later, the products were being integrated by international customers!

We turn your vision into products!

OEM products are our life. We have our standard portfolio, but we stand out due to our production of customized products. We offer new developments for our own in-house products but also for the product lines of our suppliers. We manufacture both single items and complete series according to customer specifications. The best part is: From development to series production, with us everything comes from one source.

Let's talk about it.

Our experienced staff members are ready to assist you during development of a product. You correspond with a single contact person, which saves you time.

We look forward to working together with you!

DETECTORS

Photodiodes, from UV to IR, as well as pyroelectric detectors and PbS/PbSe detectors are manufactured in the United States.

PHOTON COUNTERS

The technologies used in the manufacture of photon counters come from in house.

FIBER OPTICS

Our strength is fibers for the transmission of high optical power in industry and medical technology.

ELECTRONICS

Electronics development not only manufactures its own products, but it also creates synergies with other production facilities!

LASER OPTICS

Laser optics from LASER COMPONENTS have had a long-standing history going back to 1986.



LASER MODULES

Laser modules developed and manufactured in Germany.

SUBSTRATES

We have our own production facility for quick single item and series production of laser optic substrates.

LASER DIODES

Pulsed laser diodes are developed and manufactured at our Canadian facilities, IR emitters in the United States.

PHOTODIODES

✉ Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!



Manufacturer: LASER COMPONENTS Detector Group, Inc.
Production started: 2004

We manufacture

- Si APDs
- InGaAs APDs
- APDs for photon counters
- APD receivers
- Si APD arrays



PHOTODIODES Production



The Company

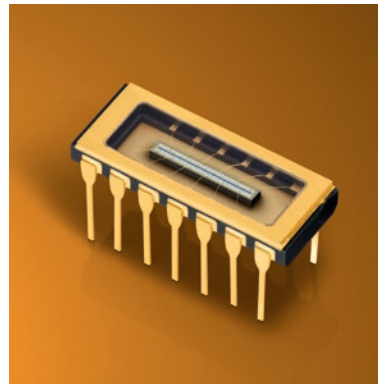
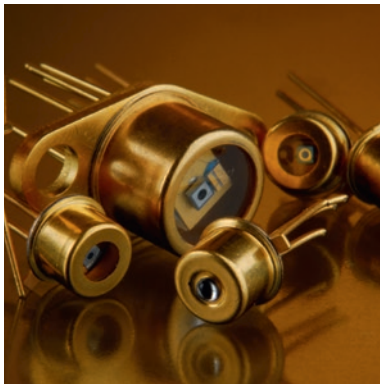
In Chandler, Arizona, LASER COMPONENTS Detector Group, Inc. manufactures semiconductor detectors. Initially, LASER COMPONENTS concentrated on the development and production of high-performance silicon and InGaAs avalanche photodiodes for the detection of the smallest amount of light. The product range has meanwhile been radically expanded to include the assembly of receivers and the development of a broad range of IR detectors.

Sophisticated Products According to Customer Specifications

The Detector Group is a specialist for orders with individual configurations. Their product range extends from low-cost APDs for commercial applications to high-end components used in military applications. The heart of our photon counting modules originated from this facility: it is the VLoK series of APDs used in the detection of the smallest amount of light. Complete receivers are also produced by the Detector Group. They feature high sensitivity and have a wide wavelength range and large frequency width.

Extended Production Options with the Help of Comprehensive Equipment

We rely on the latest technologies in the production of avalanche photodiodes to implement complicated designs.



Avalanche Photodiodes

From UV to IR

Avalanche photodiodes are manufactured from different semiconductor materials. Depending on the spectral sensitivity, silicon or InGaAs is used.

Silicon avalanche photodiodes detect radiation in the range from 255nm to 1100nm. Different versions are optimized for each of their own wavelength ranges; thus, there are series available for the UV range, the visible range, and the NIR.

For detection in the infrared spectral range, InGaAs is used. The products have three features: an extremely high damage threshold, a very low capacitance, and a low dark current.

Detectors for Photon Counting

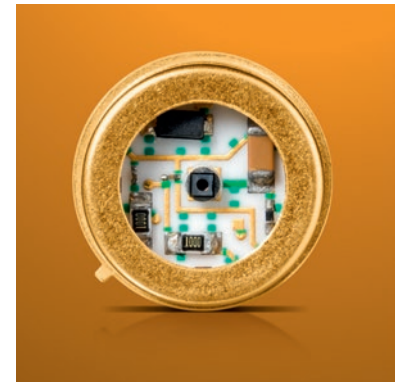
Avalanche photodiodes are also used in single photon counting. Silicon detectors are particularly suitable due to their high efficiency and low dark count rate.

Receivers for Immediate Application

APD receivers come equipped with an integrated preamplifier – for optimal performance!

APD Array

Monolithic linear silicon APD arrays with low crosstalk and an inter-element gap of only 40 μ m. Available with 8, 12 and 16 elements as standard, or as a custom configuration tailored to your requirements.



