ROITHNER LASERTECHNIK GmbH
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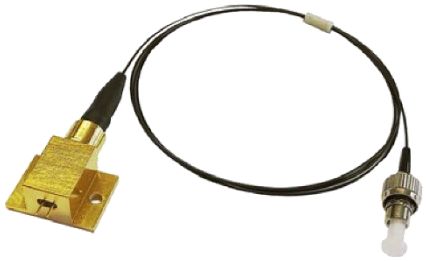
SPL465-2W-105M

- **Blue Fiber-Coupled Laser Diode**
- **465 nm, 2 W**
- **105 µm Multimode Fiber**



Description

SPL465-2W-105M is a blue fiber-coupled laser diode, typically emitting at 465 nm with an output power of 2 W. It comes in a 2-pin package with 105 µm multimode fiber and FC/PC connector.

Additional options like built-in photodiode, built-in TEC cooling, or alternative fiber connector are available on request.

Maximum Rating (T_{CASE} = 25°C)

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Current	I_R		80	mA
Operating Temperature	T_{OPR}	0	+ 60	°C
Storage Temperature	T_{STG}	- 40	+ 85	°C
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	°C

Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter		Symbol	Values			Unit
			Min.	Typ.	Max.	
Peak Wavelength		λ_P	455	465	475	nm
Output Power		P_O		2		W
Spectral Width (FWHM)		$\Delta\lambda$		3.0		nm
Temperature Coefficient						nm/°C
Operating Voltage		V_F		4.5	5.5	V
Threshold Current		I_{th}		0.4	0.6	A
Operating Current		I_F		2.5	3.0	A
Fiber	Type		Multimode			
	Core		105			µm
	Numerical Aperture		0.22			
	Connector *		FC/PC			
	Length			80		cm

** optional: SMA905*

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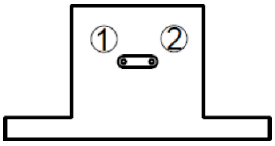
Electrical Connection

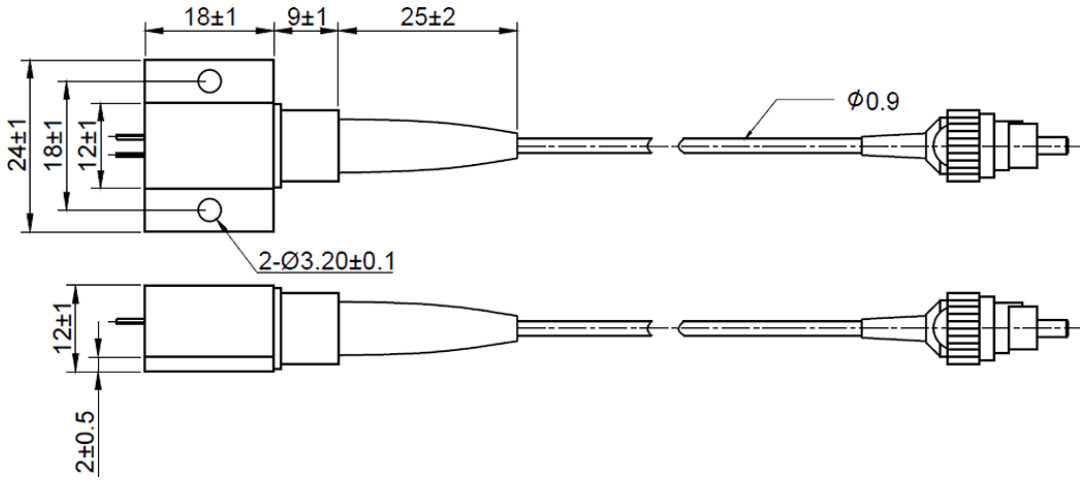
Pin Configuration*	
PIN #	**Function**
1	LD Cathode
2	LD Anode

Side View



* subject to change

Outline Dimension



All dimensions in mm

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Precautions

Safety

Caution: Laser light emitted from any laser diode may be harmful to the human eye. Avoid looking directly into the laser diode's aperture when the diode is in operation.

Note: The use of optical lenses with this laser diode will increase eye hazard

ESD Caution

Always do handle laser diodes with extreme care to **prevent electrostatic discharge**, the primary cause of unexpected diode failure. To prevent ESD related failures we strongly advise to always **wearing wrist straps**, and **grounding all applicable work surfaces**, when handling laser diodes

Operating Considerations

We strongly advise to only operate this laser diode with a current source. The current of a laser diode is an exponential function of the voltage across it. **Usage of current regulated drive circuits is mandatory**.
Laser diodes may be damaged by excessive drive currents or switching transients

It is advised, to operate the laser diode at the lowest temperature possible, and to never exceed maximum specifications as outlined in the datasheet. Device degradation will accelerate with increased temperature. **Proper heat sinking will greatly enhance stability and life-time of the laser diode.**