

# Z-LASER

*Intelligent Solutions in Light*

## POSITIONING LASERS

- » Wavelengths 405nm - 685nm (red, green, blue)
- » Output power up to 80mW
- » Long line length
- » Highest precision
- » Focusable or with fixed focus
- » Robust housings

Wood  
Stone  
Textile  
Metal  
Tire  
Medical



**Z-LASER is your specialist for innovative laser applications in industry and handcraft.**

## Application Samples:

Tire building  
Patient positioning  
Saw guidance  
Drilling  
Pressing  
Paper cutting  
Glass cutting / drilling  
Textile cutting  
Stitching & Sewing  
Screen printing  
etc.

For 30 years, **Z-LASER** Optoelektronik GmbH has been developing and producing laser systems at the site of Freiburg i. Br. for positioning applications in various industries.

Here, the lasers serve as a visual guide to position the material in the manual and also semi-automatic manufacturing or handling processes. Our aim is to offer you the customized laser for your special application.

To do this, you can choose from various components:

- Design of the laser according to your space
- Projection mode tailored to your application
- Laser light color and power adapted to your environment

We have a highly motivated team of experts in the fields of construction, electronics and optics. The production works on the latest state of the art. Our purchase department prefers local suppliers who meet our high quality standards and operate close to the market. Our dedicated sales team gives expert advice to you on the selection of the appropriate laser.

30 years of industry experience are at your side!

## ZA



- Laser for battery power with line, point or cross projection
- 1.5V AA battery or 1.2V rechargeable battery (patented)
- Magnetic On/Off-Switch
- Dimensions: Ø20x108mm
- Output power / Wavelength: 1-5mW/635nm (red)

## ZD



- Universal mini laser module with line, point or cross projection
- Supply voltage: 3-6VDC, optional 24VDC
- Dimensions: Ø11x52mm
- Output power / Wavelength: 1-15mW/635nm or 5mW/650nm (red)

## ZT



- Laser with exchangeable optics: dot, line, line-point, small cross, large cross
- Supply voltage: 3-6VDC
- Adjustable light intensity
- Dimensions: Ø14x69 mm
- Output power / Wavelength: 1-5mW/635nm or 645nm (red)



## ZM12



- Compact laser with wide variety of laser diodes and optics
- Supply voltage: 5-30VDC with connector or 4-6VDC with integrated cable
- Simple, external hand focusing mechanism
- Dimensions: ØM12 thread with optic head 15mmx[50-80mm]
- Output power / Wavelength: 1-40mW/635nm (red)
- TTL modulation up to 100kHz optional

## ZM18



- Compact laser with wide variety of laser diodes and optics
- Supply voltage: 5-30VDC with connector or 4-6VDC with integrated cable
- Protection class IP67, water and dust resistant
- Simple, external hand focusing mechanism
- Dimensions: ØM18 thread with optic head 20mmx[76-138mm]
- Output power / Wavelength: 1-80mW/404-685nm (red, green, blue)
- Analogue and TTL modulation up to 1MHz optional

## ZPT-F



- Asymmetric line optics for maximum line length
- Laser with active temperature control (useable from -10 to +50°C)
- Highly failure resistant, integrated wide range power supply 90-265VAC
- Free focusable (tool adjustable)
- Dimensions: Ø40x280mm
- Output power / Wavelength: 1-80mW/635nm (red)

## ZR



- Asymmetric line optics for maximum line length
- Highly failure resistant, integrated wide range power supply 90-265VAC
- Dimensions: Ø40x201mm
- Output power / Wavelength: 1-40mW/635nm (red)

## ZRG-F



- Green laser with asymmetric line optics for maximum line length
- Highly failure resistant, integrated wide range power supply 90-265VAC
- Free focusable (tool adjustable)
- Optical head with cooling ribs for optimal heat dissipation
- Dimensions: Ø40x329mm
- Output power / Wavelength: 1-40mW/532nm (green)

## Special products



- **Z-MLLS** (Movable Line Laser System) for tire industry
- **Z5A Belt-Aligner** for alignment of drives and running wheels
- **ZKV** for circle projections e.g. production of cable drums

# Features

## Robust housing



With robust housing our lasers are suitable for industry and handcraft.