PHOTON COUNTERS



✉ Direct contact:

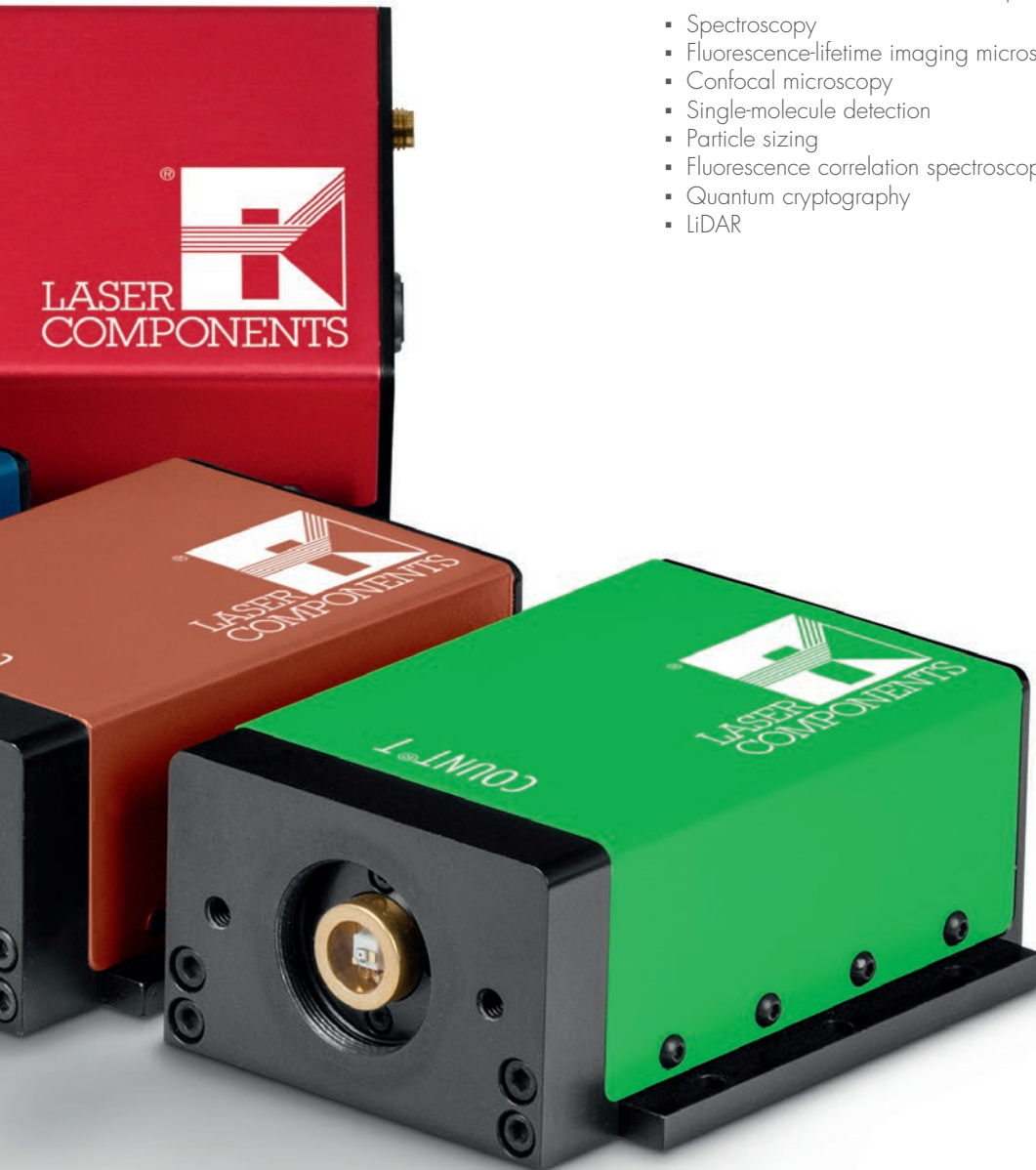
info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!

Manufacturer: LASER COMPONENTS GmbH
Production started: 2010

Photon counters are used, for example, in the following applications:

- Spectroscopy
- Fluorescence-lifetime imaging microscopy (FLIM)
- Confocal microscopy
- Single-molecule detection
- Particle sizing
- Fluorescence correlation spectroscopy (FCS)
- Quantum cryptography
- LiDAR



PHOTON COUNTERS Production



Photon Counters from One Source

Motivated by numerous customer requests, LASER COMPONENTS GmbH ventured the development of photon counters in house in 2010, relying on the know-how of affiliated production facilities in the individual disciplines, avalanche photodiodes and electronics. The exclusive broadband coating of the integrated optics as well as the optical fiber is also manufactured by LASER COMPONENTS.

From quality components to the complete system, everything comes from one source. This is the secret of LASER COMPONENTS' success with its COUNT® modules.

You Profit from Manufacturing Options

At the semi-automatic measuring station, quantum efficiency, dark count rates, dead time, and after-pulsing can be measured – with or without fiber coupling. We simulate different scenarios, testing efficiency in your application field. Inquire with us!



COUNT® Modules

Extraordinary Products in Excellent Quality

Photon counters are mainly used in the measurement of photons. One of the most important measurement parameters in terms of product quality is quantum efficiency at specific wavelengths. We dominate this field with a detection efficiency of up to 85% in the red wavelength range and 75% in the blue wavelength range.

Another criterion is the dark count rate: Modules with values of $<10\text{c/s}$ are available.

