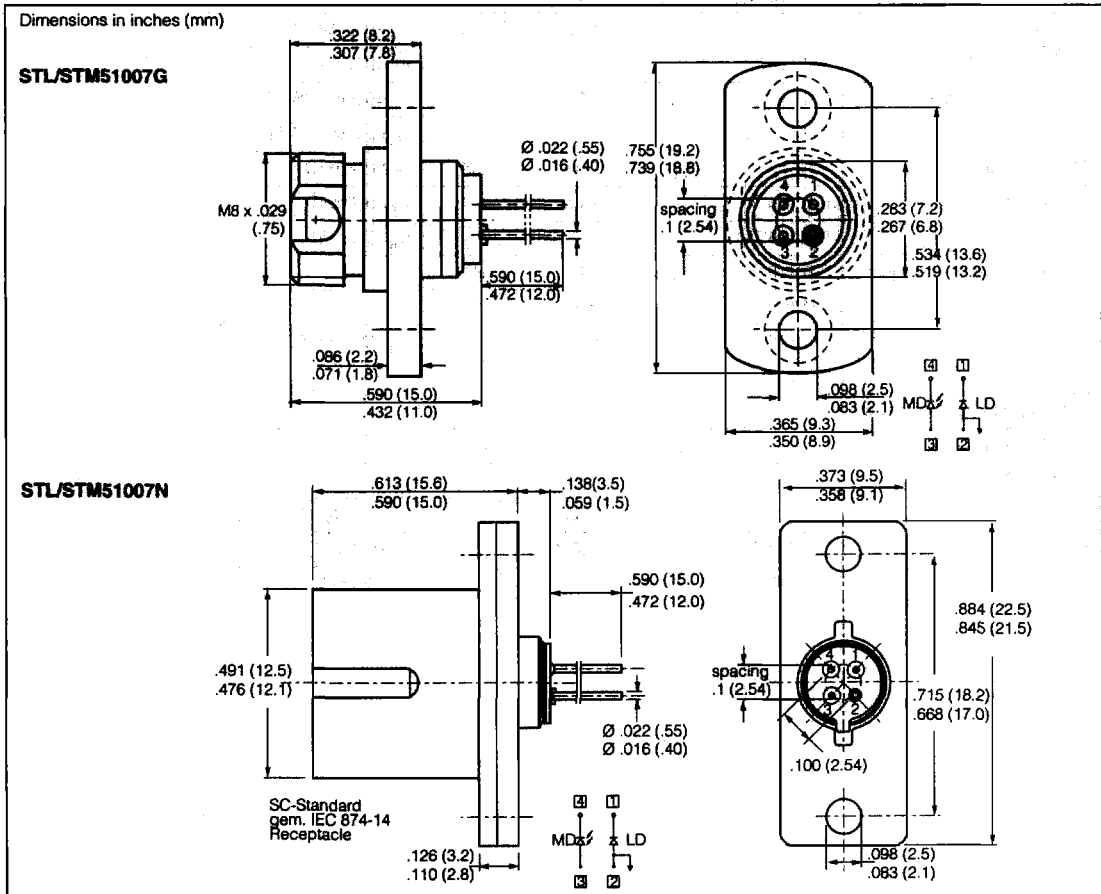


# SIEMENS

## LOW POWER **STL51007G/N** MEDIUM POWER **STM51007G/N** 1300 nm Laser in FC or SC Receptacle Package



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 fange and optional connector

### Maximum Ratings

Output power ratings refer to the SM fiber output. The operating temperature of the submount is identical to the case temperature.

#### Module

Operating/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 ( $\Phi_e$ ) ..... 1 mW

STL ..... 2 mW

STM ..... 2 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  $\mu\text{m}$  SM fiber,  $T_C=25^\circ\text{C}$

Parameter	Symbol	Value	Unit	Condition	
<b>Laser Diode</b>					
Optical Output Power CW	STL51007G/N	$\Phi_e$	>0.2	mW	
	STM51007G/N		>0.5		
Emission Wavelength, Center of Range	STL51007G	$\lambda$	1280–1330	nm	$\Phi_e=0.2\text{mW}$
	STM51007G				$\Phi_e=0.5\text{mW}$
Spectral Bandwidth	STL51007G	$\Delta\lambda$	<5		$\Phi_e=0.2\text{mW (RMS)}$
	STM51007G				$\Phi_e=0.5\text{mW (RMS)}$
Threshold Current		$I_{th}$	2–45	mA	–40 to +85°C
Forward Voltage	STL51007G	$V_F$	<1.5	V	$\Phi_e=0.2\text{mW}$
	STM51007G				$\Phi_e=0.5\text{mW}$
Radiant Power at Threshold	STL51007G	$\Phi_{eth}$	<10	$\mu\text{W}$	
	STM51007G		<40		
Slope Efficiency	STL51007G	$\eta$	8–60	mW/A	–40°C to +85°C
	STM51007G		20–100		
Differential Series Resistance		$r_S$	<8	W	
Rise Time/Fall Time		$t_R, t_F$	<1	ns	
<b>Monitor Diode</b>					
Dark Current		$I_R$	<500	nA	$V_R=5\text{V}, \Phi_e=0, T_C=85^\circ\text{C}$
Photocurrent	STL51007G	$I_P$	100–1000	$\mu\text{A}$	$\Phi_e=0.2\text{mW}$
	STM51007G				$\Phi_e=0.5\text{mW}$