

## 850 nm VCSEL 2.5G Laser Diode With ST Receptacle

Data Sheet

OLD2404-C1-TRE

### Features

- Uncooled
- Type C laser
- Low threshold current
- Power Output: 0.5 mW
- Data Rate: 2.5 Gb/s
- 850nm VCSEL laser diode
- 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-48/SDH STM-1, STM-4, STM-16

### Description

The OLD2404-C1-TRE is a hermetically sealed VCSEL laser diode module in a small ST receptacle package.

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 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.

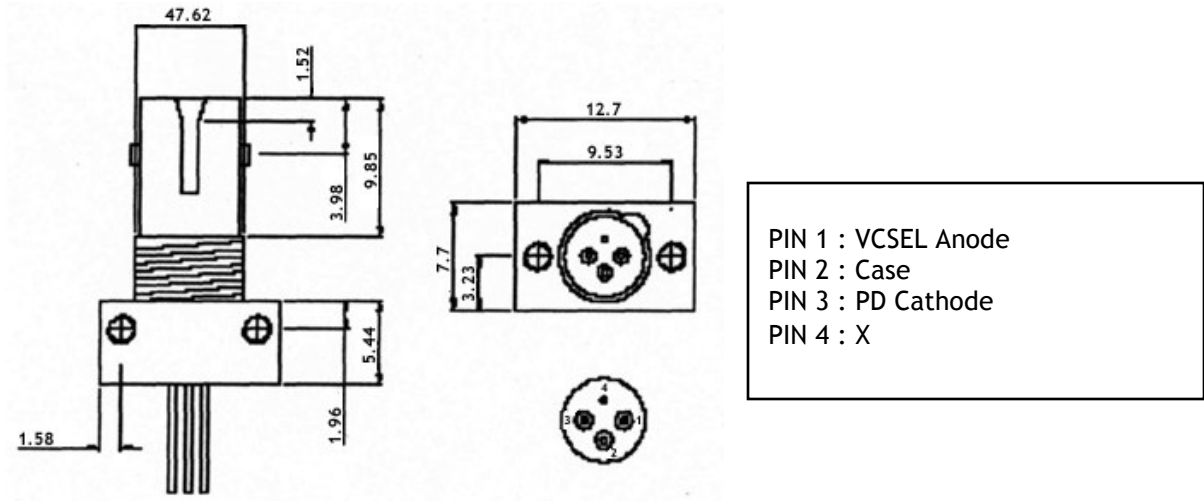
Parameter	Symbol	Value	Unit
Storage Temperature	Tstg	-40 to +85	°C
Operating Case Temperature	Top	0 to +70	°C
Peak Optical Output Power	Po	5	mW
Forward Current (LD)	I <sub>FLD</sub>	15	mA
Reverse Voltage (LD)	V <sub>RLD</sub>	5	V
Soldering Temperature	Stemp	260	°C
Soldering Time	Stime	10	sec

**Electrical and Optical Characteristics (T<sub>c</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Threshold Current	I <sub>th</sub>		-	1.8	2.5	mA
Slope Efficiency	H	I <sub>f</sub> =6mA	0.08	-	0.1	mW/mA
Central Wavelength	λ <sub>c</sub>	CW, I <sub>f</sub> =6mA	830	850	860	nm
Spectral Width, RMS	Δλ	CW, I <sub>f</sub> =6mA	-	-	0.85	nm
Relative Intensity Noise	RIN		-	-	-122	dB/Hz
Bandwidth	BW	BW (-3dBm, I <sub>f</sub> =6mA)	3	-	-	G
Forward Voltage	V <sub>F</sub>	I <sub>f</sub> =6mA	-	1.9	2.2	V
Series Resistance	R <sub>S</sub>	I <sub>f</sub> =6mA	25	40	50	Ohm

### Package Outline Diagram

Dimensions for the device package are given in millimeters.



### Additional Information

#### Contact

For additional information, product specifications, or information about Optocom:

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