

1310 nm 10 Gbps FP TO-can Package

L-TT-EF31-xx Series

TYPE NAME: L-TT-EF31-00

Product Description:

The LuxNet L-TT-EF31-xx TO-56 header assembly is designed for high speed, high performance data communication and telecommunication applications. This device is integrated with a 1310 nm 10Gbps FP laser, a TO-56 header, a monitoring photodiode, and a ball lens cap. The product is designed for 10Gbps short and intermediate-reach optical communication systems. This TO header assembly can be integrated with different types of ports providing good coupling efficiency with 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	STEM	°C		260	10 seconds max.
Laser Reverse Voltage	V _{RL}	V		2	
Laser Forward Current	I _F	mA		120	
Photodiode Reverse Voltage	V _{RD}	V		15	
Photodiode Forward Current	I _{pd}	mA		10	

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

Parameter	Symbol	Unit	Min.	Typ	Max.	Test Condition
Threshold Current	I _{th}	mA		8	12	T _c =25°C
					25	T _c =-40~85°C
Operating Voltage	V _{op}	V		1.3	2.0	I _{th} +20mA
Slope Efficiency	SE	mW/mA	0.20	-	0.50	Average, I _{th} +5 mA to I _{th} +20 mA, T _c =25°C
			0.12			T _c =85°C
Central Wavelength	λ _c	nm	1270	1310	1350	I _{th} +20mA, T _c = -40 to 85°C
Spectral Width (RMS)	Δλ	nm		1.3	2	I _{th} +20mA
					2.4	T _c =-40~85°C
Beam Divergence Angle (//)	θ //	degree		8		FWHM @ Pf=5mW
Beam Divergence Angle (⊥)	θ ⊥			9		
Wavelength temperature coefficient	Δλ/ΔT	nm/°C		0.45		T _c =-40 to 85°C
Kink		%			20	I _{th} +5mA to 120mA, T _c = -40~85°C
Bandwidth	f _{3dB}	GHz	9			T _c =25°C, I _{op} =35mA
			8			T _c =85°C, I _{op} =50mA
Rise/Fall Time	tr,tf	ps		50		20-80%, P _o =6mW
Tracking Error	TE	dB	-1.0	-	1.0	*(1)
Focal Point of Fiber Coupling	FL	mm	6.0	6.1	6.2	I _{th} +20mA

*(1) TE = 10xlog(Pf(T_c)/Pf(25°C)), I_m hold constant (@Pf=5.0mW, 25°C)

* Specifications are subject to change without notice.

* Screening per customer-specified reject limits is available.

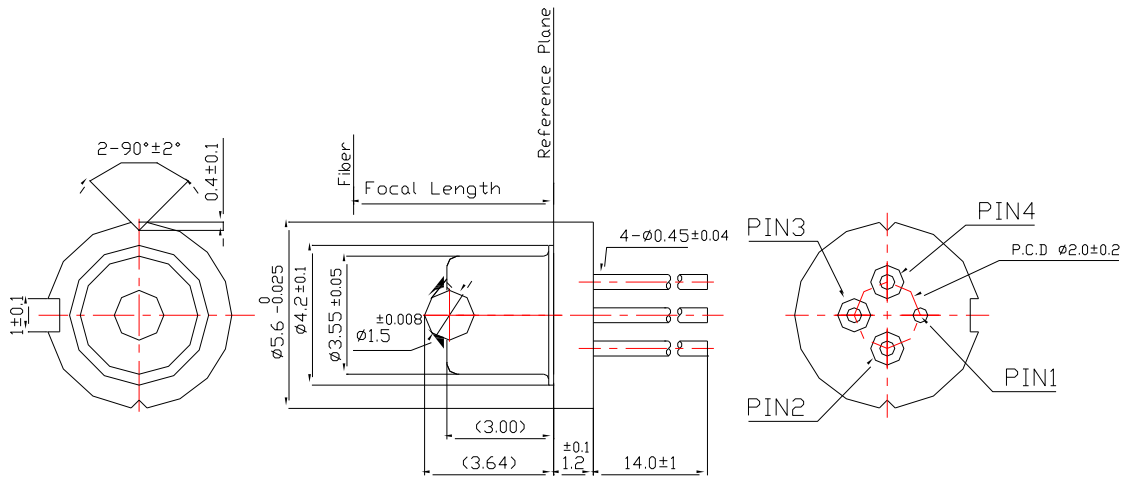
Version 1.1

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

Parameter	Symbol	Unit	Min.	Typ	Max	Test Condition
Monitor Current	I_{pd}	mA	0.1	0.5	0.8	$I_{th}+20mA, T_c=25^\circ C$
Dark Current	I_d	nA			100	
PD Capacitance	C	pF		10	20	$V_r=5V @ 1MHz$

L-TT-EF31-00

Dimensions: (mm)



PINOUT

L-TT-EF31-00(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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