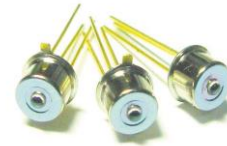


Features

- : Multi-mode 850nm VCSEL
- : 6 Gbps data rates
- : Low drive current and voltage
- : Ball Lens Type TO-46 Can Package
- : Back monitor Photo diode
- : Attenuating coating
- : Other configurations available on request

Description



Applications

- : High speed Data Communications
- : Fiber Channel
- : Gigabit Ethernet

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100 °C
Operating Temperature	-40 to 85 °C
Lead Solder Temperature	260 °C, 10 sec
Continuous Forward Current	10mA
Continuous Reverse Voltage	5V (@10µA)

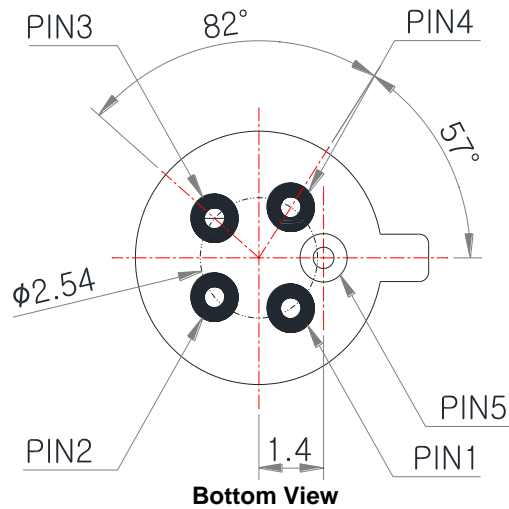
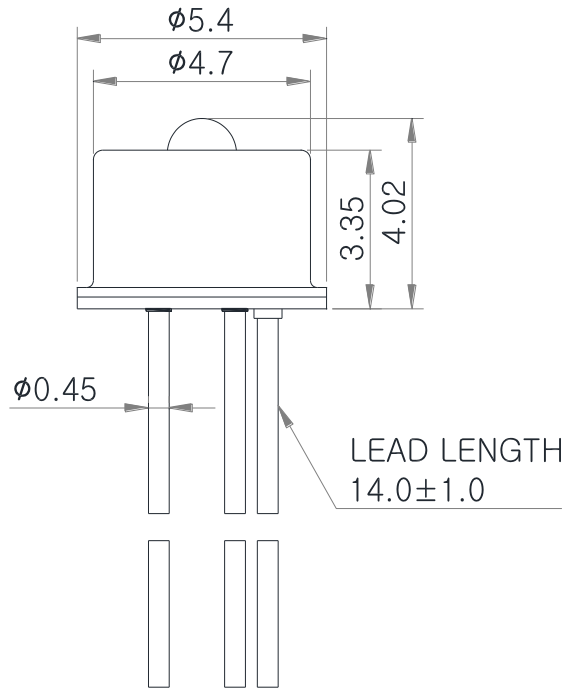
NOTICE

Conditions exceeding those listed may cause permanent damage to the device. Devices subjected to conditions beyond the limits specified for extended periods of time may adversely affect reliability

Part Number :	Description :
PM85-B1P1D-LA	850nm Ball lens type TO-46 Package, Differential drive, without flex, normal type
PM85-B1P1D-LK	850nm Ball lens type TO-46 Package, Differential drive, without flex, Inverted type

Dimensions

Unit :mm



PIN OUT

PM85-B1P1D-LA		PM85-B1P1D-LK	
Number	Function	Number	Function
1	A _{VCSEL}	1	K _{VCSEL}
2	K _{m-PD}	2	K _{m-PD}
3	A _{m-PD}	3	A _{m-PD}
4	K _{VCSEL}	4	A _{VCSEL}
5	GND	5	GND

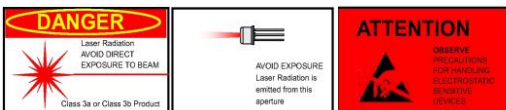
Electro-Optics Characteristics ($T_a=25^\circ\text{C}$ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Optical Output Power	P_o		1.5		mW	$I_f = 6 \text{ mA}$
Threshold Current	I_{th}		1.0	2.0	mA	CW
I_{th} Temperature Variation	ΔI_{th}		1.5		mA	$T_a = -40 \text{ to } 85^\circ\text{C}$
Slope Efficiency	η	0.1	0.2	0.35	W/A	$I_f = 6 \text{ mA}$
η Temperature Variation	$\Delta\eta / \Delta T$		-0.5		%/°C	$T_a = -40 \text{ to } 85^\circ\text{C}$ at 6 mA
Peak Wavelength	λ_p	840	850	860	nm	$I_f = 6 \text{ mA}$
λ_p Temperature Coefficient	$\Delta\lambda / \Delta T$		0.06		nm/°C	$T_a = -40 \text{ to } 85^\circ\text{C}$ at 6 mA
Spectral Bandwidth (RMS)	$\Delta\lambda$			0.65	nm	$I_f = 6 \text{ mA}$
Forward Voltage	V_f		2	2.5	V	$I_f = 6 \text{ mA}$
Breakdown Voltage	V_b		-10		V	
Rise and Fall Times	t_r		40		ps	Prebias Above Threshold, 20%~80%
	t_f		50			
Series Resistance	R_S		70		Ohm	$I_f = 6 \text{ mA}$
Focal Length	FD		2.5		mm	

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Monitor Current	I_{PD}	0.1		0.5	mA	$P_o = 1.5\text{mW}$
Dark current	I_D			10	nA	$P_o = 0\text{mW}, V_R = 5\text{V}$
PD Reverse Voltage	BVR_{PD}	40			V	$P_o = 0\text{mW}, I_R = 10\mu\text{A}$
PD Capacitance	C			50	pF	$V_R = 0\text{V}, \text{Freq} = 1\text{MHz}$
				20		$V_R = 5\text{V}, \text{Freq} = 1\text{MHz}$

Notes

* These specifications are subject to change without notice



NOTICE	The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.