T85V-P-LCLC0

1.25Gbps 850nm 0.2mW VCSEL Pigtail Module with LC/PC Connector

Data Sheet

Description

The Lasermate T85V-P-LCLC0 is a compact 850nm Vertical Cavity Surface Emitting Laser (VCSEL) module designed for 1.25Gbps multimode fiber communication. It comes pigtailed with an LC/PC connector, aligned for 62.5μm multimode fiber, and includes a monitor photodiode for enhanced performance control. The module offers low noise and jitter characteristics, making it an ideal solution for short-range, high-reliability optical transmission systems.

Features

- LC/PC connector pigtailed for easy multimode fiber integration
- Optimized for 62.5μm multimode fiber
- Integrated monitor photodiode
- Excellent noise and jitter performance
- Supports DC to 1.25Gbps data rate
- Compact and reliable module form factor

Applications

- 1.25Gbps optical data links
- Multimode fiber communication systems
- Optical interconnects

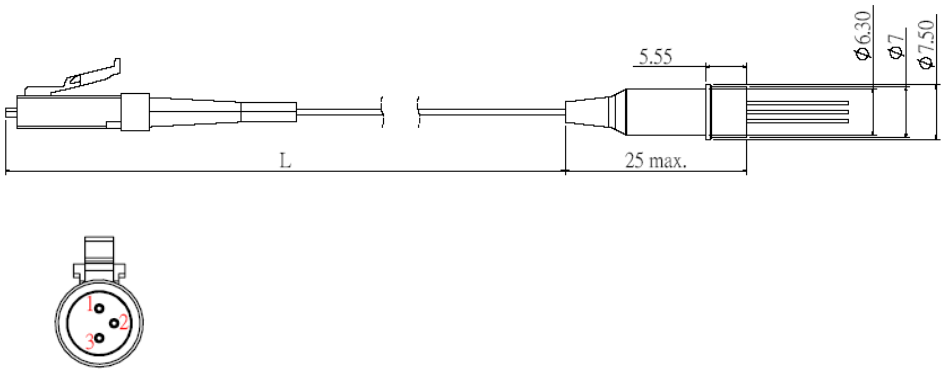
Specifications

Absolute Maximum Ratings			
Parameters	Symbol	Value	Unit
Storage temperature	Tstg	-40 to +85	°C
Operating case temperature	Top	0 to +70	°C
Peak optical output power	P_o	5	mW
Forward current (LD)	I_{FLD}	12	mA
Reverse voltage (LD)	V_{RLD}	5	V
Soldering temperature	Stemp	260	°C
Soldering time	Stime	10	sec

Electro-Optical Characteristics (CW at Tc=25°C, unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I_{th}		2	3.5	mA	
Output Power	P_o	0.2			mW	I_F=6mA
Central Wavelength	λ_C	830	850	860	nm	CW, I_F=6mA
Spectral Bandwidth (RMS)	$\Delta\lambda$			0.85	nm	CW, I_F=6mA
Relative Intensity Noise	RIN		-130	-122	db/Hz	I_F=6mA, f= 1GHz
Rise/Fall Time	t_r/t_f		150/200		ps	I_b= I_{th}, 20%-80%
Forward Voltage	V_F	1.7	1.9	2.2	V	I_F=6mA
Breakdown Voltage	V_{BD}	5	14		V	IR=10uA
Series Resistance	R_S	30	45	65	Ohm	
Monitor Current	I_M		50		μA	

Outline Dimensions (unit: mm)

Pigtailed TOSA



Pin Configuration

Number	Function
1	VCSEL Cathode
2	PD Cathode
3	PD Anode
4	VCSEL Anode
5	Case

Additional Notes

- For eye safety, ensure to avoid human eyes or skin exposure to laser beam. Do not look directly into the laser diode or the collimated laser beam when the device is activated.
- The component should be handled in the same manner as ordinary semiconductor devices to prevent electro-static damages (ESD). For safekeeping and carrying, the component should be packaged with ESD proof material. To assemble the component on PCB, the workbench, soldering iron and human body should be grounded.
- Operation-Conditions beyond Absolute Maximum Ratings may cause permanent damage to the device and affect the lifetime and reliability of product.
- Specifications are subject to change without notice.