

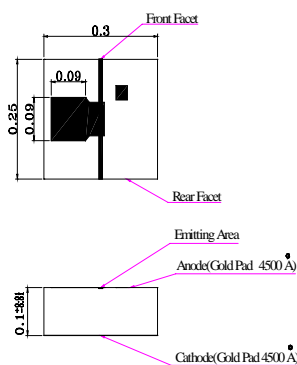
Features

- Uncooled laser diode with MQW structure
- 5mW CW operation at 0~70°C
- High temperature operation without active cooling
- Complies with Bellcore TA-NWT-000983

Handling Precautions

This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

Chip dimension(mm)



Absolute Maximum Ratings(Tc=25°C)

Parameter	Symbol	Value	Unit
Optical Output Power	P _o	10 (CW)	mW
LD Reverse Voltage	V _{RLD}	2	V
Operating Temperature	T _{opr}	0~+70	°C
Storage Temperature	T _{stg}	-40~+85	°C

Optical and Electrical Characteristics(Tc=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Slope Efficiency	SE.	0.3	0.35	-	mW/mA	CW,P _o =5mW
Threshold Current	I _{th.}	-	10	15	mA	CW,P _o =5mW
Optical Output Power	P _o	5	-	-	mW	CW, kink free
Peak Wavelength	λ	1295	1310	1320	nm	CW,P _o =5mW
RMS Spectral Width	Δλ	-	-	1	nm	Note
Forward Voltage	V _F	-	1.2	1.5	V	CW,P _o =5mW
Beam Divergence	θ _{//}	-	25	30	deg.	CW,P _o =5mW, FWHM
	θ _±	-	35	40		
RIN	RIN	-	-	-130	dB/Hz	CW,P _o =5mW
Bandwidth	B	10	-	-	GHz	CW,P _o =10mW
Differential Resistance	R	5	7	10	Ω	
SMSR	Sr	30	35	-	dB	
Wavelength coefficient	C _w	-	-	0.1	nm/deg. C	
Rise/Fall Time	t _r / t _f	-	-	50	ps	I _{bias} =I _{th.} , 10-90 %

Note: Measured at 10 Gb/s, 8.2 dB extinction ratio, 5 mW average output power

1310nm**C-13-DFB10-C****1310nm 10Gbps DFB Laser Diode Chip****Optical and Electrical Characteristics(Tc=70°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test condition
Threshold Current	I_{th}		30	40	mA	CW, $P_o=5mW$
Optical Output Power	P_o	6	8	-	mW	CW, $I_{op}= I_{th} + 40mA^*$

*Note: measured with TO can package