

## 10G 1270nm DFB 4Pin TO-56

### L-TT-ED27-xx Series

Ver. : 1.0

#### TYPE NAME: L-TT-ED27-03

#### Product Description:

The LuxNet L-TT-ED27-03 TO-56 header assembly is designed for high speed, high performance data communication and telecommunication applications. This device is integrated with a 1270 nm 10Gbps DFB laser, a TO-56 header, a monitoring photodiode, and a lens cap. The product is designed for 10Gbps long reach 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 DFB laser is transmitted into a single mode fiber.

#### Application Note:

- For 10G

#### Product Specifications:

##### Absolute Maximum Ratings

Parameter	Symbol	Unit	Min.	Max.	Note
Operating Temperature(Ta)	T <sub>op</sub>	°C	-40	85	
Storage Temperature	T <sub>stg</sub>	°C	-40	85	
Solder Reflow Temperature	STEM	°C	-	260	10 seconds max.
Optical Output Power	P <sub>o</sub>	mW	-	15	
Laser Reverse Voltage	V <sub>r</sub>	V	-	2	
Photodiode Reverse Voltage	V <sub>rd</sub>	V	-	20	
Photodiode Forward Current	I <sub>pd</sub>	mA	-	10	

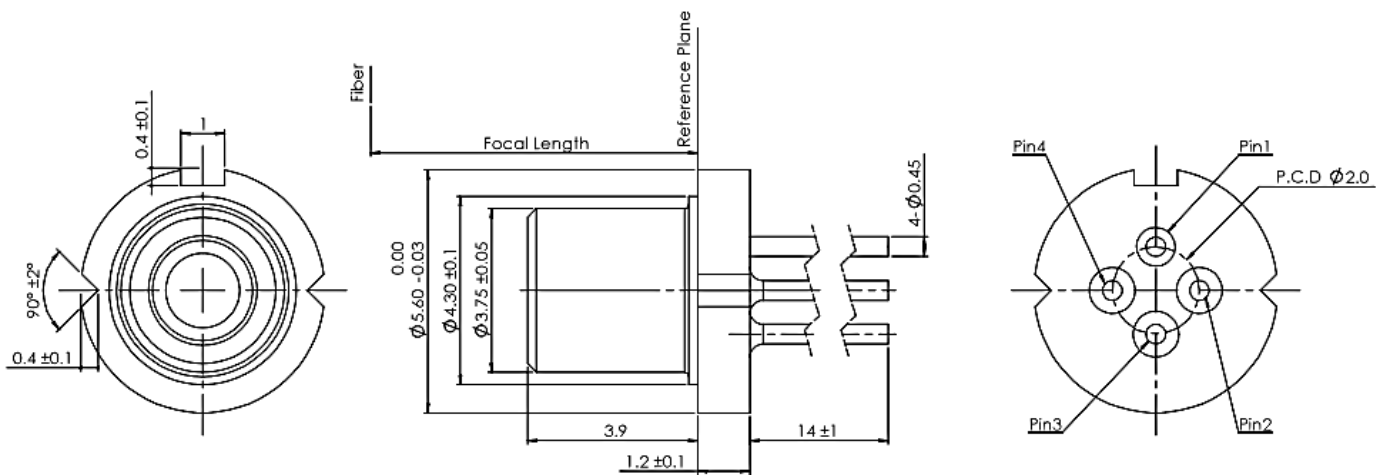
##### Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max.	Test Condition
Threshold Current	I <sub>th</sub>	mA	-	8	15	CW
Forward Voltage	V <sub>f</sub>	V	-	1.2	1.5	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Slope Efficiency	SE	mW/mA	0.30	-	-	Average, I <sub>th</sub> +5 mA to I <sub>th</sub> +20 mA
Peak Wavelength	λ <sub>p</sub>	nm	1267	1270	1273	CW, I <sub>op</sub> =I <sub>th</sub> +20mA Temp. 25°C
Spectral width	≥λ	nm	-	-	1	CW, I <sub>op</sub> =I <sub>th</sub> +20mA Scan resolution <0.1nm
Side Mode Suppression Ratio	SMSR	dB	35	-	-	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Rise / Fall Time	tr ,tf	ps	-	50/50	-	I <sub>th</sub> +20 mA, 20-80%
Focal Point of Fiber Coupling	FL	mm	7.2	7.5	7.8	CW, maximum coupling to SMF (9/125), PC fiber without theta alignment

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

Parameter	Symbol	Unit	Min.	Typ	Max	Test Condition
Monitor Current	$I_m$	mA	0.1	-	1.0	CW, Ith + 20 mA ,
PD Dark Current	$I_d$	nA	-	-	100	$V_r = 1.7V$
PD Capacitance	C	pF	-	10	20	$V_r = 5V @ 1MHz$

**L-TT-ED27-03**
**Dimension:** (mm)

*All dimensions are nominal*

**PINOUT**

Number	Function
1	PD Anode / Case
2	Laser Diode Cathode
3	Photodiode Cathode
4	Laser Diode Anode