Photon Counters for Different Wavelengths

Depending on the application, different COUNT® modules are available. The Si SPAD COUNT® module is optimized for wavelengths in the range from 500nm to 700nm. For shorter wavelengths, the COUNT® BLUE features high detection efficiency in the blue-green spectral range. The COUNT® NIR module delivers the best performance in the near infrared range. The COUNT® T is used for time-correlated applications.

Fiber Connection

All COUNT® modules are also offered with a fiber connection on an optional basis. This serves as a protective barrier from outside influences.

Customer Requests

Bring About New Products

Innovation never stops. Customer demands increase and we respond as quickly as possible with new models and product variations. This includes, for example, photon counters for quantum cryptography.

INFRARED COMPONENTS

Manufacturer: LASER COMPONENTS Detector Group, Inc.
Production started: 2013

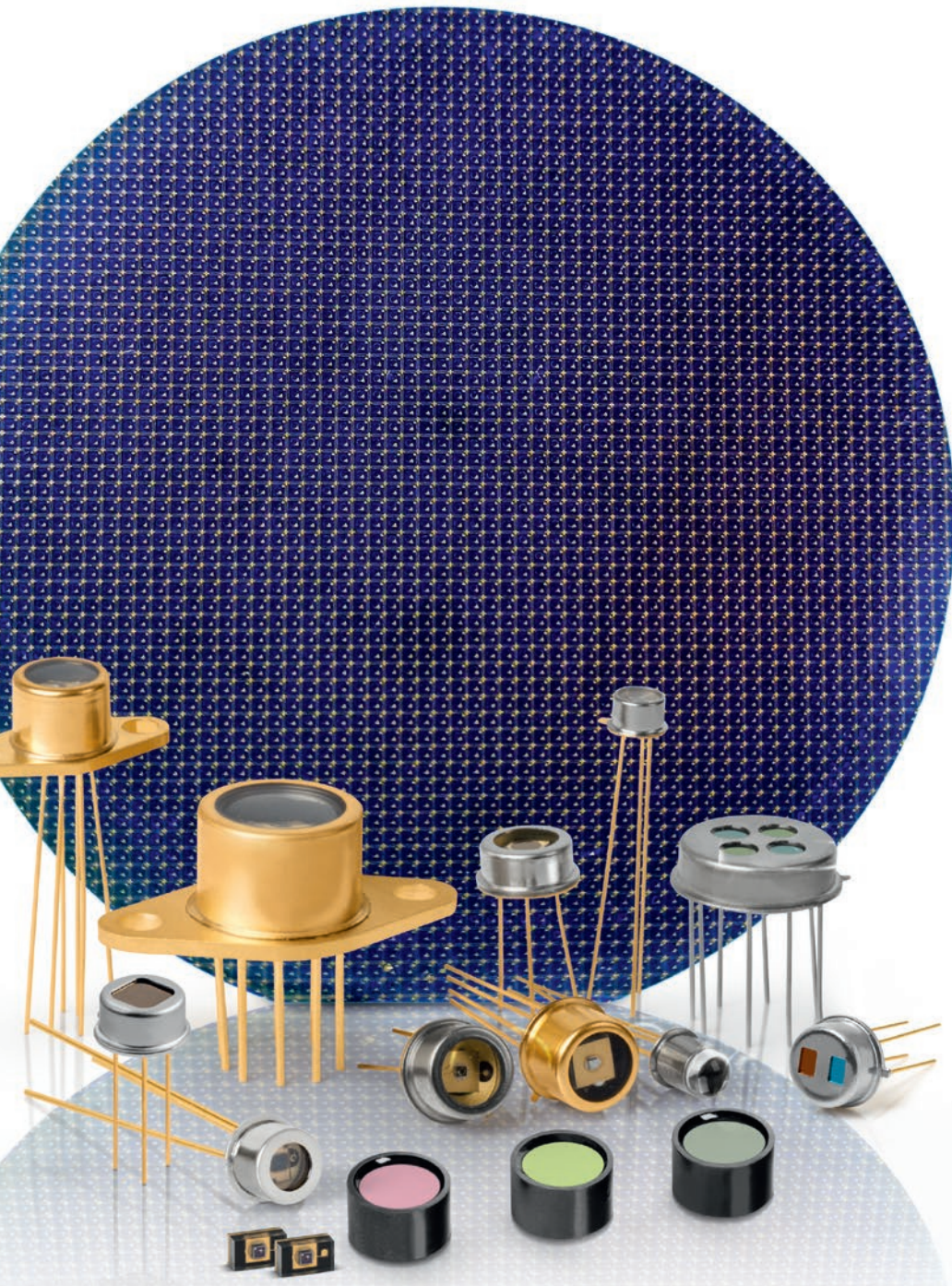
We manufacture

- InGaAs PIN detectors
- InAs detectors
- Extended InGaAs PIN detectors
- PbS / PbSe detectors
- Pyroelectric detectors

 Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!



INFRARED COMPONENTS Production

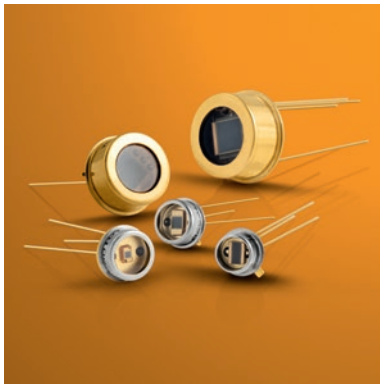


The LASER COMPONENTS Detector Group in Chandler, Arizona, has been manufacturing standard and extended InGaAs PIN photodiodes since 2013. In 2014 the portfolio was extended to include pyroelectric detectors. In addition, photoconductive PbS and PbSe devices were launched in 2015.

