



## SPM670-50-PM-T8P

- Red Pigtailed Laser Diode
- 670 nm, 50 mW
- 4  $\mu\text{m}$  PM Fiber, FC/APC con.
- 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 TEC and thermistor**, and **4  $\mu\text{m}$  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	$\lambda_P$	660	670	680	nm
Spectral Width	$\lambda_{\Delta}$		2.0		nm
Output Power	$P_O$		50		mW
Operating Voltage	$V_F$		2.8	3.5	V
Threshold Current	$I_{th}$		55	80	mA
Operating Current	$I_O$		210	230	mA
TEC Voltage	$V_{TEC MAX}$			4.0	V
TEC Current	$I_{TEC MAX}$			1.3	A
Thermistor	$R_{TH}$		10K		$\Omega$
Fiber Spec.	Type	Polarization Maintaining			
	Polarization Ext. Ratio	13	15		
	Core diameter		4		$\mu\text{m}$
	N.A.		0.12		
	Connector		FC/APC		
	Length		80		cm

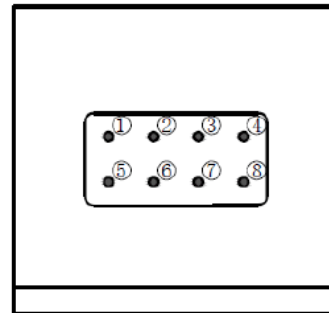




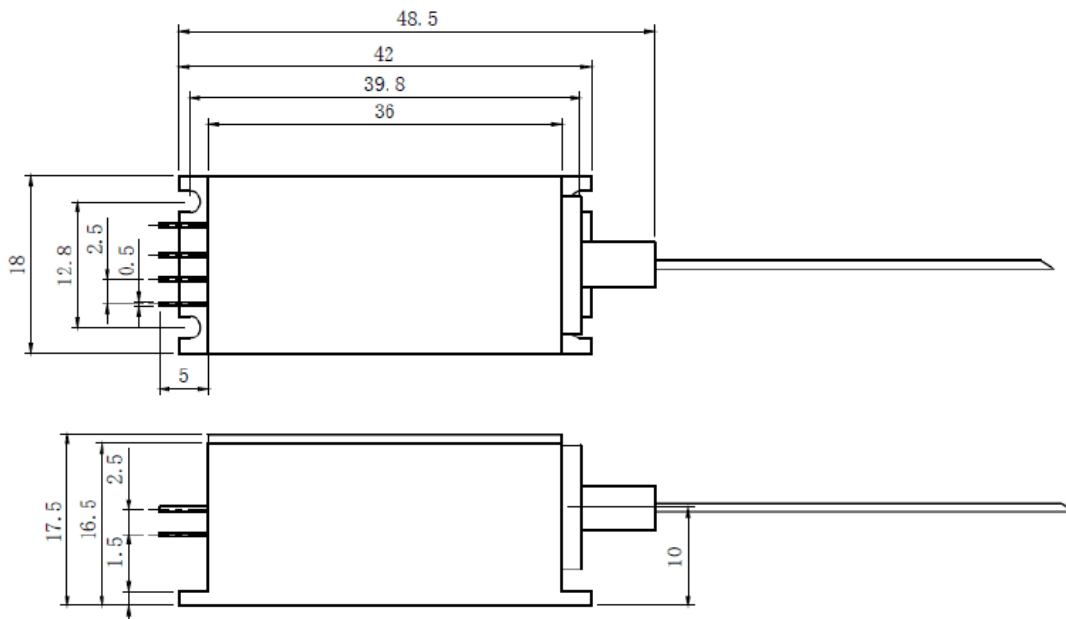
## Electrical Connection

Pin #	Function*	Pin #	Function*
Pin 1	RT	Pin 5	NC
Pin 2	LD cathode	Pin 6	NC
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.

