Target Specification
1300nm DFB Laser in Coaxial Package with SM-Pigtail, High Power, with optical Isolator for 2,5GBit Application

- Designed for application in high-speed and long-haule fiber-optic networks
- Laser Diode with Multi-Quantum-Well and gain coupled structure
- Suitable for bit rates up to 2,5 Gbit/s (STM-16) with optical isolator, without cooler
- Ternary photodiode at rear mirror for monitoring and control of radiant power
- Hermetically sealed subcomponent, similar to TO 18
- SM Pigtail with optional flange

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

Module	**Symbol**	**Values**	**Unit**
Operating Temperature range at case	T_C	- 20... +85	°C
Storage Temperature range	T_{stg}	- 40... +85	°C
Soldering Temperature tmax = 10 s, 2 mm distance from bottom edge of case	T_S	260	°C

Laserdiode	**Symbol**	**Values**	**Unit**
Direct forward current	$I_{F\ max}$	120	mA
Radiant power CW	Φ_e	4	mW
Reverse Voltage	$V_{R\ max}$	2	V

Monitor Diode	**Symbol**	**Values**	**Unit**
Reverse Voltage	$V_{R\ max}$	10	V

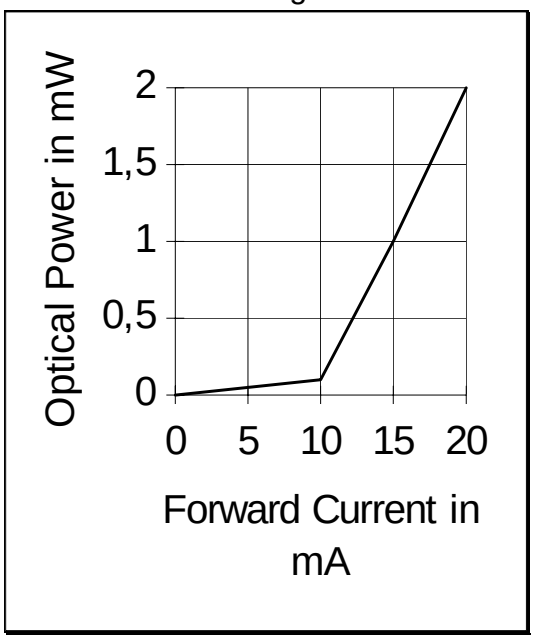
Characteristics

All optical data refer to a coupled 10/125µm SM fiber, Tc =25°C.

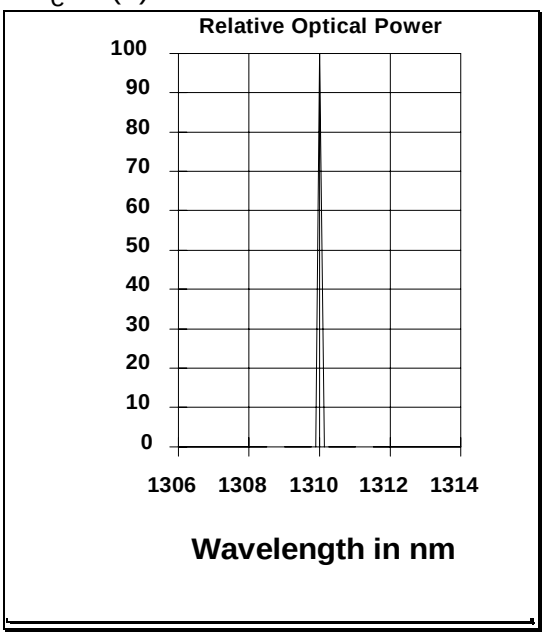
Laser Diode	**Symbol**	**Values**	**Unit**
Optical Output Power	Φ_e	>2,4	mW
Emission wavelength center of range Φ_e =1 mW	λ	1280...1330	nm
Spectral bandwidth Φ_e =1mW(RMS), f<5GHz	$\Delta\lambda$	< 0,1	nm
Side mode suppression ratio	SSR	>35	dB
Threshold current (-20...+85°C)	I_{th}	5...55	mA
Forward voltage Φ_e =1mW	V_F	< 1,5	V
Radiant power at threshold	Φ_{eth}	< 80	µW
Slope Efficiency (-20...+85°C)	η	25...150	mW/A
Differential series resistance	r_S	< 8	Ω
Rise Time/Fall Time	t_R, t_F	< 0,5	ns
Temperature Coefficient of the emission wavelength center	TCλ	<0,15	nm/K
Optical Isolation (T=25°C)		>30	dB

