

1310 nm 1.25G/2.5Gbps FP Lasers SC TOSA

FI2C-91xx-x Series

TYPE NAME:FI2C-9118-1

Product Description:

The LuxNet FI2C-91xx-x 4-pin 1.25G/2.5G FP Lasers LC/SC-TOSA (Transmitter Optical Sub-Assembly) is designed for Synchronous Digital Hierarchy (SDH) systems, SONET and other fiber optic communication network applications. This device integrates our Fabry-Perot (FP) laser diode with InGaAs monitor PIN-PD in a receptacle type package, and have low threshold current and high performance at high temperature.

Product Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Units	Min	Max	Note
Operating Temperature	T_{op}	°C	-40	+85	
Storage Temperature	T_{stg}	°C	-40	+100	
Solder Reflow Temperature	T_s	°C		260	
Laser Reverse Voltage	V_{RL}	V		2	
Laser Forward Current	I_{RL}	mA		150	
Photodiode Reverse Voltage	V_{RD}	V		15	
Photodiode Forward Current	I_{pd}	mA		10	

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

Parameter	Symbol	Units	Min	Typ	Max	test condition
Threshold Current	I _{th}	mA	8	10	15	CW @T _c =25°C
			3		30	CW @ T _c =-40~85°C
Forward Voltage	V _f	V		1.2	1.5	CW, I _{op} =I _{th} +20mA @ T _c =-40~85°C
Optical Output Power (Note 1)	High	PF	-1.5		1.8	CW, I _{op} =I _{th} +20mA, kink free
Peak Wavelength	λ	nm	1290	1310	1330	CW, I _{op} =I _{th} +20mA @ T _c =25°C
			1270	-	1360	CW, I _{op} =I _{th} +20mA @ T _c =-40~85°C
Slope Efficiency	SE	mW /mA	0.04	0.07	0.14	CW, I _{op} =I _{th} +20mA
	ΔSE	%		25	35	[1-SE@85°C/SE@25°C]*100
Spectral Wavelength(RMS)	Δλ	nm		1.5	3	I _{th} +20mA, Peak- RMS Kr=1, Mean= -20dB, T _c =-40~85°C
Rise/Fall Time	tr ,tf	ps		100	200	I _{th} +20mA, 20~80%
Tracking Error (Note 2)	ΔP _f /P _f	dB	-1.0		+1.0	CW, I _m =Constant (@P _o =I _{th} +20mA, T _c = 25°C), TE=10log [(P _o @T _c) / (P _o @25°C)], T _c = -40 ~ 85°C

* Specifications are subject to change without notice.

* Screening per customer-specified reject limits is available.

Version 1.3

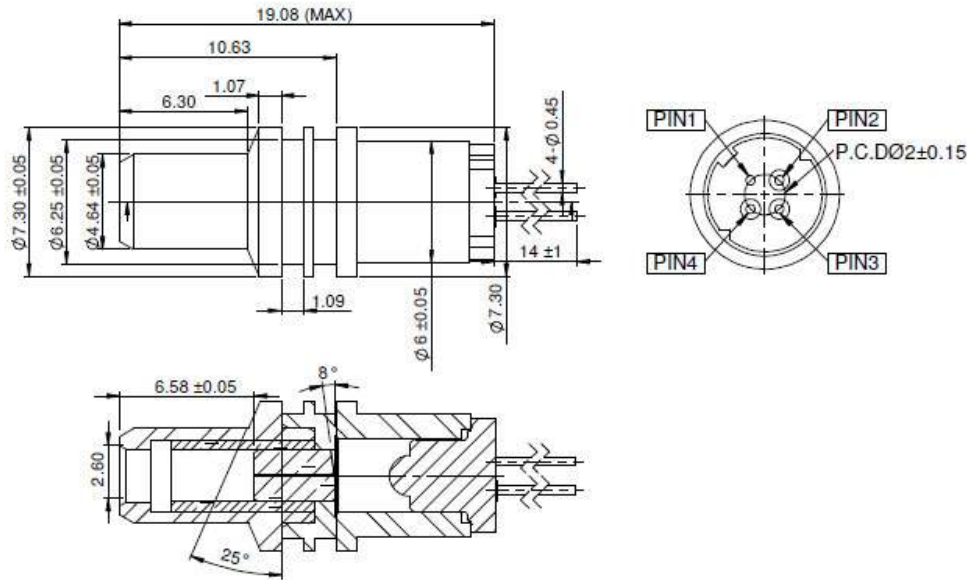
Photodiode Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Units	Min	Typ	Max	test condition
PD Monitor Current	I _{pd}	mA	0.1		0.8	CW, I _{th} +20mA, V _{RPD} = 2V
PD Dark Current	I _d	nA			100	P _{oc} = 0, V _r = 1.7V
PD Capacitance	C	pF		10	20	V _r = 5V, 1MHz

FI2C-9118-x (SC-TOSA)

Dimensions: (mm)

All dimensions are nominal



PINOUT (Bottom View)

FI2C-9118-1	
Number	Function
1	Case Gnd
2	Laser Diode Cathode
3	Photodiode Anode
4	Laser Diode Anode & Photodiode Cathode

Note 1: Output optical power is measured by master fiber (SMF 9/125) and holding DUT by OSA fixture.

Note 2: Set CW, P_f = I_{th} + 20mA at 25°C, constant power mode; T_A = 85°C / 25°C and -40°C / 25°C; use SMF and front end assembly

Note 3: In case, P_f = I_{th} + 20mA is not compliant with the optical output power specification at customer site, customer agrees to use SE specification to be the pass/fail criteria.

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