ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44 OFFICE@ROITHNER-LASER.COM

SPM650-1W-105M-P2

- **Red Pigtailed Laser Diode**
- **658 nm, 1.0 W**
- **105 µm Multi Mode Fiber**
- **FC/PC Connector**
- **2-Pin Heat Load Package**

RoHS COMPLIANT Pb-Free

Description

SPM650-1W-105M-P2 is a red pigtailed laser diode, typically emitting at 658 nm with an output power of 1.0 W. It comes in a 2-pin heat load package, and features a **105 µm multi-mode fiber** with FC/PC connector. Different fibers and connectors as well as built-in PD and TEC are optionally available.

Maximum Ratings*

Parameter	Symbol	Values Min.	Values Max.	Unit
Reverse Current	I_R		80	mA
Operating Temperature	T_{OPR}	- 10	+ 40	°C
Storage Temperature	T_{STG}	- 40	+ 85	°C
Soldering Temperature ($t_{max.}$ 3s)	T_{SOL}		+ 260	°C

***** Operating close to or exceeding these parameters may damage the device

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

Parameter		Symbol	Values Min.	Values Typ.	Values Max.	Unit
Peak Wavelength		λ_P	650	658	665	nm
Spectral Width (FWHM)		$\Delta\lambda$		2.0		nm
Temperature Coefficient		η		0.25		nm/°C
Output Power		P_O		1.0		W
Operating Voltage		U_F		2.4	2.8	V
Threshold Current		I_{th}		0.4	0.6	A
Operating Current		I_O		1.4	1.6	A
Fiber Spec.	Type		Multi-mode			
	Core diameter		105*			µm
	Numerical Aperture [N.A.]		0.22			
	Connector		FC/PC*			
	Length			80*		cm
Built-in Photodiode			optional			
Built-in TEC			optional			

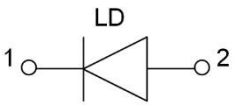
***** FC/APC, SC, SMA905 con., 50µm, 200µm, 400 µm core diameter, available on request
****** Length of fiber customizable

ROITHNER LASERTECHNIK GmbH
WIEDNER HAUPTSTRASSE 76 1040 VIENNA AUSTRIA
TEL. +43 1 586 52 43 -0, FAX. -44 OFFICE@ROITHNER-LASER.COM

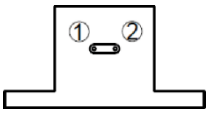
Electrical Connection

Pin Configuration*

Pin #	Function
Pin 1	LD cathode
Pin 2	LD anode

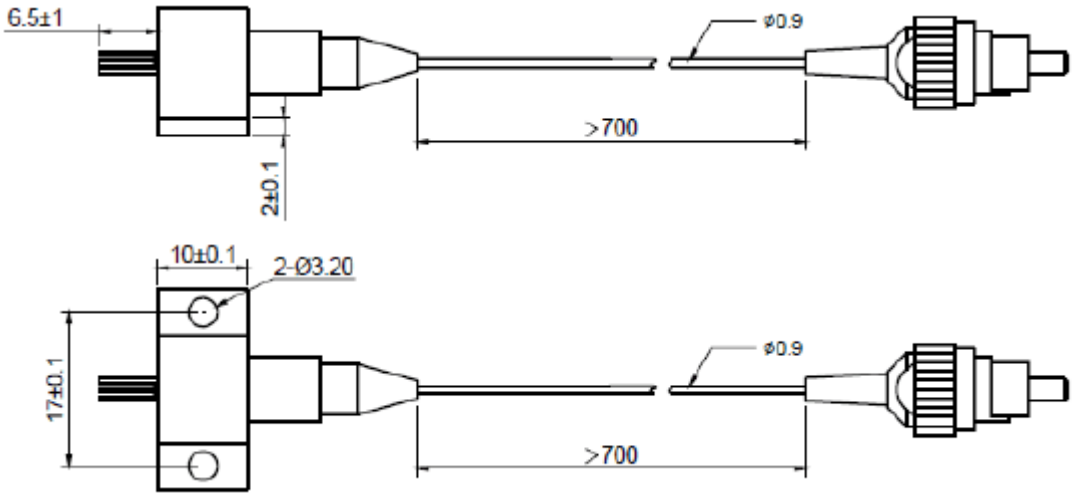


PIN Bottom View



* subject to change

Outline Dimension



All dimensions in mm

Precautions

Safety

Laser light emitted from any laser diode may be harmful to the human eye. **Avoid looking directly into the laser diode's aperture.** The use of optical lenses will increase eye hazard

ESD Caution

Always do handle laser diodes with care to **prevent electrostatic discharge**. We advise to **wearing wrist straps, and grounding all applicable work surfaces**, when handling laser diodes

Operating Considerations

Usage of current regulated drive circuits is mandatory We advise to operate this laser diode with a current source and heat sink, and to never exceed the maximum specifications as outlined in this datasheet.