



1.25Gbps 850nm VCSEL in ST Receptacle with Monitor PD

Part No.TST-M85A426-2

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



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	$I_F=6\text{ mA}$
Breakdown Voltage	V_{BD}	5	14		V	$I_R=10\text{ uA}$
Slope Efficiency	η	0.03		0.12	mW/mA	$I_F=6\text{ mA}$
Series Resistance	R_S	35	45	65	Ω	$I_F=6\text{ mA}$
Wavelength	λ_P	830	850	860	nm	$I_F=6\text{ mA}$
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	$I_F=6\text{ mA}$
Relative Intensity Noise	RIN		-130	-122	dB/Hz	$I_F=6\text{ mA}$, $f=1\text{GHz}$
Monitor Current	I_M		500		uA	$P_{OC}=350\text{uW}^{(2)}$

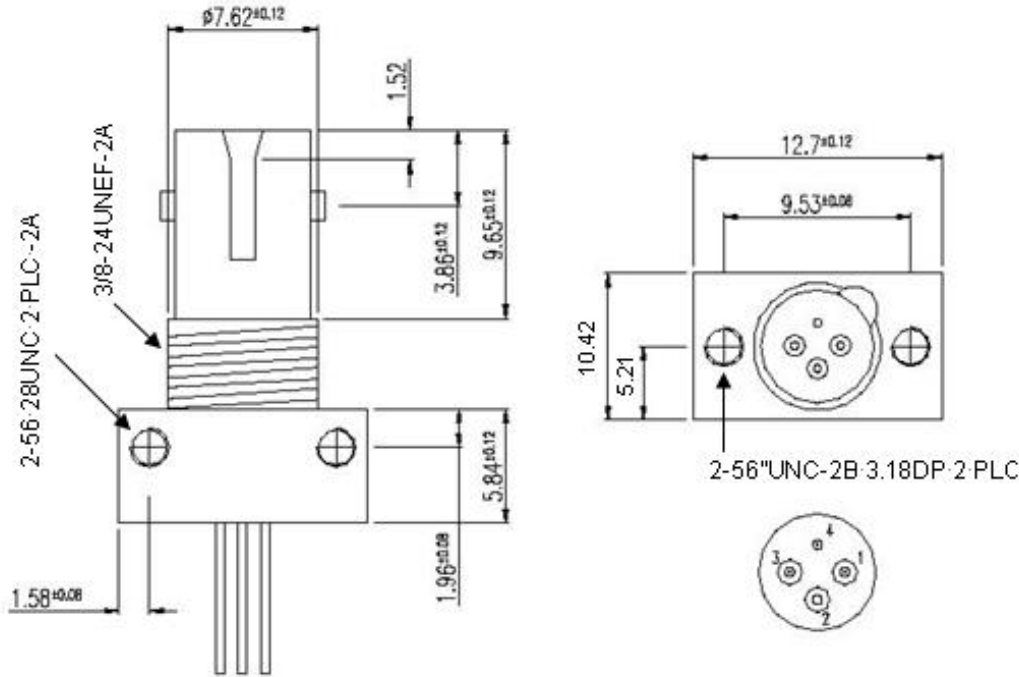
Notes:

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	ΔI_{th}	-2.5		2.5	mA	$T_A=0\sim 70^\circ\text{C}$
η Temperature Coefficient	$\Delta\eta/\Delta T$			-0.6	%/°C	$T_A=0\sim 70^\circ\text{C}$, $I_F=6\text{ mA}$
λ_P Temperature Coefficient	$\Delta\lambda_P/\Delta T$		0.06		nm/°C	$T_A=0\sim 70^\circ\text{C}$, $I_F=6\text{ mA}$



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.

Note: Specifications are subject to change without notice.