

## 1310nm 10Gbps FP Laser LC TOSA W/ Flex board

### L-AT-EF31-xx Series

**TYPE NAME: L-AT-EF31-00**

#### Product Description:

The Luxnet L-AT-EF31-00 4pin 10G FP Laser LC-TOSA (Transmitter Optical Sub Assembly) is designed for 10G fiber optic data communication applications. The requirements are used to perform through single mode optical fiber. The flex board interconnects the header to the transceiver PCB using control impedance. The device integrates an FP Laser diode with an InGaAs monitor which is located in the TO-can. The product has a low threshold current, and performs well even at high temperatures.

#### Product Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min.	Max.	Note
Operating Temperature(Tc)	T <sub>op</sub>	°C	-40	85	
Storage Temperature	T <sub>stg</sub>	°C	-40	85	
Solder Reflow Temperature(10sec)	--	°C	-	260	
Laser Reverse Voltage	V <sub>RL</sub>	V	-	2	
Laser Forward Current	I <sub>FL</sub>	mA	-	120	
Photodiode Reverse Voltage	V <sub>RD</sub>	V	-	15	
Photodiode Forward Current	I <sub>pd</sub>	mA	-	10	

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

Parameter	Symbol	Unit	Min.	Typ	Max.	Test Condition
Threshold Current	I <sub>th</sub>	mA	-	9	15	Tc=25°C
Forward Voltage	V <sub>f</sub>	V	-	1.4	2	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Optical Output Power	SMF PF	uW	250	-	500	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Slope Efficiency	SE	mW/mA	0.0125	-	0.025	CW, @I <sub>th</sub> +20mA
Central Wavelength	λ	nm	1290	1310	1330	CW, I <sub>op</sub> =I <sub>th</sub> +20mA
Spectral Wavelength (RMS)	Δλ	nm	-	1.4	3	CW (RMS -20dB) CW (RMS), I <sub>op</sub> =I <sub>th</sub> +20mA, K=1
Rise / Fall Time	Tr/Tf	ps	-	50	-	20% to 80%
Tracking Error(*1)	ΔPf/Pf	dB	-1.5	-	+1.5	APC, -40 ~ 85°C

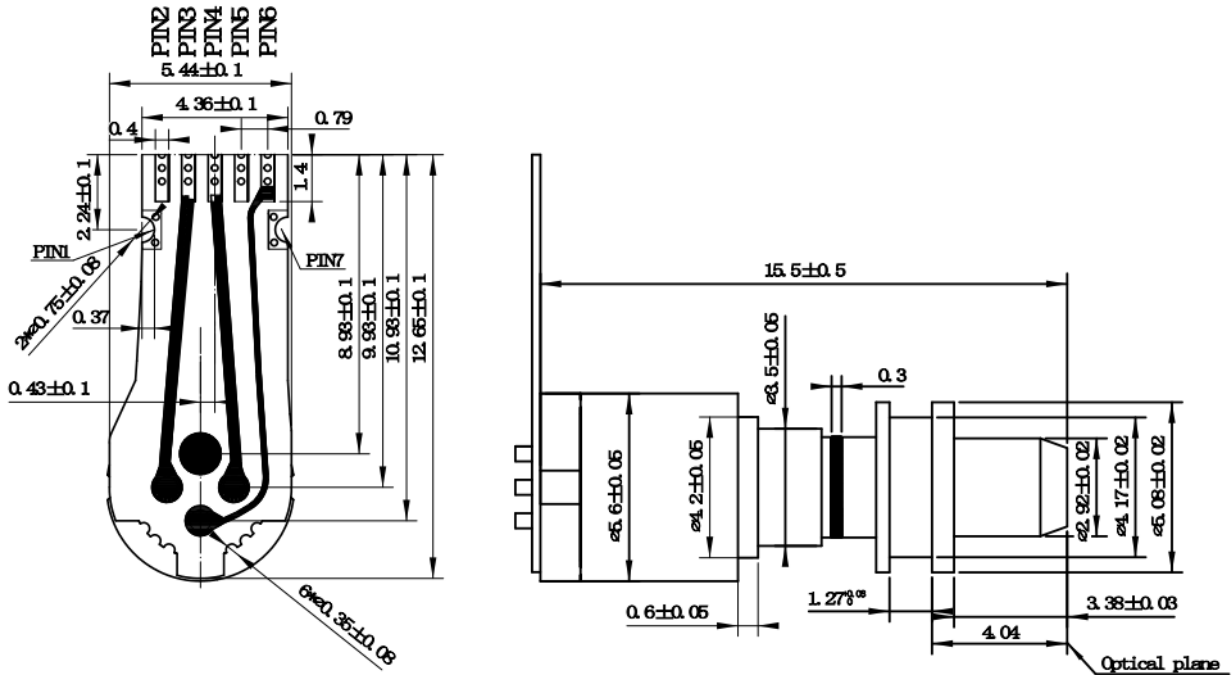
(\*1)  $10 \cdot \log \left\{ \frac{P_o @ -40 \sim +85^\circ \text{C}}{P_o @ 25^\circ \text{C}} \right\}$ , I<sub>m</sub> constant

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

Parameter	Symbol	Unit	Min.	Typ	Max	Test Condition
PD Monitor Current	I <sub>pd</sub>	mA	0.1	-	0.8	CW, I <sub>op</sub> =I <sub>th</sub> +20mA,
PD Dark Current	I <sub>d</sub>	nA	-	-	100	V <sub>r</sub> = 1.7V
PD Capacitance	C	pF	-	10	20	V <sub>r</sub> = 5V @ 1MHz

## L-AT-EF31-00 (LC-TOSA)

**Dimensions:** (mm)



### PIN definition

PN	Function
PIN1	GND/PD+
PIN2	GND/PD+
PIN3	LD+
PIN4	LD-
PIN5	GND/PD+
PIN6	PD-
PIN7	GND/PD+

### FPC Drawing

