



TLC-P85A846-25M

High Speed 25Gbps LC Connectorized 850nm VCSEL with FPC (Wide Operation Temperature)

Description

The Lasermate TLC-P85A846-25M is an 850nm wavelength, Vertical Cavity Surface Emitting Laser (VCSEL) LC-TOSA with wide operation temperature designed for use in 25Gbps data rate operation.



Features

- LC-type optical sub-module with flexible circuit attached
- Optimized for fiber optic application
- Support up to 25.78Gbps data rate operation
- Isolated pinout between LD and monitor PD
- Operating temperature -40 to 85 °C
- Thermal resistor internally for compensating low temperature operation

Applications

- 25Gbps data rate operation

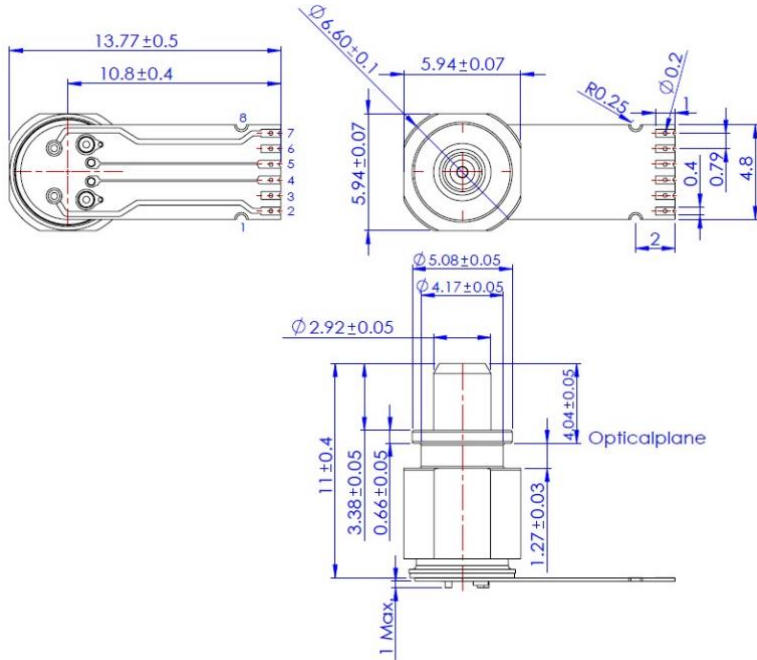
Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	85	°C	
Operating Temperature	-40	85	°C	
Lead Solder Temperature		260	°C	10 seconds
Continuous Forward Current		12	mA	
Continuous Reverse Voltage		5	V	

Electro-Optical Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I_{th}		0.7	1.2	mA	$T_A=25\text{ }^\circ\text{C}$
Slope Efficiency	η		0.14		mW/mA	$I_F=6.5\text{ mA}$
Wavelength	λ_P	840	850	860	nm	$I_F=6.5\text{ mA}$
Forward Voltage	V_F		2.2		V	$I_F=6.5\text{ mA}$
Series Resistance	R_S		100		Ohm	$I_F=6.5\text{ mA}, T_A=25\text{ }^\circ\text{C}$
Relative Intensity Noise	RIN			-128	dB/Hz	$I_F=6.5\text{ mA}, f=1\text{GHz}$
Spectral width (RMS)	$\Delta\lambda$			0.6	nm	$I_F=6.5\text{ mA}, T_A=0\sim 85\text{ }^\circ\text{C}$
Monitor Current	I_M		100		uA	$V_R=5\text{ V}, I_F=6.5\text{ mA}$
PD Dark Current	I_d			20	nA	$V_R=5\text{ V}, T_A=25\text{ }^\circ\text{C}$
PD Capacitance	C_M		12		pF	$V_R=3\text{ V}, f=1\text{MHz}$

Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
η Temperature Coefficient	$\Delta\eta/\Delta T$		-0.6		%/°C	$T_a=-40\sim 85\text{ }^\circ\text{C}, I_F=6.5\text{ mA}$
λ_P Temperature Coefficient	$\Delta\lambda_P/\Delta T$		0.07		nm/°C	$T_a=-40\sim 85\text{ }^\circ\text{C}, I_F=6.5\text{ mA}$

Outline Dimensions (unit: mm)



Pin Configuration

Number	Function
1	MPD Anode/Heater Cathode
2	Heater Anode
3	MPD Anode/Heater Cathode
4	VCSEL Cathode
5	VCSEL Anode
6	MPD Anode/Heater Cathode
7	MPD Cathode
8	MPD Anode/Heater Cathode

Note: Specifications are subject to change without notice.