



CxxD-5A-C2G-V2

1270nm~1610nm CWDM DFB Laser Diodes in TO-can for 2.5Gbit/s

Description

The Lasermate CxxD-5A-C2G-V2 is an 18 channel 1270nm-1610nm wavelength, Distributed Feedback (DFB) laser diode, TO-can package, designed for use in CWDM applications.

Features

- Uncooled 1270nm~1610nm MQW structure laser diode (LD)
- 5mW CW operation at -20 to +85°C
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode (PD)
- TO-56 with an aspherical lens cap of 7.5mm focal distance

Product Overview

The following table shows the list of available part numbers and the wavelength of each of the part numbers.

Part Number	Wavelength
C27D-5A-C2G-V2	1270nm
C29D-5A-C2G-V2	1290nm
C31D-5A-C2G-V2	1310nm
C33D-5A-C2G-V2	1330nm
C35D-5A-C2G-V2	1350nm
C37D-5A-C2G-V2	1370nm
C39D-5A-C2G-V2	1390nm
C41D-5A-C2G-V2	1410nm
C43D-5A-C2G-V2	1430nm
C45D-5A-C2G-V2	1450nm
C47D-5A-C2G-V2	1470nm
C49D-5A-C2G-V2	1490nm
C51D-5A-C2G-V2	1510nm
C53D-5A-C2G-V2	1530nm
C55D-5A-C2G-V2	1550nm
C57D-5A-C2G-V2	1570nm
C59D-5A-C2G-V2	1590nm
C61D-5A-C2G-V2	1610nm



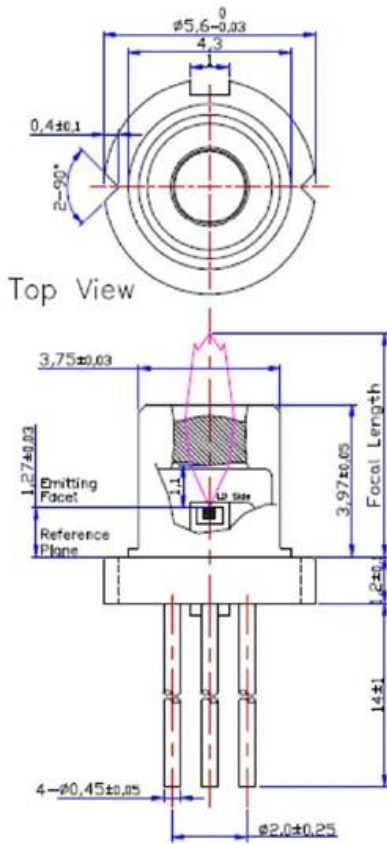
Specifications

Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40 to +95	°C	
Operating case temperature	Top	-20 to +85	°C	
Peak optical output power	Po	10	mW	
Forward current (LD)	I _{FLD}	120	mA	
Reverse voltage (LD)	V _{RLD}	2	V	
Forward current (PD)	I _{FPD}	2	mA	
Reverse voltage (PD)	V _{RPD}	15	V	
Soldering temperature	Stemp	260	°C	

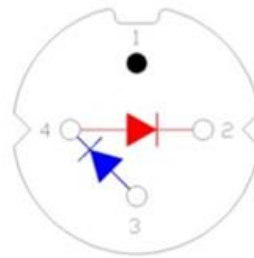
Electro-Optical Characteristics (CW @ T _c = 25°C unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold current	I _{th}	-	8	15	mA	CW
		-	-	40		CW, T _c =-20~85°C
Operating current	I _{op}	-	30	40	mA	CW, P _o =5mW
Operating voltage	V _{op}	-	1.1	1.5	V	CW, P _{op} , T _c =-20~85°C
Slope efficiency	η	0.25	-	-	W/A	CW, P _o =5mW, 1270-1550nm
		0.2	-	-		CW, P _o =4mW, 1570-1610nm
Peak wavelength*	λ _p	n-3	n	n+3	nm	CW
Side mode suppression ratio	SMSR	35	-	-	dB	CW, P _o =5mW, T _c =-20~85°C
Temperature coefficient of peak wavelength	Δλ _p / ΔT	-	0.1	0.12	nm/°C	CW, P _o =5mW, T _c =-20~85°C
Fiber coupling power	Pf	1.5	-	-	mW	CW, P _o =5mW, SMF (10/125)
Focal length	Df	7.0	7.5	8.0	nm	CW, P _o =5mW, SMF (10/125)
Rise time	t _r	-	80	120	psec	I _b = I _{th} , 20%~80%
Fall time	t _f	-	100	150	psec	I _b = I _{th} , 20%~80%
PD Monitor current	I _m	80	-	1000	uA	P _{op} , V _{RPD} =5V
PD Dark current	I _d			100	nA	V _{RPD} =5V
PD Capacitance	C	-	5	15	pF	V _{RPD} =5V, f=1MHz

* Peak wavelength: n=1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610.

Pin Assignment and Mechanical Outline (unit: mm)



Pin No. ^o	Function ^o
1 ^o	Case ^o
2 ^o	LD Cathode ^o
3 ^o	PD Anode ^o
4 ^o	LD Anode/PD cathode ^o



Additional Notes

- Avoid eye or skin exposure to laser radiations.
- The device is sensitive to electro-static discharge (ESD). The device should be handled with ESD proof tools. To assemble the device on PCB, proper grounding is required to prevent ESD.
- The performance and reliability of the device are not guaranteed when it is operated under strong vibration environment.
- Specifications are subject to change without notice.