

## 1310nm 6.25Gbps 4Pin FP TO

### FIHA-8120-3H6 Series

**TYPE NAME: FIHA-8120-3H6**

#### Product Description:

The LuxNet FIHA-8120-3H6 TO-56 header assembly is designed for high speed, high performance data communication and telecommunication applications. This device is integrated with a 1310 nm 6 Gbps FP laser, a TO-56 header, a monitoring photodiode, and a ball lens cap. The product is designed for 6Gbps 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	85	
Solder Reflow Temperature	$T_s$	°C		260	10 seconds max.
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			12	T=25°C
Forward Voltage	$V_f$	V			1.5	T=0 to 85°C, $P_o=5$ mW
Slope Efficiency	$\eta$	mW/mA	0.24	-	0.50	Average, $I_{th}+5$ mA to $I_{th}+20$ mA
Peak Wavelength	$\lambda_p$	Nm	1290	1310	1330	$P_o=5$ mW
Spectral Wavelength (RMS)	$\Delta\lambda$	nm		1.4	3	CW(RMS), $I_{op}=30$ mA, K=1,
Rise Time/Fall Time	$\tau_r/\tau_f$	ps		70/70		$P_o=5$ mW, 20-80%,
Focal Point of Fiber Coupling	FL	mm	6.0	6.1	6.2	$I_{th}+20$ mA@T=25°C SMF(APC fiber w/o theta alignment)

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

Parameter	Symbol	Unit	Min.	Typ	Max	Test Condition
Monitor Current	$I_{pd}$	mA	0.1		0.7	$I_{th}+20$ mA @ T=25°C
Dark Current	$I_d$	nA			100	$P_{oc}=0$ , $V_r=1.7$ V
PD Capacitance	C	pF		10	20	$V_r=5$ V @ 1MHz

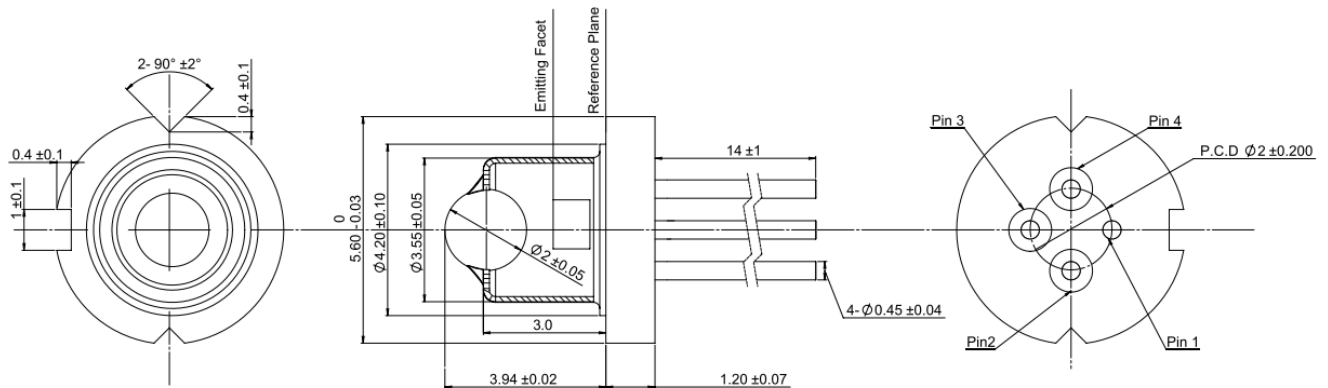
\* Specifications are subject to change without notice.

\* Screening per customer-specified reject limits is available.

Version 1.0

## FIHA-8120-3H6 (FP TO)

**Dimensions:** (mm)  
*All dimensions are nominal*



### PINOUT

FIHA-8120-3H6(FL:6.1±0.1mm)	
Number	Function
1	GND/ Photodiode Anode
2	Laser Diode Cathode
3	Photodiode Cathode
4	Laser Diode Anode

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### Notice

Version	Date	Status	Description	Signature
1.0	2014/5/26	Initial	FIHA-8120-3H6 Spec.	Cherry