

## 1310nm 10Gbps FP Laser LC TOSA with Flex board

### FI5D-910E-x Series

#### TYPE NAME: FI5D-910E-3J6

#### Product Description:

The Luxnet FI5D-910E-x 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	Units	Min	Max	Note
Operating Temperature (case)	Top	°C	-40	+85	
Storage Temperature	Tstg	°C	-40	+85	
Solder Reflow Temperature (10 sec)	STEM	°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 (T = 25°C, unless noted otherwise):

Parameter	Symbol	Units	Min	Typ	Max	test condition
Threshold Current	I <sub>th</sub>	mA	-	9	15	CW
Forward Voltage	V <sub>f</sub>	V	-	1.4	2	CW, I <sub>op</sub> =35 mA
Optical Output Power	SMF PF	dBm	-3.72	-	-1.67	CW, I <sub>op</sub> =35 mA
Slope efficiency	SE	mW/mA	0.0169		0.0272	Average, I <sub>th</sub> +5 mA to I <sub>th</sub> +25 mA
Central Wavelength (Note1)	λ	nm	1290	1310	1330	CW, I <sub>op</sub> =35 mA
Spectral Wavelength (RMS)	Δλ	nm		1.4	2	CW (RMS-20dB), CW(RMS), I <sub>op</sub> =35mA, K=1,
Rise/Fall Time	t <sub>r</sub> , t <sub>f</sub>	ps	-	50	-	20% to 80%
Tracking Error	ΔP <sub>f</sub> /P <sub>f</sub>	dB	-1.5		+1.5	APC, -40 ~ 85°C

##### 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	-	0.8	CW, I <sub>op</sub> =35 mA
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

\* Specifications are subject to change without notice.

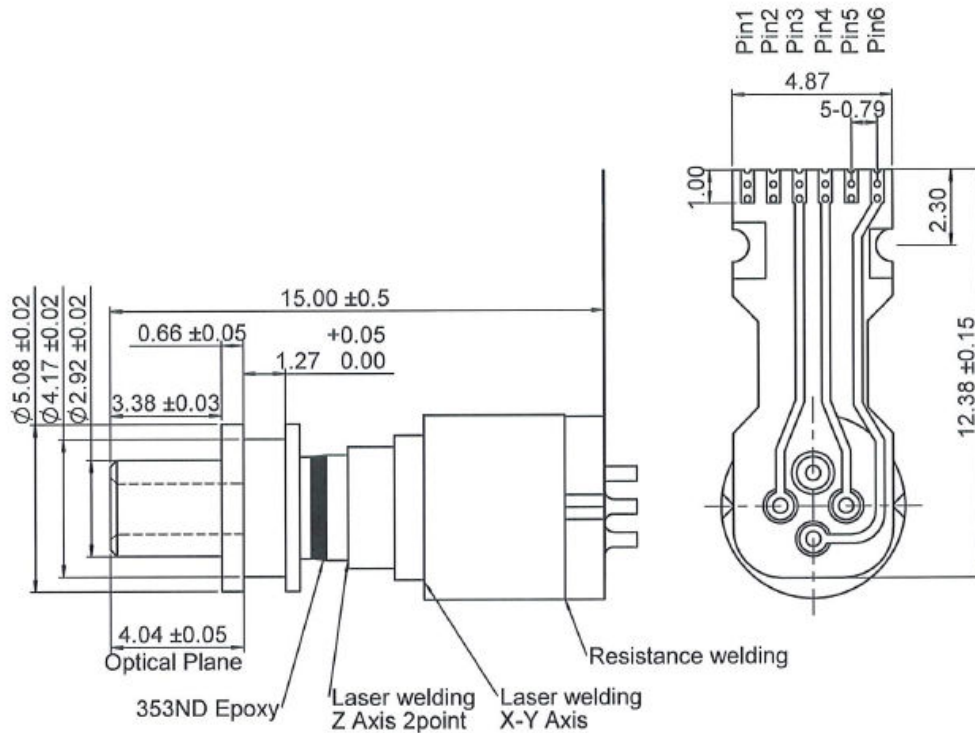
\* Screening per customer-specified reject limits is available.

Version 1.0

## FI5D-910E-3J6(LC-TOSA)

**Dimensions:** (mm)

*All dimensions are nominal*



Flex Board PINOUT (Bottom View)

FI5D-910E-3J6	
Number	Function
1	NO CONNECT
2	GND/PD+
3	LD+
4	LD-
5	GND/PD+
6	PD-

Note1:

Parameter	Symbol	Units	Min	Typ	Max	Part Number	Temperature
Central Wavelength	$\lambda$	nm	1290	-	1330	FI5D-910E-3J6	-40~85°C
Central Wavelength	$\lambda$	nm	1295	-	1310	FI5D-910E-3J6-1	-40~85°C

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## 1310nm 10Gbps FP Laser LC TOSA with Flex board

### Notice

Version	Date	Status	Description	Signature
1.0	2014/04/28	Initial	F15D-910E-3J6 datasheet Specification	Allen