

## 25Gbps DFB 4Pin TO-38

### L-TT-IDXX-24 Series

Ver. : 1.0

#### Type Name: L-TT-IDXX-24

#### Product Description:

The LuxNet L-TT-IDXX-24 TO-38 header assembly is designed for high speed, high performance data communication and telecommunication applications. This device is integrated with 25Gbps DFB laser, a TO-38 header, a monitoring photodiode, and an aspherical lens cap. 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:

- 25G BiDi

#### Product Specifications:

##### Absolute Maximum Ratings

Parameter	Symbol	Units	Min	Max	Note
Operating Temperature (case)	$T_c$	$^{\circ}\text{C}$	-40	85	Case temperature
Storage Temperature	$T_{stg}$	$^{\circ}\text{C}$	-40	85	
Laser Reverse Voltage	$V_r$	V	-	2	
Optical power	$P_o$	mW	-	20	Typical max. current is 80-85mA at RT
Photodiode Reverse Voltage	$V_{rd}$	V	-	15	
Photodiode Forward Current	$I_{pd}$	mA	-	10	

##### Electro-Optical Characteristics (T = 25 $^{\circ}\text{C}$ , unless noted otherwise):

Parameter	Symbol	Units	Min	Typ	Max	Test condition	
Threshold Current	$I_{th}$	mA	-	8	15	CW, $T_c = 25^{\circ}\text{C}$	
			-	-	26	CW, $T_c = 85^{\circ}\text{C}$	
Forward Voltage	$V_f$	V	-	-	2	CW, $T_c = 25^{\circ}\text{C}$ , $I_{op} = I_{th} + 30\text{mA}$	
Slope Efficiency	$\eta$	mW/mA	0.2	-	-	CW, $T_c = 25^{\circ}\text{C}$	
Peak Wavelength	L-TT-ID27-24	$\lambda_p$	nm	1261	1271	1281	$T_c = -40 \sim 85^{\circ}\text{C}$
	L-TT-ID31-24			1301	1311	1321	
	L-TT-ID33-24			1321	1331	1341	

*All specifications or information contained herein are subject to change for improvement without notice.  
Further details are available from any LUXNET sales representative.*

Parameter	Symbol	Units	Min	Typ	Max	Test condition
Side Mode Suppression Ratio	SMSR	dB	35	-	-	T <sub>c</sub> = 25°C, I <sub>op</sub> = I <sub>th</sub> +30mA Scan resolution 0.1 nm
Focal Length of Fiber Coupling	FL	mm	3.45	3.75	4.05	CW, maximum coupling to SMF (9/125), PC fiber without theta alignment
Rise Time / Fall Time	T <sub>r</sub> /T <sub>f</sub>	ps	-	20/20	-	I <sub>op</sub> = I <sub>th</sub> +30mA 20-80%

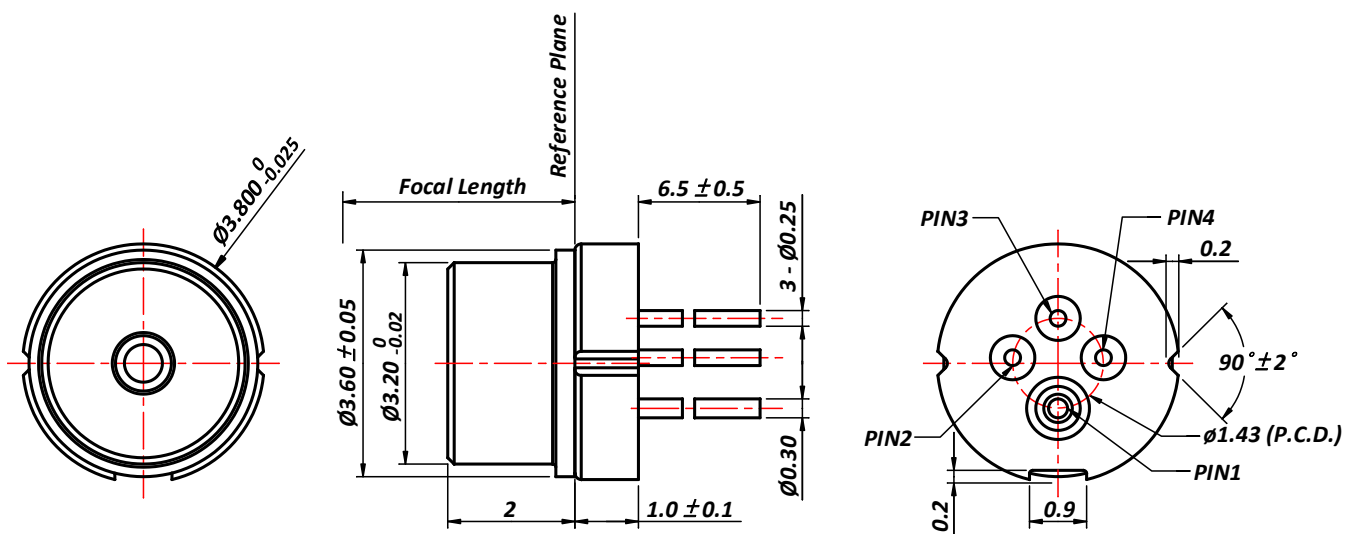
Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Units	Min	Typ	Max	test condition
PD Monitor Current	I <sub>m</sub>	mA	0.1	-	1.2	CW, I <sub>op</sub> = I <sub>th</sub> +30mA
PD Dark Current	I <sub>d</sub>	nA	-	-	100	P <sub>oc</sub> = 0, V <sub>r</sub> = 3.3V
PD Capacitance	C	pF	-	10	20	V <sub>r</sub> = 5V @ 1MHz

## L-TT-IDXX-24

**Dimension:** (mm)

*All dimensions are nominal*



PINOUT (Bottom View)

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

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**Document History**

Version	Date (MM/DD/YYYY)	Notes
1.0	10/26/2023	Initial Preliminary datasheet

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