

1310 nm 2.5 Gbps DFB Laser (*Preliminary*)

Product Description:

The LuxNet BI2A-7000 DFB chip is designed for high-speed, high performance fiber optic communication applications. The device is particularly suitable for short and intermediate-reach metro optical communication systems up to 2.5 Gbps.

Product Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min.	Max.	Note
Operating Temperature	T_{op}	°C	0	85	
Storage Temperature	T_{stg}	°C	- 40	100	
Die-Attach Temperature		°C		330	60 second max.
Maximum Power	P_o	mW		7	
Reverse Voltage	V_r	V		2	
Photodiode Forward Current	I_{pd}	mA		10	

Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max.	Test Condition
Threshold Current	I_{th}	mA		14	18 40	$T_c=25^{\circ}C$ $T_c=0$ to $85^{\circ}C$
Forward Voltage	V_f	V		1.2	1.8	$T_c=0$ to $85^{\circ}C$, $P_o=5$ mW
Slope Efficiency	η	W/A	0.18	0.25		Average, $I_{th}+5$ mA to $I_{th}+15$ mA
Peak Wavelength	λ_p	nm	1290	1310	1330	$T_c=0$ to $85^{\circ}C$, $P_o=5$ mW
Side Mode Suppression Ratio	SMSR	dB	35	40		$T_c=0$ to $85^{\circ}C$, $P_o=5$ mW
Beam Divergence Angle (h) Beam Divergence Angle (v)		degree		18 35		FWHM
Rise Time	τ_r	ps		100	120	$I_{bias}=I_{th}$, $P_o=5$ mW, 20-80%, $T_a=0$ to $85^{\circ}C$
Fall Time	τ_f	ps		100	120	$I_{bias}=I_{th}$, $P_o=5$ mW, 20-80%, $T_a=0$ to $85^{\circ}C$
Relaxation Oscillation Frequency	f_r	GHz	4	7		$P_o=5$ mW

Chip configuration:

- Top contact: Anode; Bottom contact: Cathode.
- Dimension: 250 μ m (Wide) x 250 μ m (Long) x 125 μ m (Thick)

* Specifications are subject to change without notice.
* Screening per customer-specified reject limits is available.