

850nm VCSEL 1.25G Laser Diode With ST Receptacle

Data Sheet

OLD2304-M1-TRE

Features

- Uncooled
- Type B laser
- Low threshold current
- Power Output: 0.5 mW
- 850nm VCSEL laser diode
- High speed monitor PIN photodiode
- Packaged in ST Receptacle
- Operating Temperature: 0 - +70° C

Applications

- Digital Signal Transmission
- Telecommunications (Local loop, interoffice and intraoffice)
- Data Communications
- SONET OC-3, OC-12, OC-24/SDH STM-1, STM-4, STM-8

Description

The OLD2304-M1-TRE is a hermetically sealed VCSEL laser diode module in a small receptacle type package, including a high speed PIN monitor photodiode and packaged in ST receptacle.

The laser diode is designed for use in data communications systems and telecommunications systems over multimode fiber, and can operate in temperatures of 0° C to +70° C. The laser diode module transmits emission power to the monitor photodiode in the rear, which ensures highly stable emission at a wavelength of 850 nm.

Safety

Radiation emitted by laser diode devices can be dangerous to the eyes. Avoid direct or scattered radiation exposure to the eyes or skin. Device contains gallium arsenide (GaAs) which can be hazardous to your health. Please embrace all customary precautions and discretion while handling this device. Observe governmental laws and regulations when discarding this device.

Performance Specifications

Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause damage to the optical device. Operations of the optical device are suggested to remain within the recommended operating conditions. Exposure to the absolute maximum ratings for extended periods can adversely affect device reliability.

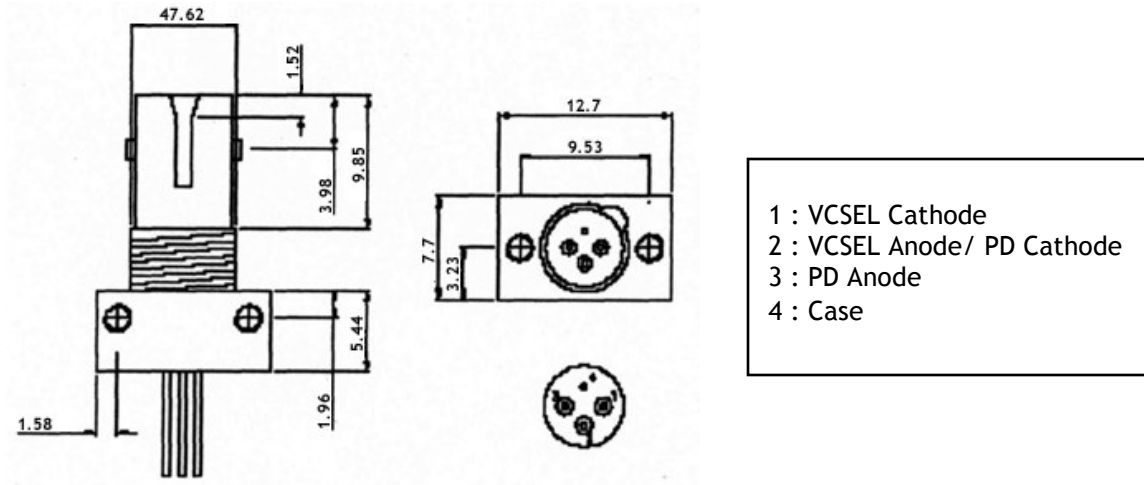
Parameter	Symbol	Value	Unit
Storage Temperature	Tstg	-40 to +85	°C
Operating Case Temperature	Top	0 to +70	°C
Peak Optical Output Power	Po	5	mW
Forward Current (LD)	I _{FLD}	20	mA
Reverse Voltage (LD)	V _{RLD}	5	V
Soldering Temperature	Stemp	260	°C
Soldering Time	Stime	10	sec

Electrical and Optical Characteristics (T_c=25°C unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Threshold Current	I _{th}		-	2	3.5	mA
Slope Efficiency	η	I _f =6mA	0.15	-	0.6	mW/mA
Central Wavelength	λ _c	CW, I _f =6mA	830	850	860	nm
Spectral Width, RMS	Δλ	CW, I _f =6mA	-	-	0.85	nm
Relative Intensity Noise	RIN		-	-	-122	dB/Hz
Rise Time/ Fall Time	T _r /T _f	I _b =I _{th} , 20%-80%	-	150/200	-	ps
Forward Voltage	V _F	I _f =6mA	1.7	1.9	2.2	V
Breakdown Voltage	V _{BD}	I _R =10μA	5	14	-	V
Series Resistance	R _S	I _f =6mA	30	45	65	Ohm
Monitor Current	I _M		-	50	-	μA
Fiber Output Power	P _f	CW, I _f ≤ 35mA	0.2	-	-	mW

Package Outline Diagram

Dimensions for the device package are given in millimeters.



Additional Information

Contact

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