**Your benefit:**

*Shock-resistant, dust & water resistant, EMV tested!*

## Wavelength

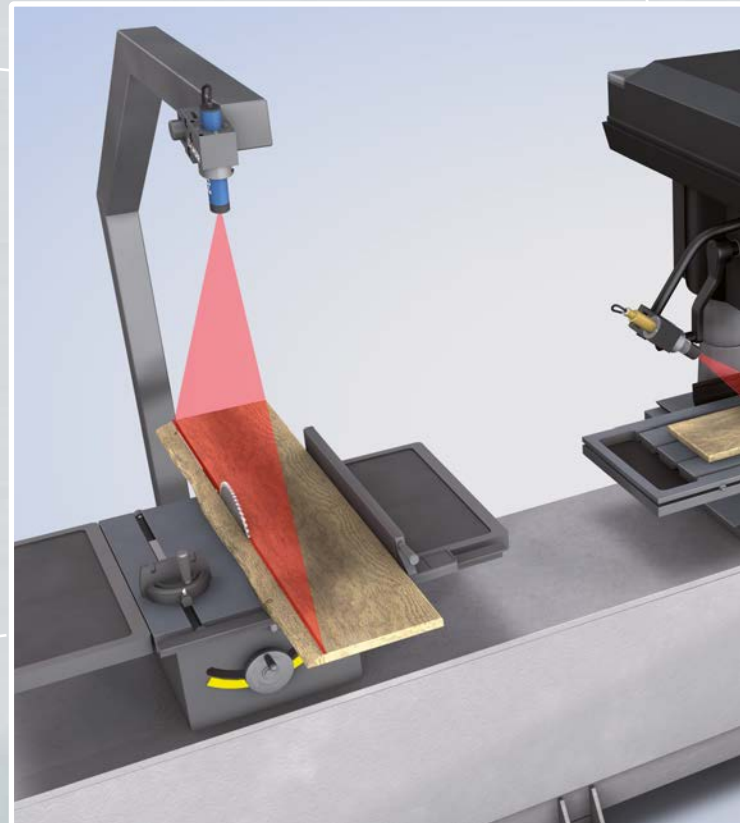


Our lasers operate in a range of 404nm (blue) to 685nm (red).

