

1310 nm 10 Gbps DFB Laser

BI5X-702X Series

Part Number: BI5A-7022

Product Description:

The LuxNet BI5A-7022 DFB laser chip is designed for high speed, high performance data communication and telecommunication applications. It is suitable for cooler-less application over a wide temperature range at speeds up to 10 Gbps.

Product Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min.	Max.	Note
Operating Temperature	T_{op}	°C	-5	75	
Storage Temperature	T_{stg}	°C	-40	100	
Die-Attach Temperature		°C		300	5 seconds max.
Maximum Power	P_o	mW		10	
Reverse Voltage	V_r	V		2	

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

Parameter	Symbol	Unit	Min.	Typ.	Max.	Test Condition
Threshold Current	I_{th}	mA		8	13 30	$T_a=25\text{ }^\circ\text{C}$ $T_a=75\text{ }^\circ\text{C}$
Operating Voltage	V_{op}	V		1.2	1.5	$P_o=5\text{ mW}$
Slope Efficiency	η	W/A	0.25			$T_a=25\text{ }^\circ\text{C}$
Peak Wavelength	λ_p	nm	1290	1310	1330	$P_o=5\text{ mW}$ $T_a=-5\sim 75\text{ }^\circ\text{C}$
Side Mode Suppression Ratio	SMSR	dB	35			$P_o=5\text{ mW}$
Beam Divergence Angle (//) Beam Divergence Angle (\perp)	$\theta_{//}$ θ_{\perp}	degree		27 33		FWHM @ $P_o=5\text{ mW}$
Rise Time	τ_r	ps		35		$I=30\text{ mA}$, 20-80 %
Fall Time	τ_f	ps		35		$I=30\text{ mA}$, 20-80 %
Relaxation Oscillation Frequency	f_r	GHz	7			$I=30\text{ mA}$

Chip configuration:

1. Top contact: anode; Bottom contact: cathode.
2. Dimension: 250 μm (width) x 200 μm (cavity length) x 100 μm (thickness)
 Tolerance: $\pm 12.5\text{ } \mu\text{m}$ (Thickness)
 $\pm 20\text{ } \mu\text{m}$ (Width, Length)

* Specifications are subject to change without notice.

* Screening per customer-specified reject limits is available.

Version 2.0

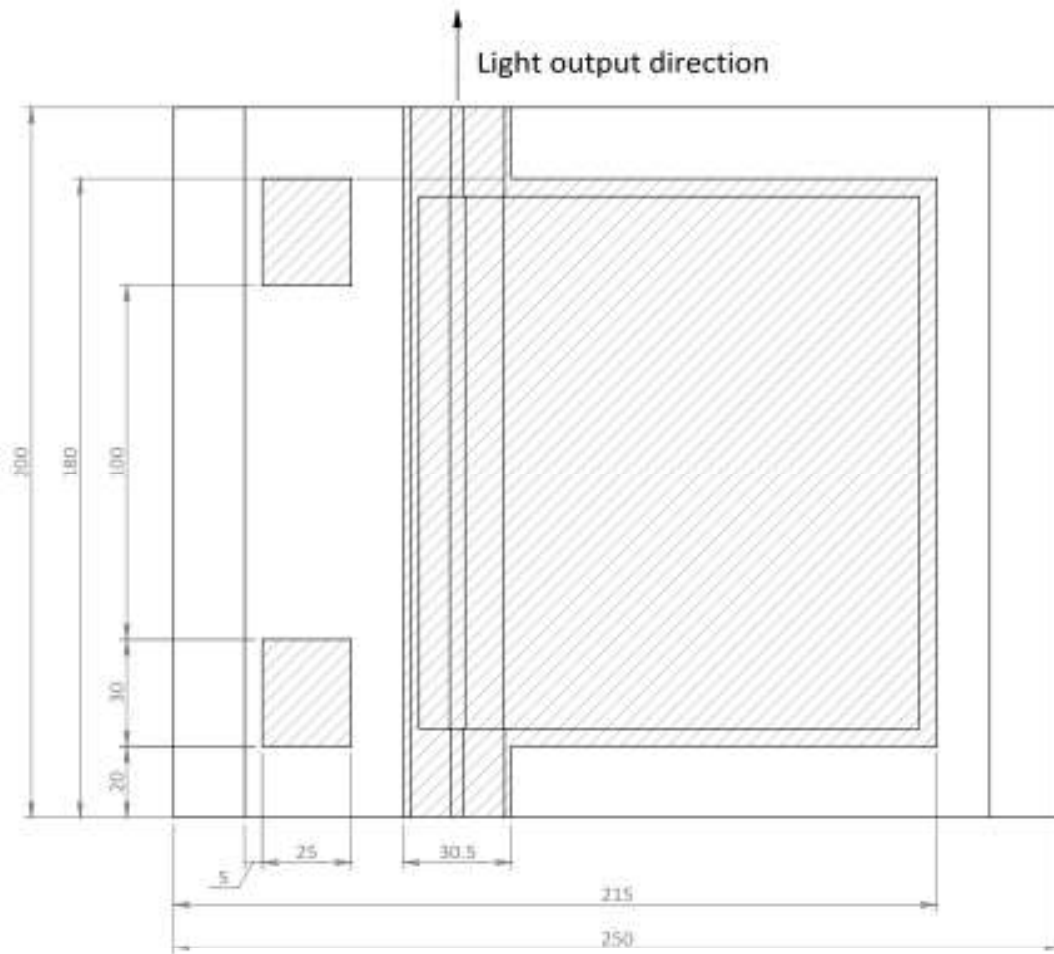


Fig. 1 Top view

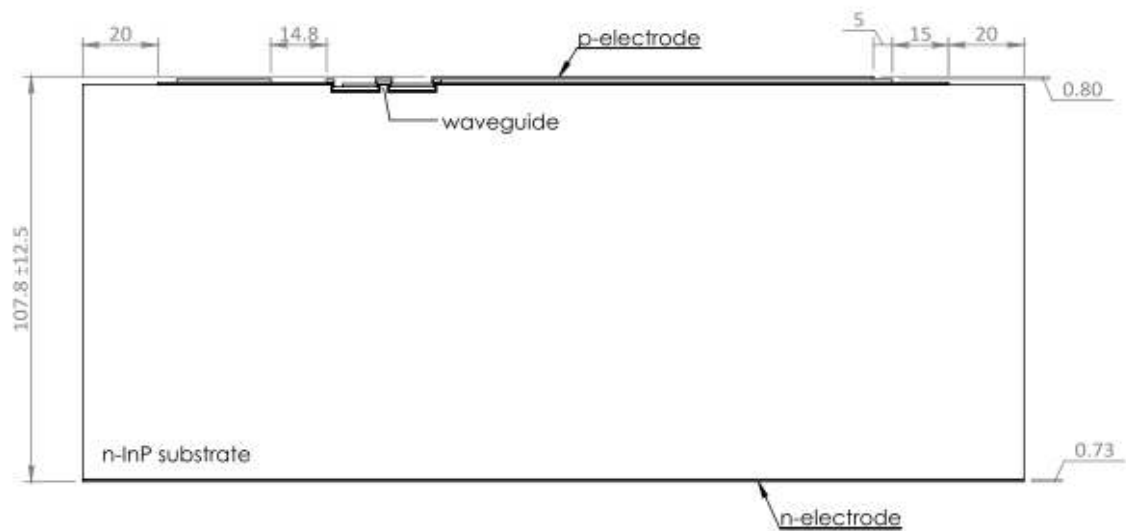


Fig. 2 Side view

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