Uncooled 1310 nm Fabry-Perot (FP) Source Laser in LC Transmitter Optical Sub-assembly (TOSA)

CLR 92 Series

Key Features

- **Uncooled operation from -40 to 95 °C**
- **Operation; 1 G, 2 G FC & GbE for datacom, OC-3 through OC-48 for telecom**
- **Industry-standard TO-38 header with LC receptacled**
- **Excellent wiggle performance**

Applications

- Datacom: longwave 1 G FC, 2 G FC, GbE
- Telecom: SR-1 at OC-3 through OC-48

The Uncooled 1310 FP TOSA is a multi-rate 1310 nm direct modulated source laser packaged within an LC receptacled transmit optical sub-assembly (TOSA). The uncooled 1310 FP can be used for telecom data rates of 155 Mb/s up to 2.5 Gb/s for SONET SR, datacom rates of 1 G and 2 G fibre channel (FC), and gigabit Ethernet (GbE) applications.

Through the use of an AlInGaAs/InP ridge waveguide laser diode structure the device exhibits high slope efficiency and output power at operation up to 95 °C and bit rates of up to 2.5 Gb/s. Additionally, a robust opto-mechanical package design provides stable optical alignment resulting in excellent transceiver level wiggle performance.

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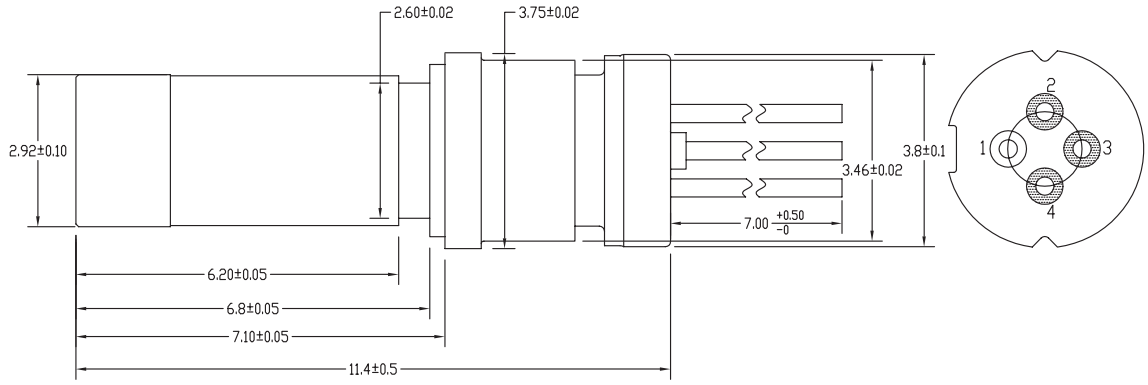
LC Type TOSA Dimensions Diagram | (Specifications in mm unless otherwise noted.)



Pinout

Pin	Description
1	Case
2	LD cathode
3	PD anode
4	LD anode/PD cathode

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Maximum Ratings

Parameter	Symbol	Conditions	Minimum	Maximum
Storage temperature	-	-	-40 °C	85 °C
Operating case temperature	T_C	-	-40 °C	95 °C
Reverse voltage (LD)	V_{RLD}	-	-	1 V
Reverse voltage (PD)	V_{RPD}	-	-	15 V
Forward current (LD)	I_{FLD}	-	-	150 mA
Forward current (PD)	I_{FPD}	-	-	2 mA
Soldering temperature		<10 seconds	-	260 °C

Specifications

(Tc=25 °C, SM LC master connecotr, BOL; unless otherwise noted.)

Parameter	Conditions	Minimum	Typical	Maximum
Threshold current (I_{TH})	T_C=25 °C	-	9 mA	15 mA
	T_C=-40 to 95 °C	-	20 mA	30 mA
Slope efficiency	-11.5 to -4.5 dBm	0.020 W/A	0.035 W/A	0.050 W/A
	T_C=-40 to 95 °C, -11.5 to -4.5 dBm	0.010 W/A	0.020 W/A	-
Central wavelength	T_C=25 °C	1295 nm	-	1325 nm
	T_C=-40 to 95 °C, 10 dB ER, EOL	1266 nm	1310 nm	1360 nm
RMS spectral width	T_C=-40 to 95 °C, 2.5 Gb/s 10 dB ER, -4.5 dBm, EOL	-	1.0 nm	1.75 nm
Relative intensity noise	1.875 GHz BW, T_C=-40 to 95 °C, -4.5 dBm	-	-130 dB/Hz	-120 dB/Hz
Tracking error	T_C=-40 to 95 °C, relative to 25 °C	-1.5 dB	-	1.5 dB
Rise/Fall time	20 to 80%, -4.5 dBm	-	-	0.15 ns
Extinction ratio		10 dB	-	-
LD operating voltage	-4.5 dBm	-	1.2 V	1.7 V
Monitor current	-4.5 dBm, V_R=1.5 V	150 µA	500 µA	950 µA
Monitor capacitance	V_R=1.5 V	-	-	25 pF
Wiggle	150 g application 90° to TOSA	-	±0.7 dB	±2.0 dB
Coupling repeatability	250 insertions	-	±0.5 dB	±1.0 dB

Ordering Information

For more information on this or other products and their availability, please contact your local JDSU account manager or JDSU directly at 1-800-498-JDSU (5378) in North America and +800-5378-JDSU worldwide or via e-mail at customer.service@jdsu.com.

Sample: 21065427

Product Code	Description
21065427	CLR92/408 Uncooled 1310 nm FP TOSA