

# TME-2B89-307

## 10Gbps 1270nm DFB Laser Diode

### FEATURES:

- Industry standard TO-56 package with Aspherical lens cap
- 1270nm typical emission wavelength
- Low threshold current and low operation current.
- Support from DC to 10.3125Gbps data rate operation.
- Isolation pinout.



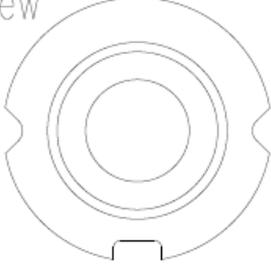
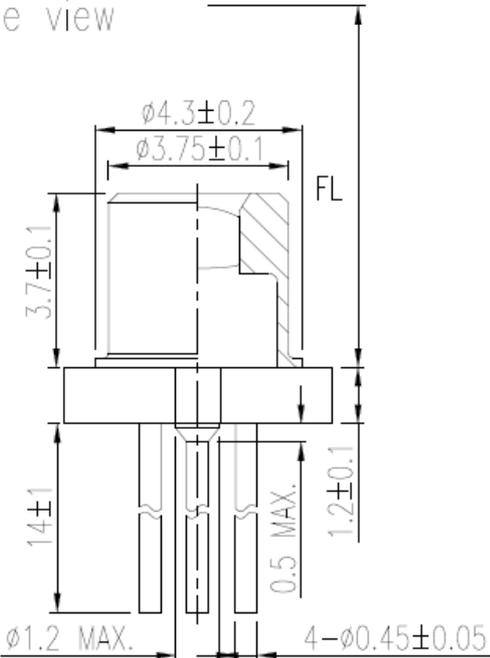
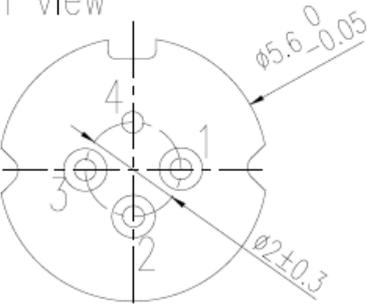
### ELECTRO-OPTICAL CHARACTERISTICS : (Tc=25°C, unless otherwise stated)

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I <sub>th</sub>		10	15	mA	CW
			25	35		CW, T <sub>C</sub> = 85°C
Forward Voltage	V <sub>f</sub>		1.2		V	CW, I <sub>F</sub> = I <sub>th</sub> + 20mA
Slope Efficiency	η	0.35	0.4		mW/mA	CW, I <sub>F</sub> = I <sub>th</sub> + 20mA
Peak Wavelength	λ <sub>P</sub>	1260	1270	1280	nm	CW, I <sub>F</sub> = I <sub>th</sub> + 20mA, T <sub>C</sub> = -40°C ~ 85°C
Side Mode Suppression Ratio	SMSR	35			dB	CW, I <sub>F</sub> = I <sub>th</sub> + 25mA
Rise / Fall Time (20%~80%)	T <sub>r</sub> / T <sub>f</sub>		50		ps	10.3125Gbps I <sub>F</sub> = I <sub>th</sub> + 20mA
PD Monitor Current	I <sub>m</sub>	100		1000	uA	CW, I <sub>F</sub> = I <sub>th</sub> + 20mA, V <sub>R</sub> = 1V
PD Dark Current	I <sub>d</sub>			0.1	uA	V <sub>R</sub> = 5V
PD Capacitance	C <sub>PD</sub>		6	10	pF	V <sub>R</sub> = 5V @1MHz
Focal Length	FL	7.2	7.5	7.8	mm	CW, I <sub>F</sub> = I <sub>th</sub> + 20mA, SMF

### ABSOLUTE MAXIMUM RATINGS :

PARAMETERS	MIN	MAX	UNIT	CONDITIONS
Storage Temperature	-40	85	°C	
Operating Temperature	-40	85	°C	
Lead Solder Temperature		260	°C	10 seconds
LD Reverse Voltage		2	V	
PD Reverse Voltage		20	V	
PD forward Current		2	mA	

**OUTLINE DIMENSIONS: (unit : mm)**

Outline Dimensions	TME-2B89-307	
<p>Top view</p>  <p>Side view</p>  <p>Bottom view</p>  <p>Rev: F</p>	<p>Focal Length : <math>7.5 \pm 0.3</math> mm</p>	
		<p>Pin Out (Bottom View)</p>

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

