LUXNET CORPORATION

48400 Fremont Blvd.
Fremont, CA 94538
Tel: (510) 445-3068 x 244
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2.5 Gbps 1310 nm DFB TO-56 Header *(Preliminary)*

Product Description:

The LuxNet BI2A-8100 DFB TO-56 header assembly is designed for high speed, high performance fiber optic communication applications. This device is integrated with a 1310 nm 2.5 Gbps DFB laser, a TO-56 header substrate, a monitoring photodiode, and a lens cap. The product is designed for 2.5 Gbps short and intermediate-reach metro optical communication systems. This TO header assembly is designed to easily integrate with different types of ports that are engaged with a single mode fiber connector to provide good coupling efficiency as light generated by the DFB is transmitted into singlemode fiber.

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	
Solder Reflow Temperature				260	10 seconds max.
Maximum Power	Po	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	Tc=25°C Tc=0 to 85°C
Forward Voltage	V_f	V		1.2	1.8	Tc=0 to 85°C, Po=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	Tc=0 to 85°C, Po=5 mW
Side Mode Suppression Ratio	SMSR	dB	35	40		Tc=0 to 85°C, Po=5 mW
Beam Divergence Angle (h) Beam Divergence Angle (v)		degree		10 15		FWHM
Rise Time	τ_r	ps		100	120	I_{bias}= $I_{th,}$, P_0= 5 mW, 20-80%, Ta=0 to 85°C
Fall Time	τ_f	ps		100	120	I_{bias}= $I_{th,}$, P_0=5 mW, 20-80%, Ta=0 to 85°C
Relaxation Oscillation Frequency	f_r	GHz	4	7		Po=5 mW

* Specifications are subject to change without notice. April, 2002
* Screening per customer-specified reject limits is available.

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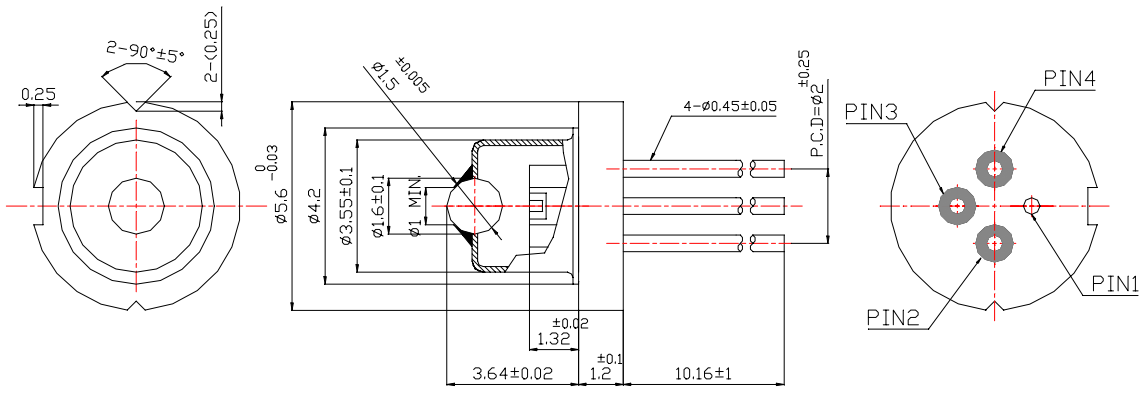
Photodiode Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max	Test Condition
Monitor Current	I_{pd}	mA	0.05		1.0	V_r= 1.7V @ Tc= 0 to 85°C
Dark Current	I_d	nA			100	P_{oc}= 0, V_r= 1.7V @ Tc= 0 to 85°C
PD Capacitance	C	pF		10	20	V_r= 5V @ 1MHz

Dimensions: (mm)
All dimensions are nominal



PINOUT

BI2A-8100 -1		**BI2A-8100 -2**	
Number	Function	Number	Function
1	Case Gnd	1	Laser Diode Anode & Case Gnd
2	Laser Diode Cathode	2	Photodiode Anode
3	Photodiode Anode	3	Photodiode Cathode
4	Photodiode Cathode & Laser Diode Anode	4	Laser Diode Cathode

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