IR Detectors

Developments in the IR sector are often very complex. Our experienced R&D team develops products according to customer requirements. At the same time, they are always working to further improve standard products, for example by continuously optimizing source materials and designs.

This has enabled us to continuously extend the technical limits of the quantum efficiency of PbS and PbSe detectors and to increase the performance of pyroelectric detectors.



IR Detectors

PbS/PbSe Detectors

We manufacture polycrystalline photoconductive PbS and PbSe detectors: PbS covers wavelengths from 1 μm up to 3.5 μm while PbSe covers 1.5 μm up to 5.5 μm . They are called mid-wave infrared (MWIR) devices. These detectors are important components for CO₂ measurement – for example in medical ventilators.

InGaAs/Extended InGaAs Detectors

InGaAs and extended InGaAs PIN photodiodes are photovoltaic short-wave infrared (SWIR) detectors. Their spectral sensitivity ranges from 500 nm to 2600 nm: These detectors are, therefore, also referred to as panchromatic.

DLaTGS and LiTaO₃ Pyroelectric Detectors

Pyroelectric detectors are thermal AC detectors. In principle, they respond to any absorbed radiation. However, they are mostly used in the MWIR and long-wave infrared (LWIR).

DLaTGS is the standard detector material for FTIR instruments that use an uncooled detector.

LiTaO₃ is mostly used for gas analysis and flame detection. Medical technology uses LTO detectors to monitor anaesthetics.

2017 saw the introduction of our Differential Mode Pyroelectric Detectors, providing significantly improved signal to noise ratio compared to traditional pyroelectric detectors.



PULSED LASER DIODES

Manufacturer: LASER COMPONENTS Canada, Inc.
Production started: 2002

Laser Diode Fields of Application

- Laser rangefinding
- Speed guns
- Laser scanners
- Defense & security
- Automotive industry
- Medical technology
- Measurement technology



✉ Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!



PULSED LASER DIODES Production



Custom Solutions –

Cost-Effective, Even When Produced in Small Amounts

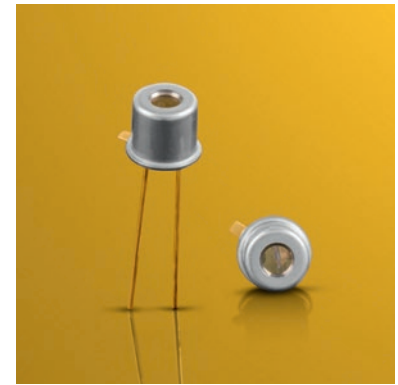
Close cooperation between customer and manufacturer has been our greatest success factor in manufacturing optimally customized products. Our customers are often pleasantly surprised by how reasonable our prices are for customized products.

LASER COMPONENTS Canada develops pulsed laser diodes (PLDs) suited to your field of application. Almost all product parameters can be adjusted e.g., wavelength, output power, and housing. It is also possible to develop completely new products.

Uncompromising Quality

Quality is an absolute imperative. The consistent application of quality management methods has resulted in the continuous advancement of products. New products and increasing efficiency are in constant demand.

As part of quality control, a life test rack was developed to simulate very different applications. The pulsed laser diodes being tested on the life rack are pushed beyond their approved limitations.



Pulsed Laser Diodes

Different Wavelengths – High-Quality Housing

The standard range consists of pulsed laser diodes with the following wavelengths: 850 nm, 905 nm, or 1550 nm. We differentiate between two product lines: high-end PLDs and low-cost PLDs. Both product lines have a high-quality metal housing in common.

Low-Cost Series

The high-volume/low-cost series consists of pulsed laser diodes in a metal housing that are best suited for consumer products such as laser rangefinders. SMD housings are also available.

In 2018 our first 80 W PLD received automotive qualification according to AEC-Q101.

SMD PLD

The SMD-Option allows for high laser powers from a small housing.

QuickSwitch® PLD

The QuickSwitch® series integrates the key components of the pulsed laser drive circuit into the same compact TO package as the laser chip. With a pulse width of only 2.5 ns, the QuickSwitch® devices are currently the fastest hybrid pulsed laser diodes available. Output powers from 72 W are offered.

Numerous Product Variations

Different types, single emitters, and stacks are available. In addition to numerous housing varieties, we primarily manufacture customer-specific components. Fast axis collimation (FAC) lenses can be integrated, cooled versions designed, and fiber couplings applied. We now also manufacture pulsed laser diodes with various wavelengths.