**Your benefit for best visibility:**

*Optimal colour for different material surfaces!*

## Power



## Available Optics:

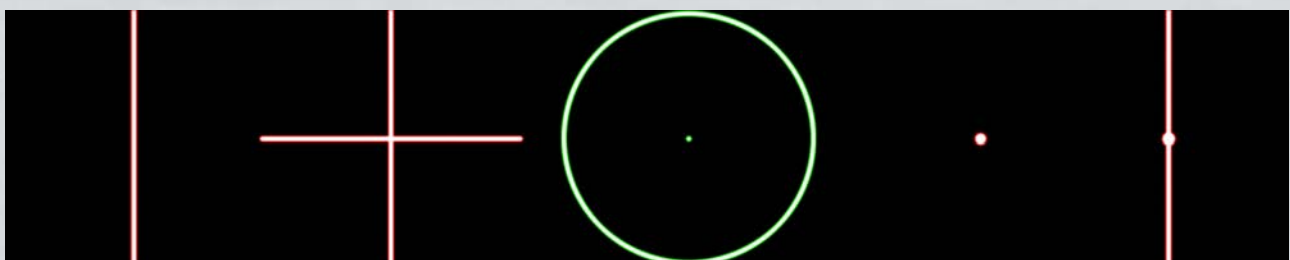
Line

Cross

Circle

Dot

Line-point

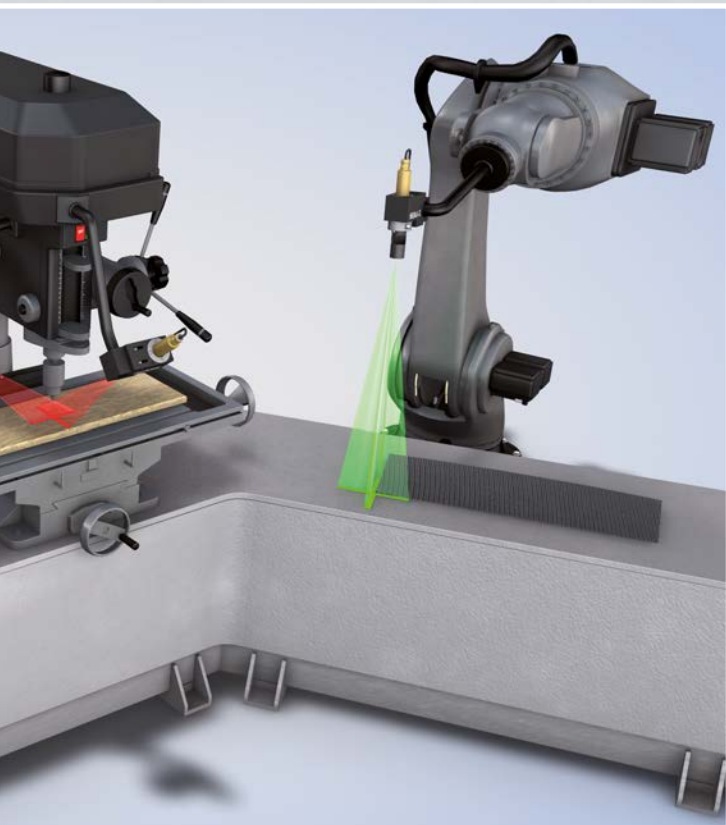


Other DOE optics on request

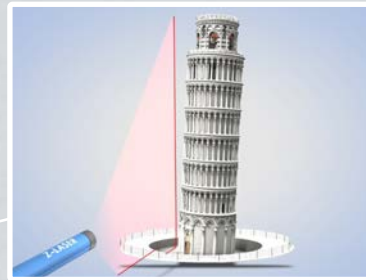
Output power from 1mW to 80mW.

**Your benefit:**

*Always the right power adjusted to your demand!*



**Line straightness**



Our lasers project long and straight lines.

**Your benefit:**

*Fast, easy and precise adjustment of material to save time and minimize waste!*

**Focusable**



With our positioning lasers, you have the ability to determine the precise focus manually at site.

**Your benefit:**

*Laser is flexibly adaptable to the working distance!*

**Accessories:**

**Mountings**



**Precision mountings**



**Power supplies & cables**





# Wood

Nearly 30 years ago, **Z-LASER** started producing lasers for the wood industry. Since then, positioning lasers have been mainly used in sawmills for precise and fast positioning of the logs before they are sawed. From this basic idea, a variety of applications have been developed:

If you to trim, edge or cut a plank – the red or green line of the **Z-LASER** shows the way. With our systems it is also possible to upgrade older existing machines like panel saws or multi blade saws without any problems.

## Advantages:

- Less waste = higher material yield
- Safety issue: red line means attention here is the cut!



# Stone

All variations of bridge saws have proven to be indispensable in the stone processing industry when it comes to cutting stone blocks or slabs. Gaining wide adoption is the use of red and green positioning lasers to simulate the cutting line in advance thus making the positioning process easier as well as more accurate. The lasers are mounted either in the bridge area or on the support and project a highly visible line onto the machine table.

## Advantages:

- Optimal material exploitation
- Higher frequency
- Cost reduction



# Metal

Laser projections are a practical tool to speed up workflows in the metal processing industry. They can be used for example for a precise and faster alignment of work pieces such as large metal plates. Additionally, laser projections can display different processes like cutting, sawing, pressing.

## Advantages:

- Reduction of setting times
- Optimal material exploitation
- Increase in work quality

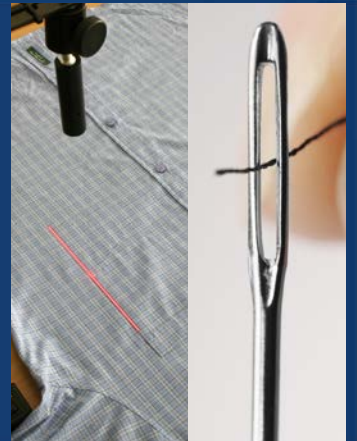


# Textile

Laser positioning is successfully used in sewing and embroidery applications, as well as in cutting and printing operations. They simplify work processes, accelerate the whole production process, improve product quality and replace classic alignment tools. It is important to know that a laser installation does not bring along a change in the production facilities, since it can be easily integrated into the existing work processes. Consequently including laser in this processes does not require changes in the machine settings or long-lasting training of the staff.

## Advantages:

- Reduction of the setting times
- Increase in work quality
- Cost reduction



# Tire

**Z-LASER** has supplied worldwide leading tire manufacturers for years with positioning lasers and accessories. Highest line straightness (which is confirmed via certificate) is required along with industrial products with the lowest possible laser class and precision brackets with which laser lines can be aligned quickly and accurately. In the tire industry, green lasers are preferred for best possible visibility on dark materials (such as black rubber) or in bright environments. In addition to the tire building machines, our products are used for various other applications in the tire industry. We are constantly developing new customised products for specific applications.

**NEW:** Z-MLLS (Movable Line Laser System)

## Advantages:

- Reduction of the setting times
- Quality control



# Medical

**Z-LASER** supplies laser systems to leading manufacturers of X-ray and MRT (Magnetic Resonance Tomography) machines. In these medical applications, line lasers and cross lasers are used to position patients before their X-RAY/MRT screening.

Our lasers are also used for radiotherapy: i.e. a laser cross projection will assist in visualizing the precise position of the high energy ray. Dot lasers are also used as a "guidance laser" for laser scalpel operations; they indicate the position of the laser scalpel's invisible high energy laser beam to the surgeon.

## Advantages:

- Precise patient positioning
- Optimal adaption of radiation dose
- Tissue-conserving surgery

