



SPM670-50-PM-T8P

- Red Pigtailed Laser Diode
- 670 nm, 50 mW
- 4 μm PM Fiber, FC/APC con.
- Monitor Photodiode
- Built-in TEC
- 8-pin HHL Package



Description

SPM670-50-PM-T8P is a red pigtailed laser diode, typically emitting at 670 nm with an output power of 50 mW. It comes in an 8-pin HHL package with integrated **monitor PD**, **TEC**, and **thermistor**, and **4 μm polarization maintaining fiber** with FC/APC connector.

Maximum Rating

Parameter	Symbol	Values		Unit
		Min.	Max.	
Reverse Voltage	V_R		2.0	V
Operating Temperature	T_{OPR}	10	+ 30	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	- 40	+ 85	$^{\circ}\text{C}$
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	$^{\circ}\text{C}$

Electro-Optical Characteristics ($T_{CASE} = 25^{\circ}\text{C}$)

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	660	670	680	nm
Spectral Width	λ_{Δ}		2.0		nm
Output Power	P_O		50		mW
Operating Voltage	U_F		2.8	3.5	V
Threshold Current	I_{th}		55	80	mA
Operating Current	I_O		210	230	mA
TEC Voltage	$U_{TEC MAX}$			4.0	V
TEC Current	$I_{TEC MAX}$			1.3	A
Thermistor	R_{TH}		10K		Ω
Fiber Spec.	Type	Polarization Maintaining			
	Polarization Ext. Ratio	13	15		
	Core diameter		4		μm
	N.A.		0.12		
	Connector		FC/APC		
	Length		80		cm

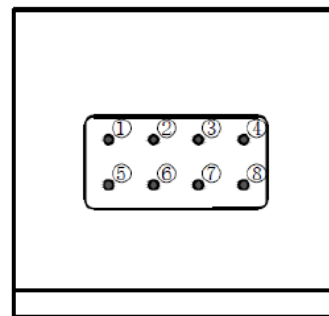




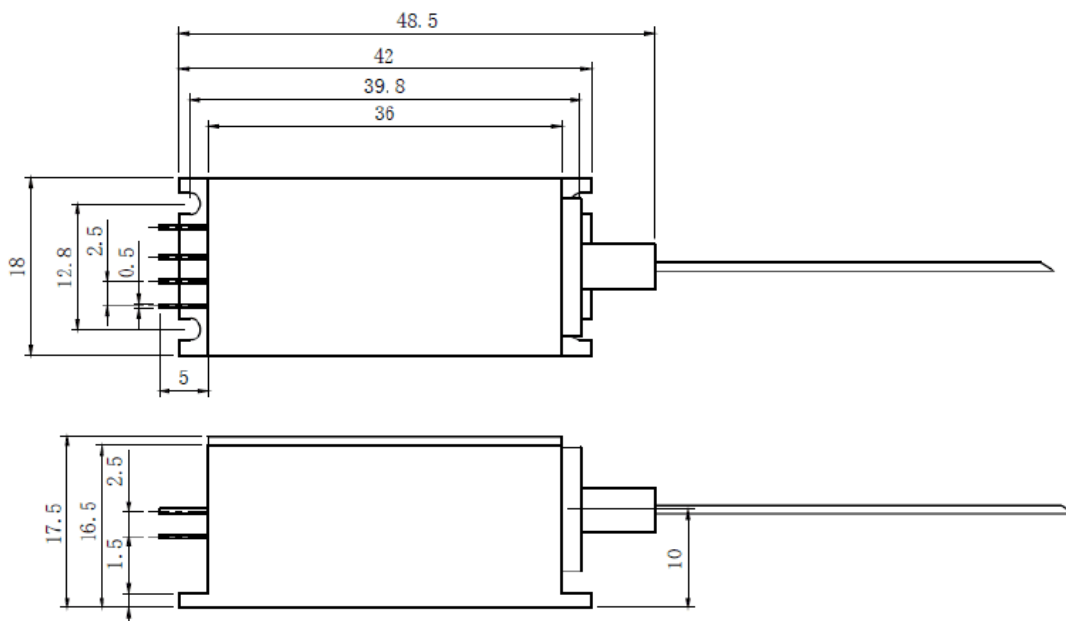
Electrical Connection

Pin #	Function*	Pin #	Function*
Pin 1	RT	Pin 5	PD anode
Pin 2	LD cathode	Pin 6	PD cathode
Pin 3	LD anode	Pin 7	TEC -
Pin 4	RT	Pin 8	TEC +

* 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.

