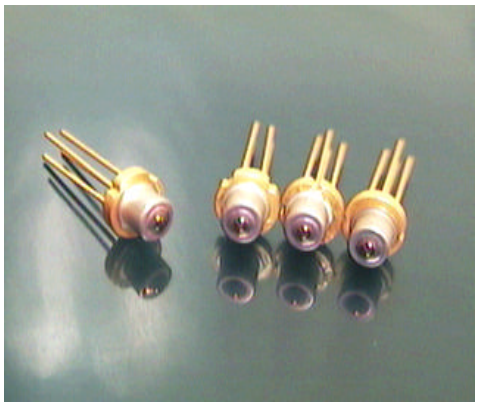
1310 nm LASER DIODE

Features

- 1310 nm typical emission wavelength
- High temperature operation no TEC required
- 5 mW CW operation at wide temp. range (-40~+80°C)
- Low threshold current ,low operating current
- PIN photodiode for monitoring laser output
- High reliability, long operation life and advanced packaging technology
  - --- Multiple Quantum Well active layer
  - --- Hermetically sealed active component
  - --- 5.6 mm packaging with a ball lens cap



Applications

- Optical communication system
  - --- Optical data links
  - --- Optical LANs
  - --- Subscriber loops

Handling and Safety Precautions

Anti-static protection, such as ionized air blowers or grounded wrist straps with a 1 mega series resistor, should be used at all times when handling laser diodes. In addition, soldering irons should be well grounded.

Overheating caused by soldering of the leads of a laser diode must be prevented. Recommend soldering iron temperature and maximum exposure times are below 260°C and 10 seconds.

Description

The MCE-3E5B-001 is a low cost and high performance 1310 nm EEL (Edge Emitting Laser) and built-in InGaAs/InP PIN photodiode for optical output monitoring. This product is designed for short and medium distance optical fiber communication.

The MCE-3E5B-001 is compatible with industry standard wave or hand solder processes and eye safety .

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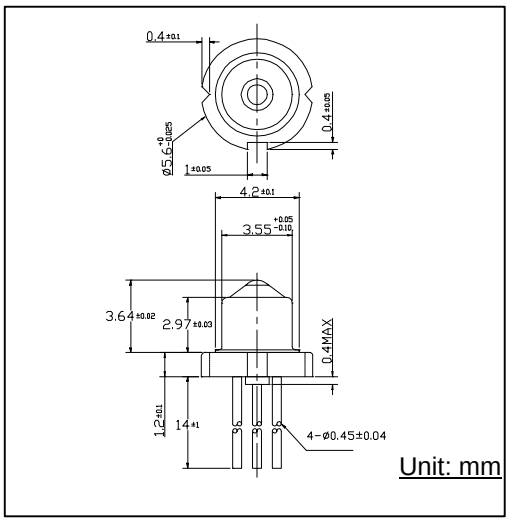
- **Absolute Maximum Ratings (Tc = 25 °C)**

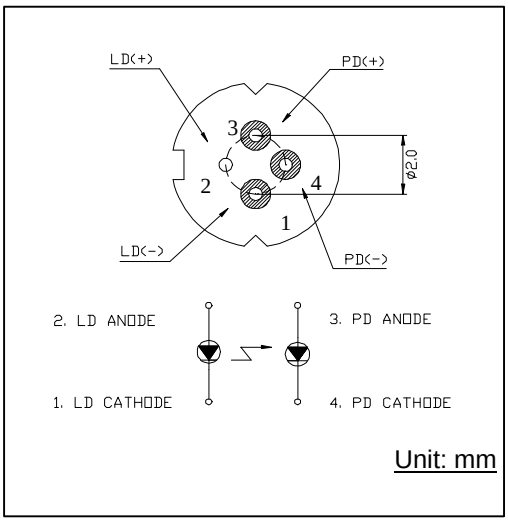
Parameter	Symbol	Rated Value	Unit
Optical output power (CW)	Po	10	mW
LD reverse voltage	Vr_L	2	V
PD reverse voltage	Vr_P	10	V
PD Forward current	If_P	1	mA
Operating case temperature	Top	- 40 to +85	°C
Storage temperature	T_{STG}	- 40 to +85	°C

- **Optical & Electrical Characteristics (Tc = 25 °C)**

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Optical output power	Po	Kink free,CW	5	¾	¾	mW
Threshold current	Ith	Po=5mW,CW	¾	10	20	mA
Operating voltage	Vop	Po=5mW,CW	¾	1.2	1.7	V
Lasing Wavelength	l p	Po=5mW,CW	1290	1310	1330	nm
Spectral Width (RMS)	Dl	Po=5mW,CW	¾	2	5	nm
Beam divergence	q^	Po=5mW,CW,FWHM	¾	15	¾	deg.
	q//	Po=5mW,CW,FWHM	¾	8	¾	deg.
Rise /Fall time	tr/tf	Po=5mW,CW,$I_{bias}=I_{th,}$ 20~80 %	¾	¾	0.5/0.5	ns
Slope efficiency	h	Po=5mW,CW	0.2	0.3	¾	mW/mA
PD Monitor current	Im	Po=5mW, CW	100	¾	¾	ì A
PD Dark Current	ID	Vr_P =5V	¾	¾	0.1	ì A
PD Capacitance	Ct	Vr_P=5V,f=1 MHz	¾	3	15	pF



Package Dimensions



Pin Connections (Bottom View)

NOTE: Specifications are subjected to change without notice.

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