TST-M85A426-2H

1.25Gbps 850nm VCSEL in ST Metal Receptacle with Monitor PD

Data Sheet

Description

The Lasermate TST-M85A426-2H is an 850nm Vertical Cavity Surface Emitting Laser (VCSEL) housed in a metal ST-type receptacle. This high-power VCSEL delivers output power greater than 1mW at 6mA operating current and is pre-aligned for multi-mode fiber communication. It includes an integrated monitoring photodiode and supports data rates from DC to 1.25Gbps.

Features

- Industry standard metal ST-type connector
- Pre-aligned for multi-mode fiber communication
- Integrated monitoring photodiode (PD)
- Data rate operation from DC to 1.25Gbps
- High output power: >1mW at 6mA

Applications

- 1.25Gbps fiber optic communication
- Multi-mode fiber systems requiring higher output power
- Industrial and telecom data links

Specifications

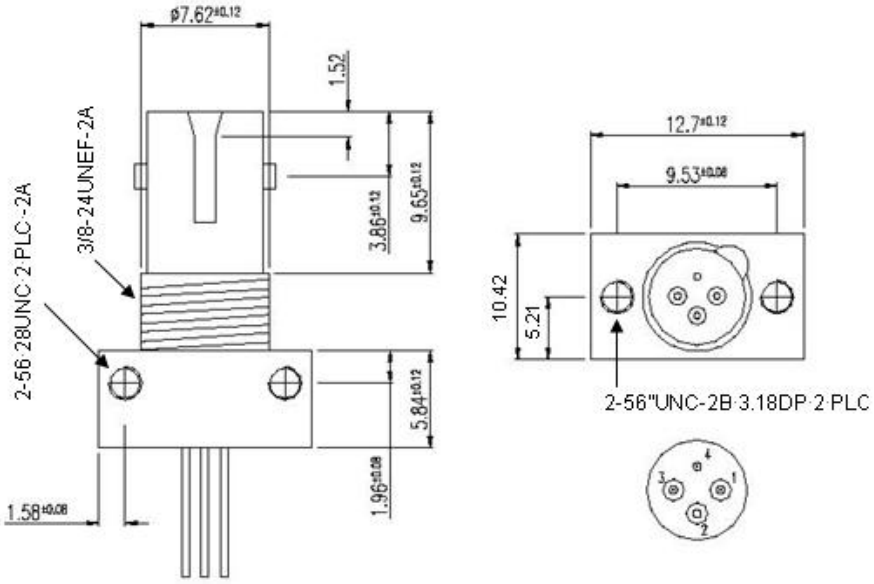
Absolute Maximum Ratings

Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	85	°C	
Operating Temperature	0	70	°C	
Lead Solder Temperature		260	°C	10 seconds
Continuous Forward Current		20	mA	
Continuous Reverse Voltage		5	V	

Electro-Optical Characteristics

Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I_{th}		2	3.5	mA	
Wavelength	λ_P	830	850	860	nm	I_F=6 mA
Fiber Coupled Power	P_O	1	1.5		mW	I_F=6 mA
Forward Voltage	V_F	1.6	1.8	2.5	V	I_F=6 mA
Breakdown Voltage	V_{BD}	5	14		V	I_R=10 uA
Series Resistance	R_S	35	45	65	Ω	I_F =6 mA
Rise Time/Fall Time	Tr			0.15	ns	I_b = I_{th}, 20%~80%
Spectral Width (RMS)	$\Delta\lambda$			0.85	nm	I_F =6 mA
Relative Intensity Noise	RIN			-122	dB/Hz	I_F =6 mA, f=1GHz
Monitor Current	I_M		50		uA	

Outline Dimensions (unit: mm)



Pin Configuration

Pin Number	Function
1	VCSEL Cathode
2	VCSEL Anode/PD Cathode
3	PD Anode
4	Case

Additional Notes

- The VCSEL is a class IIIb laser in the safety standard ANSI Z136.1 and should be treated as a potential eye hazard.
- Specifications are subject to change without notice.