

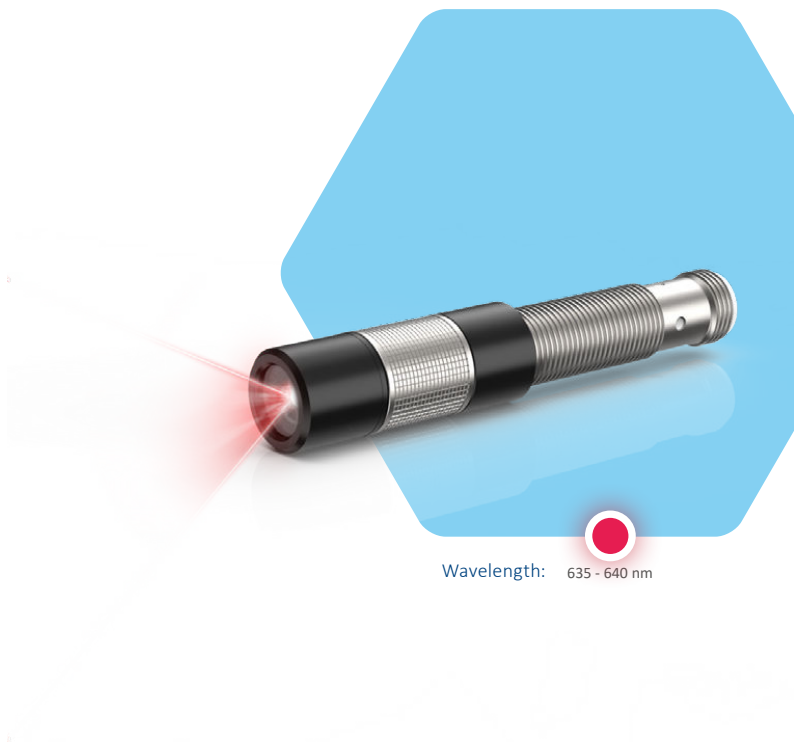
# ZM12B

## The perfect all-rounder

Whether you need an industrial laser for your positioning application or need a reliable module for your machine vision- thanks to the modular system, your laser can be configured to fit perfectly.

You have the option of power up to 30mW, manual focus or fixed focus and various optics. The laser is only suitable for continuous operation (CW mode).

The compact design (ø15mm at max. 85mm housing length) as well as the housing designed as M12 thread allow easy mounting and simple integration into existing machines or systems. All devices are IP67. An easy to operate focusing mechanism completes the ZM12B.



Easy installation



Output Power up to 30 mW



IP 67

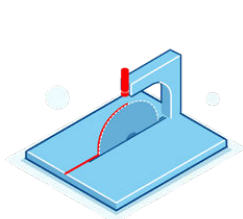


Different Optics

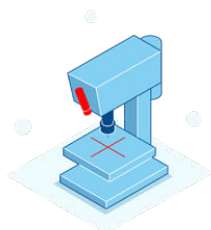
## Highlights

- Manually focusable
- Compact M12 threaded for simple and versatile mounting
- Optical output power up to 30 mW
- Wavelengths from 635 - 640 nm
- Industry Standard
- Protection class IP67

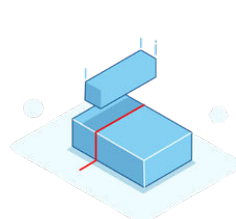
### Sample applications



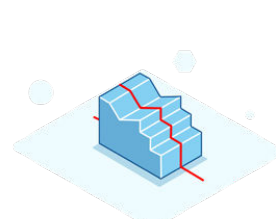
Miter Box Saw



Drilling Machines



Highly Accurate Positioning Tasks



3D-Measurement

### Order Code

Z??	M12	B	?	?	?
Power	Product family	Electronics	F-Focusable	Wavelength	Optics

## System specifications

Wavelength	nm	635-640
Wavelength tolerance	nm (typisch)	±10
Wavelength drift	nm / K (typisch)	0,25nm
Output power	mW	1-30
Electronics variants		B
Pointing stability	μrad / °C	<15
Long-term power stability	(24h)	±3 % over operating temperature range
Start-up time	ms.	<300
Laser operation mode		APC with current limiter

## Electrical specifications

Operating voltage		5 - 30 VDC
Operating current	(max. bei 25°C)	<400mA
Protection		Reverse polarity and transient protection / ESD, Overheating protection and LED fault indication
Electrical isolation		Potential-free housing
Connection		4-pin M12 plug
Power consumption		<2W

## Optical specifications

Fan angles <sup>(1)</sup>	Degrees	10°, 20°, 30°, 45°, 60°, 75° (homogeneous lines) 5°, 20°, 30°, 90° (Gaussian line profile)
Line straightness <sup>(2)</sup>	% (of line length)	<0,05
Line uniformity <sup>(3)</sup>	% (typical)	<±25%
Dot		Point elliptical
DOE		Multi line, crosses, grids, etc.
Focus range	mm	100 mm up to 10.000 mm

## Keynotes

<sup>(1)</sup> <i>Line length / fan angle</i>	at >13,5 % $I_{max}$
<sup>(2)</sup> <i>Line straightness</i>	Deviation from best fit line over the middle 80% of the line, for homogeneous lines
<sup>(3)</sup> <i>Line uniformity</i>	Maximum relative optical power variation over the middle 80% of the line, for homogeneous lines and fixed focus

## Electronics variants

	B
Available wavelength	635-640nm

## Environmental conditions

Operating temperature	°C / °F	-10 °C to +50 °C / 14 °F to +122 °F
Storage temperature	°C / °F	-10 °C to +70 °C / 14 °F to +158 °F
Humidity	%	<90 %, non-condensing
Dissipated heat		<1W

## Mechanical specifications

Weight	g/lbs	67 g / 0.15 lbs (fix focus)
Length	mm	85 mm
Diameter head Ø	mm	15 mm
Material		Aluminium/Brass
Protection class		IP67

**ZM12**



**M12 4-pin: A-Pinning Connector**

According to IEC 61076-2-101

X 1.1	5 - 30 VDC
X 1.2	n.c.
X 1.3	GND
X 1.4	n.c.