FLEXPOINT® LASER MODULES

Manufacturer: Blau Optoelektronik GmbH
Production started: 1987

Manufacturer: LASER COMPONENTS GmbH
Production started: 2009

Laser modules come in many varieties; different customers rarely order the same module. You determine the following parameters:

- Wavelength
- Power
- Beam profile
- Housing
- Connection
- Modulation
- Operating voltage



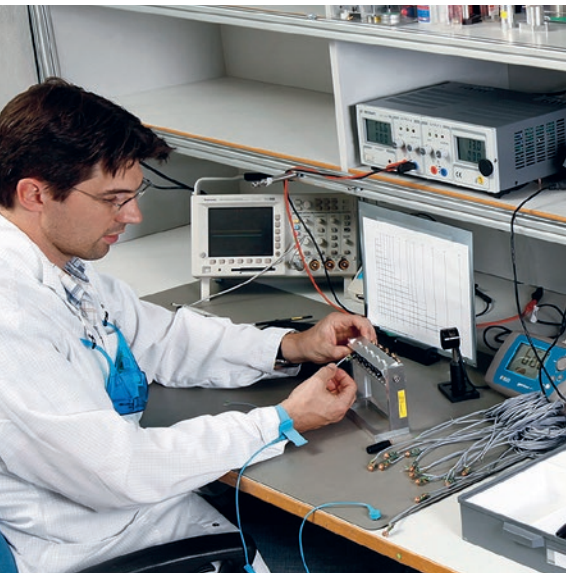
✉ Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!



FLEXPOINT® LASER MODULES Production



Development of Laser Modules

Two laser modules are rarely alike. Our strength lies in our ability to offer customer-specific FLEXPOINT® modules. Whether single pieces are required or series production, we develop and manufacture your modules in Germany – from electronics and optics to the complete laser module. Place your trust in the FLEXPOINT® brand.

The Most Modern Technologies for Customized Developments

Our FLEXPOINT® laser modules are developed with computer assistance: Using CAD, we determine the shape of the housing. Integrated lens combinations are responsible for the beam quality of the laser modules. We simulate the beam using optics design software. To ensure the driver of the laser diode works hassle free, it is also developed on the computer.

Quality Assurance

To assure quality, the laser modules are tested at different optical measuring stations. All kinds of parameters are tested: optical power, beam profiles, and beam angle error as well as electrical parameters, such as power consumption, and voltage.



Laser Modules

FLEXPOINT® Laser Modules

The FLEXPOINT® laser modules are developed and manufactured directly at LASER COMPONENTS and Blau Optoelektronik GmbH, a subsidiary of the LASER COMPONENTS group.

Laser Modules for Specific Requirements

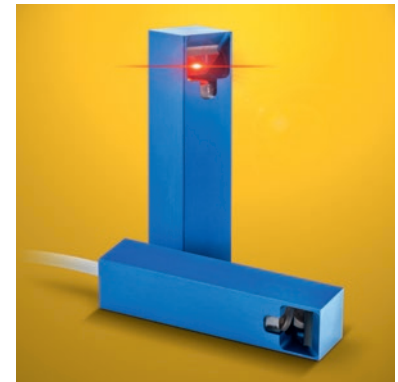
FLEXPOINT® laser modules with special housings, specific wavelengths, output power, or extraordinary beam profiles, can also be implemented in small series. Many standard components can be combined in an individual model. It is also possible to manufacture customized prototypes on short notice.

MV Series – Laser Modules for Industrial Image Processing

In industrial image processing special demands are placed on laser modules. Line lasers with a uniform power distribution along the line are often used. High-power models and special housings are sometimes required for machine vision applications as well.

Precision Laser Modules

Precision laser modules are modules in which the beam axis and the housing axis are aligned. In their miniaturized form, they are used as OEM precision laser modules in laser light barriers. Larger, mechanically robust housings are used for alignment purposes in machine engineering.



FIBER OPTICS

✉ Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!



Manufacturer: LASER COMPONENTS GmbH
Production started: 1995

Your wish is our command: optical fibers according to your requirements. As soon as you determine the properties, we begin production. Length, type of connector, material, and field of application: These are the features that are available for selection in conventional assemblies. Whether the components are later produced in small or large numbers, we work together with our customers to develop top products.



FIBER OPTICS Production



Product Range

We assemble the widest variety of optical fibers – from bare fibers and industrial fibers to fibers with a protective jacket – all of which can be equipped with all standard connectors. It goes without saying that we also assemble custom connectors with the desired fiber.

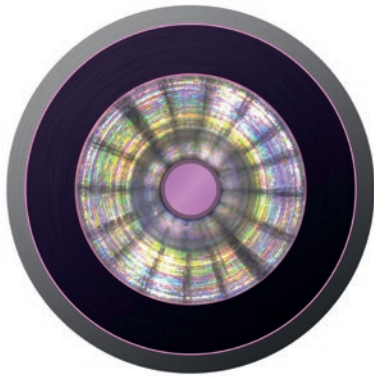
Medical Applications

Moreover, we develop and manufacture fiber-optic components for medical applications; we are certified to do so according to EN ISO 13485. As required, we use biocompatible materials and deliver sterile products upon request. They are manufactured under class 7 cleanroom conditions.

Machinery and Quality Control

We modernize our facilities regularly. Computer-operated cutting and polishing machines work precisely and reproducibly. This is how we achieve high-quality fiber assemblies.

To keep our customers satisfied with our products, we introduced an advanced outgoing goods inspection. With the help of a digital measurement microscope, we are able to perform 3D measurements, centricity measurements, and surface analyses for laser and medical fibers. We have interferometers for fiber-optical connectors available for PC and APC polishing, as well as measurement equipment for insertion loss and return loss testing. We like to ensure that you receive a fiber that has been perfectly assembled and achieves the best results in centricity and laser polishing.



