



ilumFIBER VISION

Machine Vision - fiber-coupled line laser

For machine vision applications, IMM Photonics now offers the ilumFIBER VISION fiber-coupled line laser.

This line laser with a uniform homogeneous beam profile was developed for special applications. It is offered primarily as a customer-specific solution. It is available with a variety of aperture angles, wavelengths, output power and line options. Due to the separation of the laser and the optics with a single-mode fiber, the laser can be used even at locations where environmental conditions are too harsh for the direct use of laser diodes. In many applications this also eliminates the need for elaborate cooling of the laser. With its compact and robust design, the ilumFIBER VISION is ideally suited for integration into existing measurement systems.

FEATURES

- Fiber coupled homogeneous line laser
- High beam quality ex fiber (TEM00-Mode)
- Passive cooled, robust and compact single-mode Pigtail
- Compact design for integration in larger systems
- Flexible: Separation between laser source and optics
- Collimated / Focused
- Application: harsh environments, measurement systems
- Custom: wavelength, aperture angle, output power and modulation



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SPECIFICATIONS

General	Value	Note
Wavelength	520 nm, 660 nm	
Output power (max.)	35 mW (520 nm) / 60mW (660 nm)	
Power stability	< 6 % (typ.)	Evaluated for the Laser Line Collimator over a range of -10 °C to +80 °C
Line options	Collimated / Focused	On request
Laser safety class	1 - 3B	Depending on laser diode
Line length (1 m distance)	1.3 m	Others on request
Line width (collimated / focused @0.5 m, @1 m, @1.5 m)	1-2 mm / 0.45 mm, 0.75 mm, 1 mm	
System storage temperature range	- 20 °C to +70 °C	

Electronic	Value	Note
Supply voltage	5 V / 9 V	
Operating current	240 mA max.	
Galvanically isolated		On request
Modulation	analog	

Fiber	Value	Note
Fiber connection	Permanently connected	
Fiber	SMF with OD = 3.4 mm stainless steel tubing	Others on request
Fiber length	> 1 m	Others on request
Fiber operating temperature range	-40 °C to +85 °C	Others on request

Singlemode Pigtail	Value	Note
Laser source operating temperature range	-10 °C to + 50 °C	
Housing dimensions	25.5 mm x 25.5 mm x 35 mm	
Distance mounting holes	12 mm	2 x M3 screw
Distance mounting threads	10 mm	2 x M2.5 thread

Laser line collimator	Value	Note
Collimator length	31.5 mm	
Collimator diameter	16 mm	
Aperture angle	60 °	Others on request
Collimator operating temperature range	-10 °C to +80 °C	