



## TST-M85A426-2

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



#### Description

The Lasermate TST-M85A426-2 is an 850nm wavelength, Vertical Cavity Surface Emitting Laser (VCSEL) ST receptacle designed for use in 1.25Gbps data rate operation.

#### Features

- Industry standard connector of metallic ST\*-type receptacle
- Pre-aligned for multi-mode fiber communication
- With monitoring PD
- Data rate operation from DC to 1.25Gbps

#### Applications

- 1.25Gbps data rate operation

#### 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	

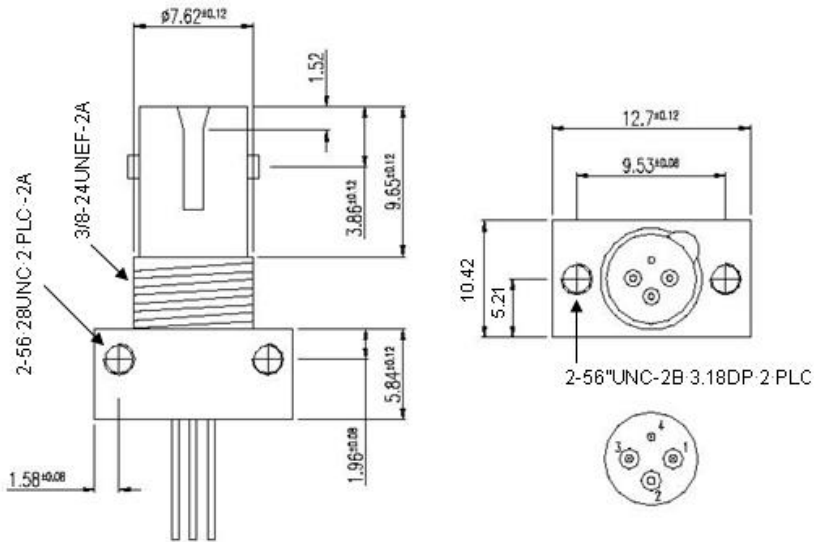
Electro-Optical Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	$I_{th}$		2	3.5	mA	
Forward Voltage	$V_F$	1.7	1.9	2.2	V	$I_F=6$ mA
Breakdown Voltage	$V_{BD}$	5	14		V	$I_R=10$ $\mu$ A
Slope Efficiency	$\eta$	0.03		0.12	mW/mA	$I_F=6$ mA
Series Resistance	$R_S$	35	45	65	$\Omega$	$I_F=6$ mA
Wavelength	$\lambda_P$	830	850	860	nm	$I_F=6$ mA
Rise Time/Fall Time (20%~80%)	$T_r$		150/200		ps	$I_b = I_{th}$ , Extinction Ratio >10dB
Spectral Width (RMS)	$\Delta\lambda$			0.85	nm	$I_F=6$ mA
Relative Intensity Noise	RIN		-130	-122	dB/Hz	$I_F=6$ mA, $f=1$ GHz
Monitor Current	$I_M$		500		$\mu$ A	$P_{oc}=350$ uW <sup>(2)</sup>

#### Notes:

1. The standard product is specified for using on GI 62.5/125um MMF.
2. Rise Time and Fall Time are sensitive to the driving circuits.

Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
$I_{th}$ Temperature Variation	$\Delta I_{th}$	-2.5		2.5	mA	$T_A=0\sim 70^\circ\text{C}$
$\eta$ Temperature Coefficient	$\Delta\eta/\Delta T$			-0.6	%/°C	$T_A=0\sim 70^\circ\text{C}$ , $I_F=6$ mA
$\lambda_P$ Temperature Coefficient	$\Delta\lambda_P/\Delta T$		0.06		nm/°C	$T_A=0\sim 70^\circ\text{C}$ , $I_F=6$ mA

**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.