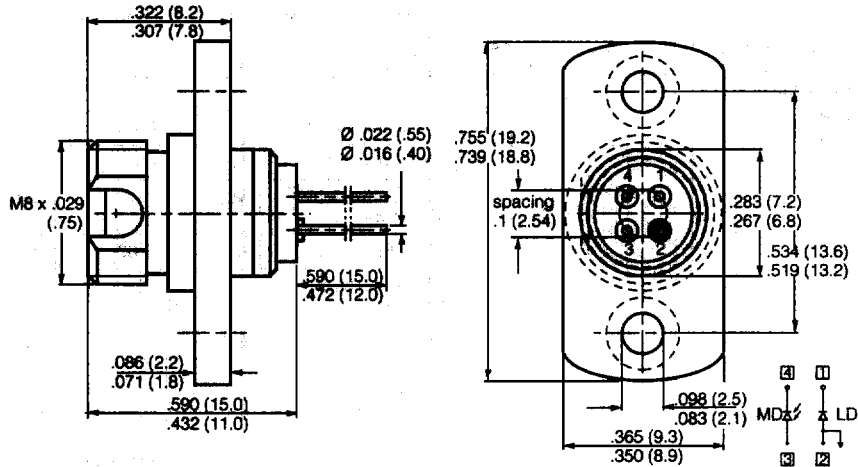
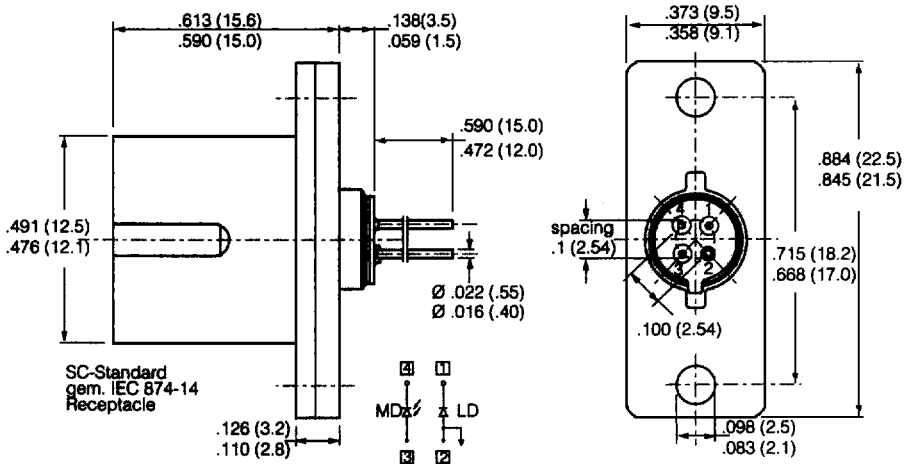


Dimensions in inches (mm)

STL81007G



STL81007N



Fiber Optics
Components
Laser Diodes

FEATURES

- Designed for fiber optic networks
- Laser diode with multi-quantum well structure
- Suitable for bit rates up to 1 Gbit/s
- Ternary photodiode at rear mirror to monitor and control radiant power
- Hermetically sealed subcomponents, similar to TO-18
- SM receptacle with 2-hole flange and optional connector

Maximum Ratings Output power ratings refer to the SM fiber output. The operating temperature of the sub-mount is identical to the case temperature.

Module

Operating and Storage Temperature Range
 at Case (T_C , T_{STG}) -40 to +85°C
 Soldering Temperature (T_S) 260°C
 t_{max} = 10 s, 2 mm from bottom edge of case

Laser Diode

Direct Forward Current (I_{Fmax}) 120 mA
 Radiant Power CW (Φ_e) 1 mW
 Reverse Voltage (V_{Rmax}) 2 V

Monitor Diode

Reverse Voltage (V_{Rmax}) 10 V

Characteristics

All optical data refer to a coupled 10/125 μ m SM fiber, $T_C = 25^\circ\text{C}$

Parameter	Symbol	Value	Unit	
Laser Diode				
Optical Output Power CW	Φ_e	>0.2	mW	
Emission Wavelength, Center of Range	λ	1510-1590	nm	$\Phi_e = 0.2 \text{ mW}$
Spectral Bandwidth	$\Delta\lambda$	<5		$\Phi_e = 0.2 \text{ mW (RMS)}$
Threshold Current	I_{th}	8-60	mA	-40 to +85°C
Forward Voltage	V_F	<1.5	V	$\Phi_e = 0.2 \text{ mW}$
Radiant Power at Threshold	Φ_{eth}	<10	μ W	
Slope Efficiency	η	8-60	mW/A	-40 to +85°C
Differential Series Resistance	r_S	<8	W	
Rise Time/Fall Time	t_R, t_F	<1	ns	
Monitor Diode				
Dark Current	I_R	<500	nA	$V_R = 5 \text{ V}, \Phi_e = 0, T_C = 85^\circ\text{C}$
Photocurrent	I_P	100-1000	μ A	$\Phi_e = 0.2 \text{ mW}$