



CHIP-980-P52

- Infrared LD bare chip die
- 980 nm, 50 mW
- Gold plated electrodes
- p-side up



Description

CHIP-980-P52 is an infrared Fabry Perot single mode laser diode bare chip, typically emitting at 976 nm, with an optical output power of 50 mW. It is delivered on tape á 100 pcs (MOQ) or 1000 pcs, with the P-side facing up. **CHIP-980-P52** is primarily utilized as light source in medical lasers, 3D sensing applications, and night vision equipment.

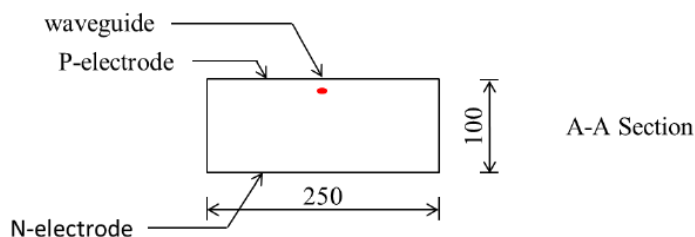
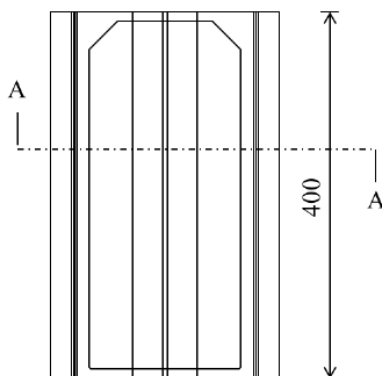
Electro-Optical Characteristics (T_{CASE} = 25°C)

Parameter	Symbol	Values			Unit
		Min.	Typ.	Max.	
Peak Wavelength	λ_P	966	976	985	nm
Optical Output Power*	P_O		50		mW
Operating Voltage	V_F		1.55	2.0	V
Threshold Current	I_{th}		12	20	mA
Operating Current	I_O	60	70	90	
Slope Efficiency (P _O =12.5-37.5mW)	η	0.64	0.8		W/A
Beam Divergence (FWHM)	parallel		9		deg.
	perpendicular		35		deg.

* measuring conditions: pulse width: 5 μ s, duty cycle: 1 %



Outline Dimensions



All dimensions in μ m



Precautions

Quality Assurance

After any processing of the laser chip into TO-Can by the customer, the performance, yield and reliability of the finished product are dictated by customers own handling, assembly, and testing procedures. The performance will further be affected by environmental conditions and any physical or chemical stress the chips might be exposed too. Hence the characteristics and reliability of the finished product cannot be guaranteed, and remains the sole responsibility of the customer.

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, it is strongly advised to always **wearing wrist straps**, and **grounding all applicable work surfaces**, when handling laser diodes

Operating Considerations

We strongly advised 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 lifetime of the laser diode**