Coated Fibers and Assemblies

Standard and PM Cables

Custom fiber assemblies are available for conventional applications. Multi-mode, single-mode, and POF cables are available with all standard connectors. We also manufacture reference cables with precise reference connectors for measurement tasks.

In addition to standard patchcords, we assemble polarization-maintaining cables for telecom, sensor, and laser technology applications, as well as cables with hollow-core fibers for the transmission of CO₂ lasers.

Coated Fiber Endfaces

An anti-reflection coating increases the efficiency of the coupled light beam considerably and reduces back reflection to a minimum. We offer AR coatings for different wavelength ranges. In-house production allows us high flexibility and short delivery times.

Fiber Bundles

Several optical fibers are combined in fiber bundles. You determine the number of fibers to be bundled and the geometric dimensions of the ferrules.

ModeStrip

Our HP-ModeStrip connector was developed for fiber optic transmission of high optical powers: Cladding modes that are created by a suboptimal beam profile are removed while the generated heat is dissipated via a cooling element. Thus, the HP-ModeStrip protects both the fiber and connector from thermal destruction.

FiberKey® - Fiber Coupler

The FiberKey® allows collimated laser beams to be precisely coupled into an optical fiber. The coupler is simply flanged to the laser. It is then possible to optimize the beam position using adjusting screws.

The FiberKey® is available in three versions: for standard silica fibers, for coupling CO₂ and Er:YAG wavelengths into a hollow-core fiber, and as the FiberKey® P with a visible pilot beam that is coupled into the cladding of a hollow core to help adjust the CO₂ beam transmitted in the cavity.

Fiber Tips

Upon request, we provide the fiber ends with end caps or ball lenses. These so-called FiberTips change the beam characteristics. Cylindrical end caps reduce the power density of the beam, while the light is focused or collimated with spherical lenses.

Collimators

LASER COMPONENTS manufactures customized collimators with different housings and lens variants. Wavelength and focus length can thus be perfectly matched to the customer's application.

OPTICAL COATINGS

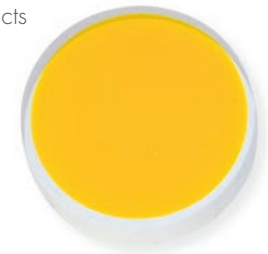
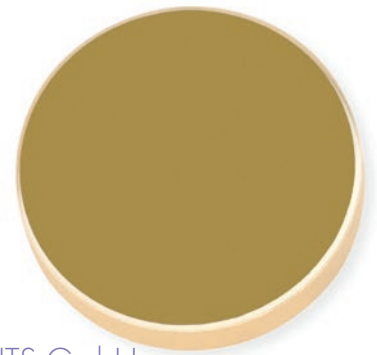
Manufacturer: LASER COMPONENTS GmbH
Production started: 1986



Coatings for traditional wavelengths on conventional substrates are often described as standard components; however, none of the products is run of the mill. We design individualized products

surprisingly inexpensively.

Some of the parameters to be selected freely include the following: substrate, wavelength, and transmission/reflection properties.



✉ Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!



OPTICAL COATINGS Production



We specialize in the production of individual laser optics. Depending on the specifications, we utilize different coating methods, such as PVD, IAD, and IBS. The size of the substrates can lie between 4mm and 390mm in diameter; of course, square substrates can also be processed.

The wavelength range extends from 248nm to 3 μ m. To guarantee the highest quality, corresponding measuring setups are used; for example, a spectrometer for reflection measurement and a damage threshold measuring station are used.

PVD Method

The physical vapor deposition (PVD) method is the classic method used in house. The coatings are characterized by high damage thresholds across the entire spectral range of production. Our PVD coaters with an electron beam evaporation source and corresponding substrate heating are particularly flexible; thus, products can be manufactured inexpensively even in smaller quantities upon customer request.

IAD Method

The ion-assisted deposition (IAD) method is used in low-drift coatings, in particular for laser optics used in wavelengths close to the water absorption bands. Even in complex coatings with several main wavelengths, this coater demonstrates its strengths. Through an integrated online monitoring process, the IAD coatings are deposited with high spectral accuracy and quality.

IBS Method

The ion beam sputtering (IBS) method works with a filament-free ion source and produces very dense and low-loss coatings. The integrated online measurement method and a zone target allow even the most complex coating systems that are characterized by particularly high edge steepness and reflection values well over 99.99%.



Video introducing
our production facilities.



Our Specialties

We manufacture mirrors, output couplers, beam splitters, dichroic coatings, polarizers, and antireflective coatings as standard components or according to customer specifications – all for applications with lasers that have the highest energy and power densities.

Beam Splitters

Beam splitters are necessary to split a laser beam into two parts. Polarization-independent components are required for the degree of separation to remain constant when the direction of polarization changes.

Thin-film Polarizers

Different polarizers are used to separate the direction of polarization. Are you familiar with 45° polarizers, adjustment-free polarizers, and broad-band polarizers? We will be happy to explain the differences and manufacture the appropriate component for your needs.

Mirrors

Mirrors are the highlight of our production range. They include the following: multiple-wavelength mirrors used in the reflection of more than one wavelength and dichroic mirrors used to combine or separate two or more wavelengths.