Monitor Diode	**Symbol**	**Values**	**Unit**
Dark Current, V_R =5V, Φ_e = 0	I_R	<500	nA
Photocurrent, Φ_e =1mW	I_P	100...1200	µA

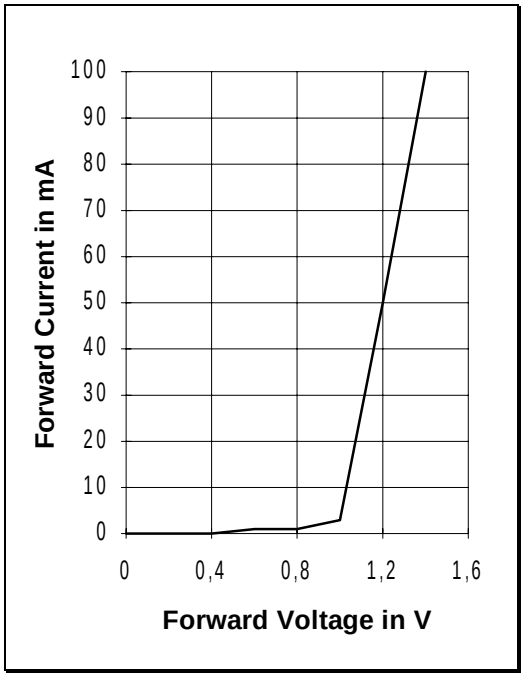
Laser Diode
Radiant Power in Singlemode Fibre



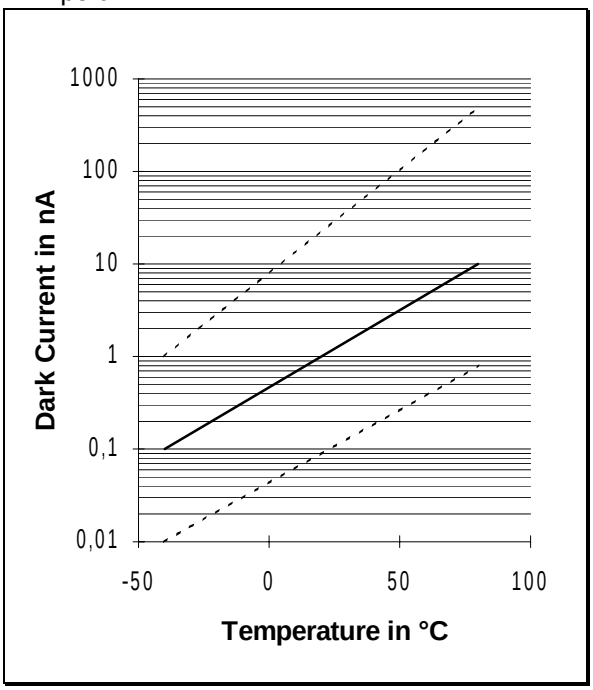
Relative Radiant Power
$\Phi_e = f(\lambda)$



Laser Forward Current
$I_F=f(V_F)$



Monitor Diode Dark Current $I_R=f(T_A)$
$\Phi_{port}=0$, V_R = 5V



Ordering Information:

Type	Ordering Code	Connector/Flange
STH61008G	Q62702-Pxxxx	FC / without flange
STH61008A	Q62702-Pxxxx	DIN / without flange

Component with other connector types on request