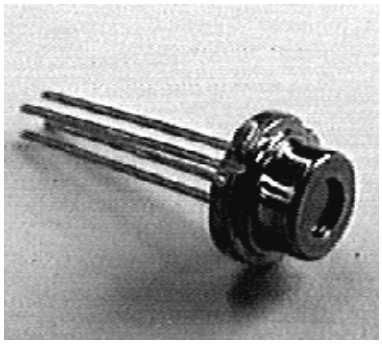
1300nm Laser in Coaxial TO-Package

- Designed for application in fiber-optic networks
- Laser Diode with Multi-Quantum Well structure
- Suitable for bit rates up to 1 Gbit/s
- Ternary photodiode at rear mirror for monitoring and control of radiant power
- Hermetically sealed subcomponent, similar to TO 18
- with integrated Silicon-Optics for high coupling efficiencies



Maximum Ratings
Output power ratings refer to the optical port. The operating temperature of the submount is identical to the case temperature

Module	**Symbol**	**Values**	**Unit**
Operating Temperature range at case	T_C	- 40... +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	10	mW
Reverse Voltage	$V_{R\ max}$	2	V

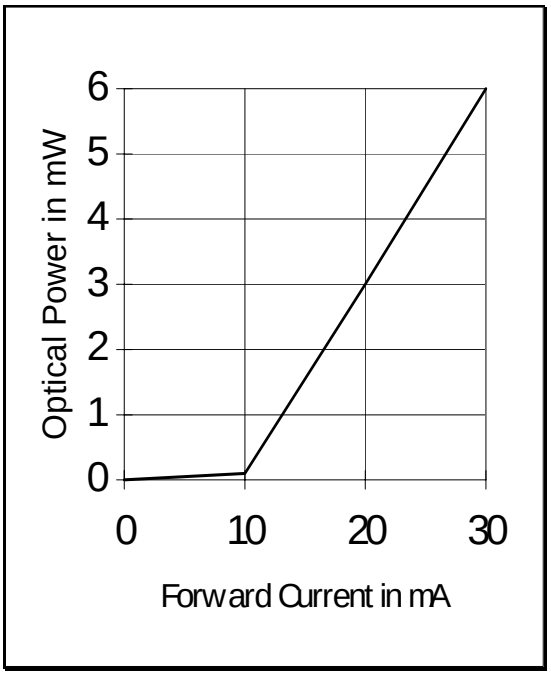
Monitor Diode	**Symbol**	**Values**	**Unit**
Reverse Voltage	$V_{R\ max}$	10	V

Characteristics
All optical data refer to the optical port.

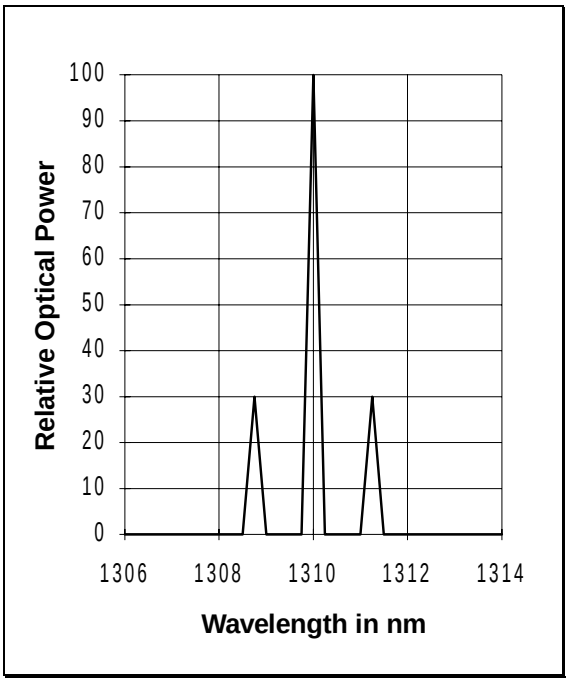
Laser Diode	**Symbol**	**Values**	**Unit**
Optical Output Power	Φ_e	>6	mW
Emission wavelength center of range Φ_e =3 mW	λ	1280...1330	nm
Spectral bandwidth Φ_e =3 mW (RMS)	$\Delta\lambda$	<5	nm
Threshold current	I_{th}	< 15	mA
Forward voltage Φ_e =3 mW	V_F	< 1,5	V
Radiant power at threshold	Φ_{eth}	< 200	µW
Slope Efficiency	η	> 200	mW/A
Differential series resistance	r_S	< 8	Ω
Rise Time/Fall Time	t_R, t_F	< 1	ns

Monitor Diode	**Symbol**	**Values**	**Unit**
Dark Current, V_R =5V, Φ_e = 0	I_R	<500	nA
Photocurrent, Φ_e =3 mW	I_P	150...1500	µA

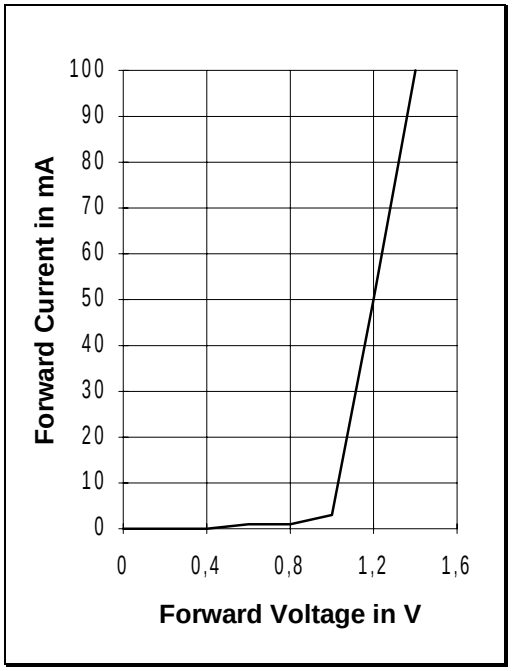
Laser Diode
Radiant Power in Singlemode Fibre



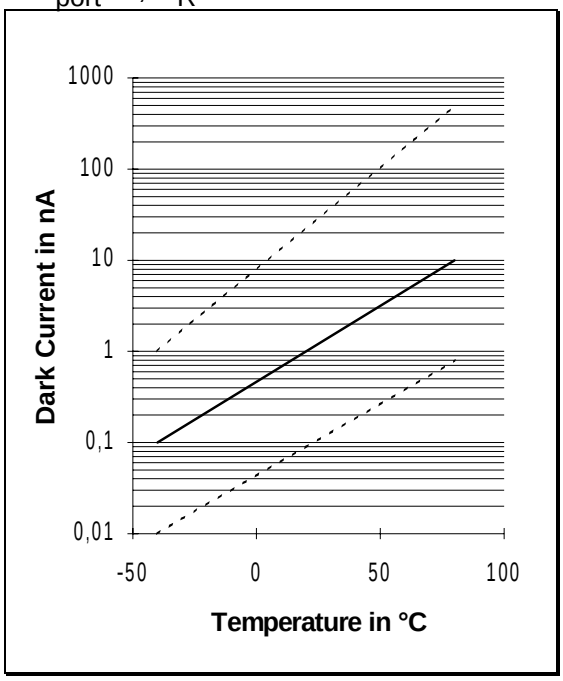
Relative Radiant Power
$\Phi_e = f(\lambda)$



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
STH51002Z	Q62702-Pxxxx

Component with other Pinout on request