Gaussian Mirrors

To produce a particularly high quality laser beam with low divergence and high beam quality at high pulse energies, we manufacture Gaussian mirrors – as the only manufacturer in Germany!

OPTICAL SUBSTRATES



✉ Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!

Manufacturer: LASER COMPONENTS GmbH
Production started: 2008

We manufacture customer-specific plano substrates and spherical lenses in Germany – from small series to large series.



OPTICAL SUBSTRATES Production



In order for us to offer quick service, we manufacture laser optics substrates directly in Germany – from single items to small series. You determine the material used in your laser optics: Different fused silica glasses are recommended for high laser power, and the inexpensive N-BK7 is recommended for low power.

Grinding and Polishing – Take Advantage of our Many Options

We shape your optics using several grinding and polishing machines. The most modern CNC machines are used to shape spherical surfaces. A surface figure of $\lambda/10$ is usually achieved after polishing.

Highest Quality – The Finish with the “Rolls Royce” of the Industry

The quality of the substrates is measured after fine grinding and polishing using an interferometer from Zygo: The QED is a polishing machine of the highest quality that makes the smallest corrections to the surface figure.



Video introducing
our production facilities.



Manufacturing Options

Everything from One Source

All of our optical components are also available from one source. We manufacture the substrate and coatings in three to four weeks. If an order is time sensitive, we can significantly reduce our delivery times, provided that the required tools are available.

Materials

We use Suprasil 3002 and 3001 to ensure that the focus remains constant, even at high cw laser power levels. Infrasil 302 and 301 are tested and proven in applications near water absorption. For short UV wavelengths, however, we recommend selected fused silica. In addition to high-end glasses, we also have standard fused silica and BK7 available.

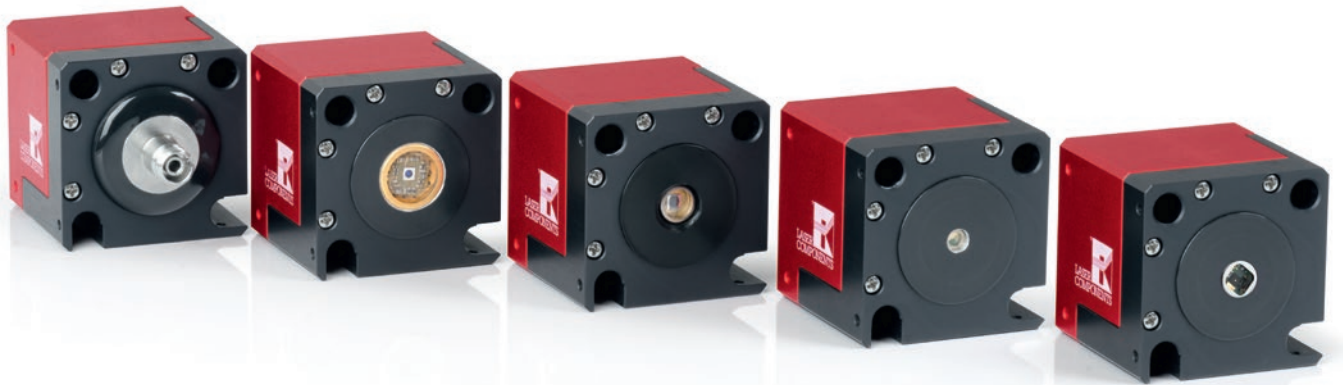
Plano Substrates

Flat is not always flat. We guarantee precise parallelism. Thus, exchanging one plane substrate with another in a system is possible without the need for readjustment.

Spherical Optics

We manufacture spherical lenses and curved mirror substrates. With these lenses and substrates, we lay the foundation for our coated laser optics that can withstand the highest levels of laser power. We have everything under our control – and the entire chain of production in house.

ELECTRONICS



Direct contact:

info@lasercomponents.com

Do you have questions, do you require a customized product, or do you need an offer? Contact our product engineers!

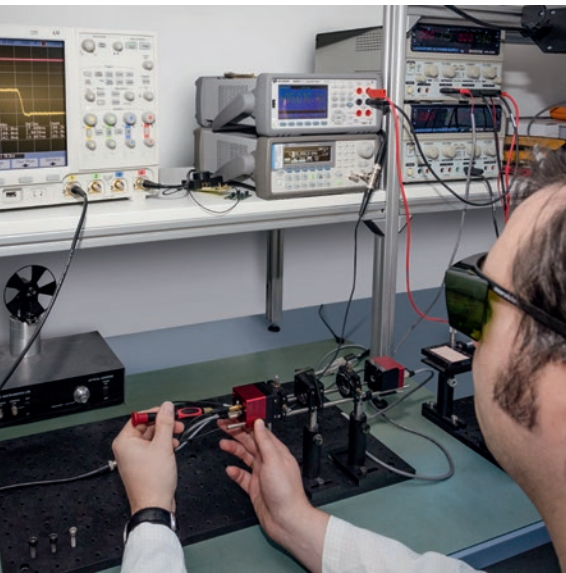
Manufacturer: LASER COMPONENTS GmbH
Production started: 2008

Stand-alone products, such as our high voltage modules and photodiode modules, are manufactured in the electronics department. This department works particularly close with our other R&D departments to create user-friendly products.



