

1550 nm 1.25/2.5 Gbps FP Lasers TO (Preliminary)

FJ2D-8100-x Series

TYPE NAME: FJ2D-8100-1A

Product Description:

The LuxNet FJ2D-8100-x TO-56 header assembly is designed for high speed, high performance data communication and telecommunication applications. This device is integrated with a 1550 nm 1.25/2.5 Gbps FP laser, a TO-56 header, a monitoring photodiode, and a ball lens cap. The product is designed for 1.25/2.5Gbps 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				260	10 seconds max.
Maximum Power	P_o	mW		10	
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		10	15 30	T=25°C T=0 to 85°C
Forward Voltage	V_f	V		1.2	1.5	T=0 to 85°C, $P_o=5$ mW
Slope Efficiency	η	mW/mA	0.14	0.20	0.6	Average, $I_{th}+5$ mA to $I_{th}+20$ mA
Peak Wavelength	λ_p	Nm	1530	1550	1570	$P_o=5$ mW
Spectral Wavelength (RMS)	$\Delta\lambda$	Nm		2	5	$P_o=5$ mW
Beam Divergence Angle (//) Beam Divergence Angle (\perp)		Degree		10 15		$P_o=5$ mW, FWHM
Rise Time	τ_r	Ps		150	200	$P_o=5$ mW, 20-80%, T=0 to 85°C
Fall Time	τ_f	ps		150	200	$P_o=5$ mW, 20-80%, T=0 to 85°C
Relaxation Oscillation Frequency	f_r	GHz	4	7		$P_o=5$ mW

* Specifications are subject to change without notice.

* Screening per customer-specified reject limits is available.

Version 1.1

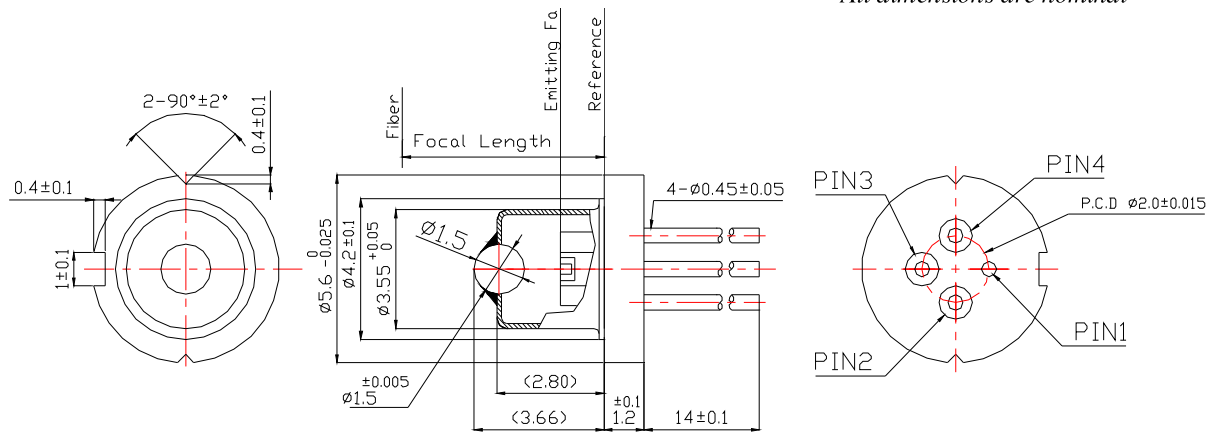
Photodiode Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max	Test Condition
Monitor Current	I_{pd}	mA	0.1	0.20	0.8	$P_o = I_{th} + 20 \text{ mW}$ @ $T_c = 0 \text{ to } 85^\circ\text{C}$
Dark Current	I_d	nA			100	$P_{oc} = 0, V_r = 1.7\text{V}$ @ $T = 0 \text{ to } 85^\circ\text{C}$
PD Capacitance	C	pF		10	20	$V_r = 5\text{V}$ @ 1MHz

FJ2D-8100-x

Dimensions: (mm)

All dimensions are nominal



PINOUT

FJ2D-8100-1A (FL:5.8±0.1mm)	
Number	Function
1	Case Gnd
2	Laser Diode Cathode
3	Photodiode Anode
4	Photodiode Cathode & Laser Diode Anode

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