

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

Model No. CxxD-5A-C2G

Where **xx** is 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59 & 61 for 1270nm, 1290nm, 1310nm, 1330nm, 1350nm, 1370nm, 1390nm, 1410nm, 1430nm, 1450nm, 1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm & 1610nm DFB lasers, respectively.

Features

- Uncooled 1270nm~1610nm MQW-DFB laser diode (LD)
- 5mW CW operation at -20 to +85°C
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode (PD)
- With an aspherical lens cap

Packaging

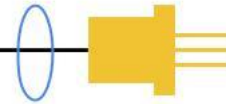
- TO-18 with aspherical lens cap of 7.5mm focal distance

Specifications

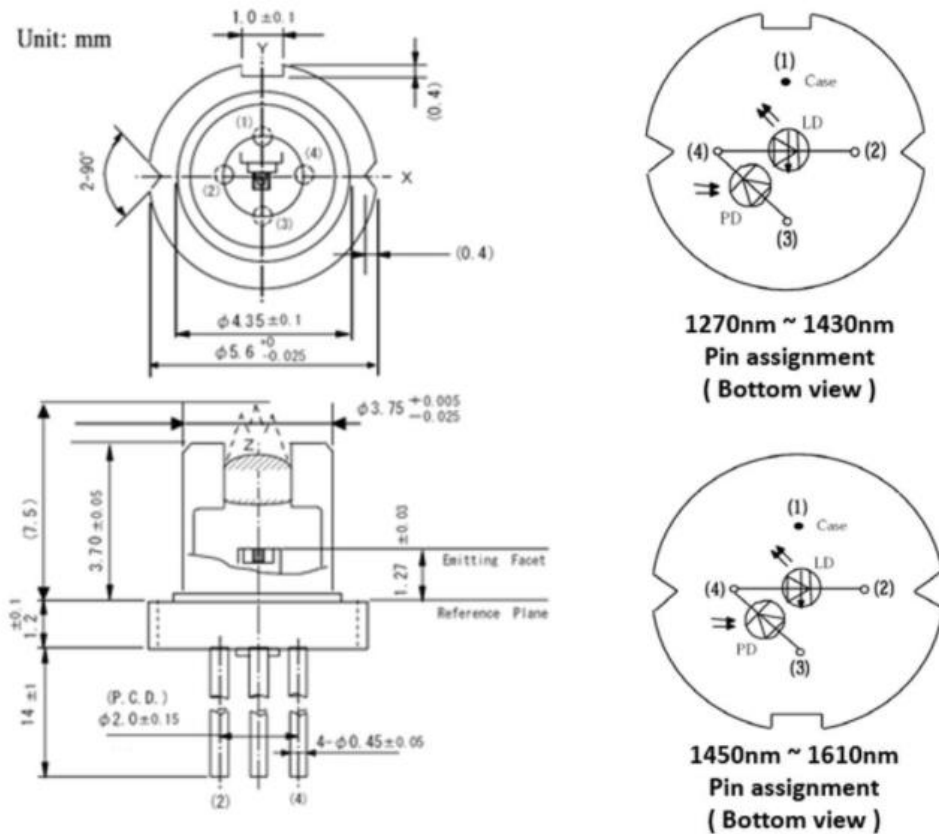
Absolute Maximum Ratings				
Parameters	Symbol	Value	Unit	Conditions
Storage temperature	Tstg	-40 to +95	°C	
Operating case temperature	Top	-20 to +85	°C	
Peak optical output power	Po	10	mW	
Forward current (LD)	I _{FLD}	150	mA	
Reverse voltage (LD)	V _{RLD}	2	V	
Forward current (PD)	I _{FPD}	2	mA	
Reverse 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}	-	10	15	mA	CW
		-	-	50		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	0.2	-	-	W/A	CW, P _o =4mW
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 =4mW, 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)
Far field (Vertical)	θ _v		31	40	degree	CW, P _o =4mW
Far field (Horizontal)	θ _h		27	35	degree	CW, P _o =4mW
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	0.1	-	1.0	mA	Pop, V _{RPD} =5V
PD Dark current	I _d			100	nA	V _{RPD} =5V
PD Capacitance	C	-	5	7	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)



Ordering Information

Read Model No. CxxD-5A-C2G

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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.