ELECTRONICS

Development and Production



In-house Product Developments

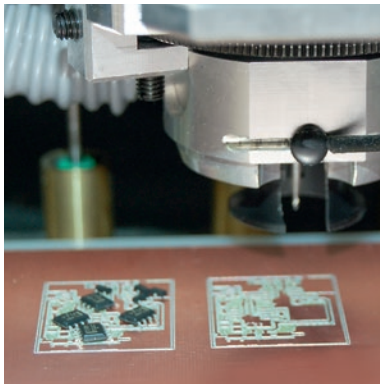
We pay close attention to the requests made by our customers. Many developments were made in accordance with concrete customer specifications; in fact, this has led to the development of different drivers for diodes.

Prototype Design

Thanks to extensive laboratory equipment, developments can be made very quickly. Prototypes can be built in a matter of days. With the help of software, our R&D team initially designs a printed circuit board to be manufactured using a computer-controlled circuit board milling machine followed by the manual assembly of the prototype.

Quality Assurance and Series Production

Each prototype is subject to comprehensive testing and measurements at our measurement stations. If it meets all the criteria, the prototype is approved for series production.



Individual Solutions

High Voltage Modules

These inexpensive block modules produce voltages of up to 1000V, required for the operation of photo-diodes, avalanche photodiodes and photomultipliers. Available with analog or digital control schemes using an inbuilt microcontroller.

CUBE

CUBE housings are designed for integration in optomechanical setups. Due to the simple controls, CUBEs are ideally suited for OEM setups.

They are available in different versions: The L-CUBE for example is equipped with a pulsed laser diode in which the pulse length and energy can be controlled on request, while the A-CUBE contains an avalanche photodiode. Thanks to the integrated temperature compensation circuit, it can be operated with constant gain even if the ambient temperature changes. Other versions are currently being developed.

CONTACT US

Worldwide Contact

Sven Schreiber, CSO

Sales Region: Worldwide

LASER COMPONENTS GmbH
Werner-von-Siemens-Str. 15
82140 Olching / Germany

s.schreiber@lasercomponents.com

Tel: +49 8142 2864-27

www.lasercomponents.com



Lukasz Abramek

Sales Region: Eastern Europe

LASER COMPONENTS GmbH
Werner-von-Siemens-Str. 15
82140 Olching / Germany

l.abramek@lasercomponents.com

Tel: +49 152 09 08 96 29

www.lasercomponents.com



Imprint

LASER COMPONENTS GmbH
Werner-von-Siemens-Str. 15
82140 Olching / Germany

General Managers: Patrick Paul

Design: design@mischeva.de Printer: flyeralarm, Würzburg

Notes on the trademark ownership:
Infrasil® and Suprasil® are registered trademarks of Heraeus Quarzglas GmbH & Co. KG.
FLEXPOINT®, FiberKey®, COUNT®, QuickSwitch® are registered EU trademarks of LASER COMPONENTS GmbH.

This brochure including all written and visual entries, is protected by copyright. With the exception of specific cases permitted by law, use of this material without the consent of LASER COMPONENTS GmbH is punishable by law. Despite thorough research, Laser Components GmbH will not accept responsibility for any inaccuracy of content.

Our Sales Offices

Matt Robinson, General Manager

LASER COMPONENTS USA, Inc.

116 South River Road, Building C
Bedford, NH 03110 / USA

info@laser-components.com

Tel: +1 603 821 7040

www.laser-components.com



Fredrik Wikfeldt, General Manager

LASER COMPONENTS Nordic AB

Skårs led 3
41263 Göteborg / Sweden

info@lasercomponents.se

Tel: +46 31 703 71 73

www.lasercomponents.se



Christian Merry, General Manager

LASER COMPONENTS S.A.S.

45 Bis Route des Gardes
92190 Meudon / France

info@lasercomponents.fr

Tel: +33 1 3959 5225

www.lasercomponents.fr



Chris Varney, Managing Director

LASER COMPONENTS (UK) Ltd.

Goldlay House 114 Parkway
Chelmsford Essex CM2 7PR / UK

info@lasercomponents.co.uk

Tel: +44 1245 491 499

www.lasercomponents.co.uk





LASER COMPONENTS GmbH

Wernervon-Siemens-Str. 15
82140 Olching / Germany
Tel: +49 8142 2864-0
Fax: +49 8142 2864-11
info@lasercomponents.com

LASER COMPONENTS USA, Inc.

116 South River Road, Building C
Bedford, NH 03110 / USA
Tel: +1 603 821 7040
Fax: +1 603 821 7041
info@laser-components.com

LASER COMPONENTS S.A.S.

45 Bis Route des Gardes
92190 Meudon / France
Tel: +33 1 39 59 52 25
Fax: +33 1 39 59 53 50
info@lasercomponents.fr

LASER COMPONENTS NORDIC AB

Skårs led 3
41263 Göteborg / Sweden
Tel: +46 31 703 71 73
info@lasercomponents.se

LASER COMPONENTS (UK) Ltd.

Goldlay House 114 Parkway
Chelmsford Essex CM2 7PR / UK
Tel: +44 1245 491 499
Fax: +44 1245 491 801
info@lasercomponents.co.uk

