

## 1310nm 25Gbps DFB Laser TO (Preliminary)

### L-TT-ID31-01

#### TYPE NAME: L-TT-ID31-01

#### Product Description:

This Luxnet L-TT-ID31-01 4pin 25Gbps DFB Laser TO38 header assembly is designed for high speed, high performance data communication and telecommunication applications. This device is integrated with a 1310 nm 25Gbps DFB laser, a TO-38 header, a mPD submount, a monitoring photodiode, and a ball 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.

#### Product Specifications:

##### Absolute Maximum Ratings

Parameter	Symbol	Units	Min	Max	Note
Operating Temperature (case)	T <sub>c</sub>	°C	-40	+85	
Storage Temperature	T <sub>stg</sub>	°C	-40	+85	
Soldering Temperature (10 sec)	STEM	°C	-	260	
Laser Reverse Voltage	V <sub>RL</sub>	V	-	2	
Laser Forward Current	I <sub>FL</sub>	mA	-	100	
Photodiode Reverse Voltage	V <sub>RD</sub>	V	-	2	
Photodiode Forward Current	I <sub>pd</sub>	mA	-	10	

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

Parameter	Symbol	Units	Min	Typ	Max	Test condition
Threshold Current	I <sub>th</sub>	mA	-	8	-	CW, T <sub>c</sub> = 25°C
			-	-	30	CW, T <sub>c</sub> = 85°C
Forward Voltage	V <sub>f</sub>	V	-	-	2	CW, T <sub>c</sub> = 25°C, I <sub>op</sub> = I <sub>th</sub> +30mA
Slope Efficiency	η	mW/mA	0.20	-	-	CW, T <sub>c</sub> = 25°C, I <sub>op</sub> = 40~50mA
Peak Wavelength	λ	nm	1300	1310	1320	T <sub>c</sub> = -40~85 °C
Side Mode Suppression Ratio	SMSR	dB	35	-	-	T <sub>c</sub> = 25°C, I <sub>op</sub> = I <sub>th</sub> +30mA Scan resolution <0.1nm
Focal Length of Fiber Coupling	FL	mm	3.7	4.0	4.3	CW, maximum coupling to SMF (9/125), PC fiber without theta alignment
Rise Time / Fall Time	τ <sub>r</sub> /τ <sub>f</sub>	ps	-	20/20	-	I <sub>op</sub> = I <sub>th</sub> +30mA 20-80%

\* Specifications are subject to change without notice.

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

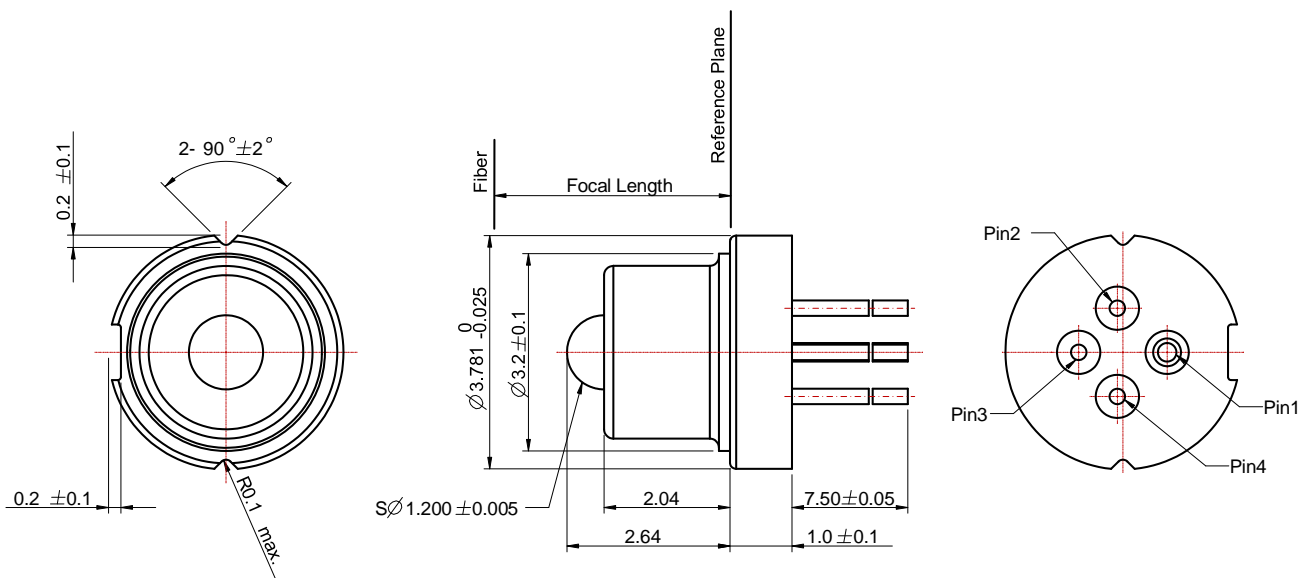
Photodiode Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Units	Min	Typ	Max	test condition
PD Monitor Current	I <sub>pd</sub>	mA	0.1	-	-	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> = 1.7V
PD Capacitance	C	pF	-	10	20	V <sub>r</sub> = 5V @ 1MHz

## L-TT-ID31-01

**Dimensions:** (mm)

All dimensions are nominal



TOCAN PINOUT (Bottom View)

L-TT-ID31-01	
Number	Function
Pin1	GND/ Photodiode Anode
Pin2	Laser Diode Anode (LD+)
Pin3	Photodiode Cathode (PD-)
Pin4	Laser Diode Cathode (LD-)

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