

1310 nm 1.25/2.5Gbps FP Lasers TO

FI2B-8120-x Series

TYPE NAME: FI2B-8120-4C

Product Description:

The LuxNet FI2B-8120-x TO-56 header assembly is designed for high speed, high performance data communication and telecommunication applications. This device is integrated with a 1310 nm 2.5Gbps FP laser, a TO-56 header, a monitoring photodiode, and a 2.0mm ball lens cap. The product is designed for 2.5Gbps short and intermediate-reach optical communication systems. This TO header assembly can be integrated with different types of ports that are engaged with a single mode fiber connector to provide good coupling efficiency as light generated by the FP laser is transmitted into a single mode fiber.

Product Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min.	Max.	Note
Operating Temperature	T_{op}	°C	-40	85	
Storage Temperature	T_{stg}	°C	-40	100	
Solder Reflow Temperature	T_s	°C		260	10 seconds max.
Maximum Power	P_o	mW		20	
Laser Reverse Voltage	V_{RL}	V	-	2	
Laser Forward Current	I_{FL}	mA	-	150	
Photodiode Reverse Voltage	V_{RD}	V	-	15	
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		10	12 30	T=25°C T=0 to 85°C
Forward Voltage	V_f	V		1.2	1.5	T=0 to 85°C, $I_{th}+20mA$
Slope Efficiency	η	mW/mA	0.47	0.55	0.60	Average, $I_{th}+5 mA$ to $I_{th}+20mA$
Peak Wavelength	λ_p	nm	1290	1310	1330	$I_{th}+20mA$
Spectral Wavelength (RMS)	$\Delta\lambda$	nm		1	3	$I_{th}+20mA @ K_r=1, T=0$ to 85°C
Rise / Fall Time	τ_r	ps		150/150	200/200	$I_{th}+20mA, 20-80%$
Focal Point of Fiber Coupling	FL	mm	6.4	6.5	6.6	CW, maximum coupling to SMF (9/125), PC fiber without theta alignment
Relaxation Oscillation Frequency	f_r	GHz	4	7		$I_{th}+20mA$

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

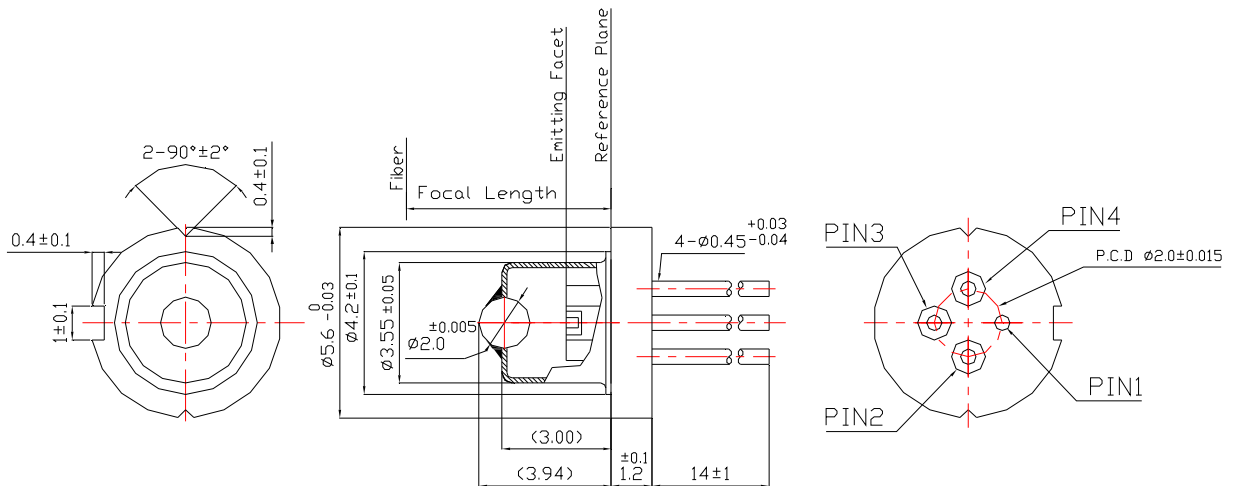
Photodiode Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max	Test Condition
Monitor Current	I_{pd}	mA	0.10	0.15	0.80	$I_{th}+20mA$ @Tc= 0 to 85°C
Dark Current	I_d	nA			100	$P_{oc}=0, V_i=1.7V$ @ T= 0 to 85°C
PD Capacitance	C	pF		10	20	$V_i=5V$ @ 1MHz

FI2B-8120-4C (FP-TO)

Dimensions: (mm)

All dimensions are nominal



PINOUT

FI2B-8120-4C (FL:6.5±0.1 mm)	
Number	Function
1	Laser Diode Anode & Case Gnd
2	Laser Diode Cathode
3	Photodiode Cathode
4	Photodiode Anode

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