

TLF-3G29-301

10Gbps LC Connectorized 1310nm DFB Laser Diode with Flex

FEATURES:

- LC-type optical sub-module with flexible circuit attached.
- Design for Small Form Factor transceivers.
- Low threshold current and low operating current.
- Support from DC to 10.3Gbps data rate operation.
- Internal optical isolator



ELECTRO-OPTICAL CHARACTERISTICS: ($T_A = 25^\circ\text{C}$, unless otherwise specified)

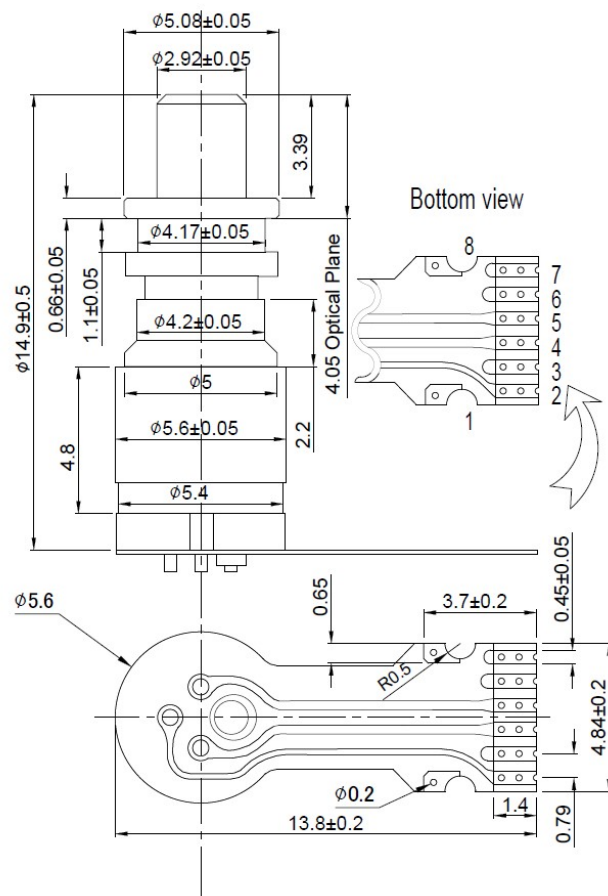
PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I_{th}		10	15	mA	CW
Forward Voltage	V_F		1.2		V	CW, $I_F = I_{th} + 20\text{mA}$
Slope Efficiency	η	0.025		0.040	mW/mA	CW, $I_F = I_{th} + 20\text{mA}$
Optical Output Power	P_f	500		800	μW	
Rise / Fall time(20%~80%)	tr/tf		50		ps	10.3125Gbps, $I_F = I_{th} + 20\text{mA}$
Wavelength	λ_p	1300	1310	1320	nm	CW, $I_F = I_{th} + 20\text{mA}$
		1260		1355		CW, $T_A = -40 \sim 85^\circ\text{C}$
Side Mode Suppression Ratio	SMSR	35			dB	CW, $I_F = I_{th} + 20\text{mA}$
PD Monitor Current	I_M	100		1000	μA	CW, $I_F = I_{th} + 20\text{mA}$, $V_R = 1\text{V}$
PD Dark Current	I_D			0.1	μA	$V_R = 5\text{V}$
PD Capacitance	C_M		5.5	10	pF	$V_R = 5\text{V}$, $f = 1\text{MHz}$
Tracking Error	TE	-1.5		1.5	dB	$I_M \text{ hold}@I_{th} + 20\text{mA}(25^\circ\text{C})$ $T_A = -40 \sim 85^\circ\text{C}$
Return Loss	RL	12			dB	

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	TEST CONDITIONS
Storage Temperature	-40	85	$^\circ\text{C}$	
Operating Temperature	-40	85	$^\circ\text{C}$	
Lead Solder Temperature		260	$^\circ\text{C}$	10 seconds
Flex Attach Temperature		370	$^\circ\text{C}$	10 seconds
LD Reverse Voltage		2	V	
PD Reverse Voltage		20	V	
PD Forward Current		2	mA	

OUTLINE DIMENSIONS:

• Unit: mm



Pinout:

TLF-3G29-301	
Pin no.	Function
1	Gnd/PD Anode
2	PD Cathode
3	Gnd/PD Anode
4	LD Cathode
5	LD Anode
6	Gnd/PD Anode
7	N. C.
8	Gnd/PD Anode

The DFB Laser is a class 1 laser in the safety standard IEC60825-1:2014.

