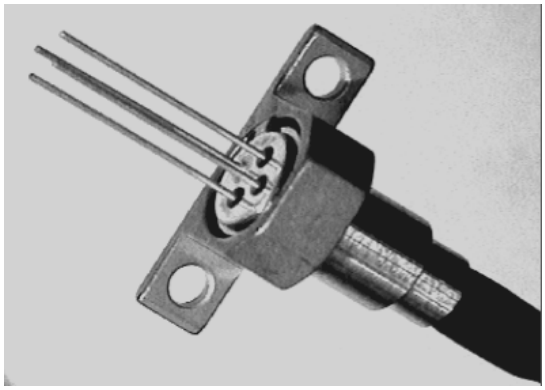
Target Specification
1300nm DFB Laser in Coaxial Package with SM-Pigtail, High Power

- Designed for application in high-speed and long-haul fiber-optic networks
- Laser Diode with Multi-Quantum-Well and gain coupled structure
- Suitable for bit rates up to 622 Mbit/s (STM-4) without thermoelectric cooler and optical isolator
- 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**
		Min.	Max.	
Operating Temperature range at case [1)]	T_C	0	75	°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**
		Min.	Max.	
Direct forward current	$I_{F\ max}$		120	mA
Radiant power CW	Φ_{av}		4	mW
Reverse Voltage	$V_{R\ max}$		2	V

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

1) Lasermodule for 85°C operating temperature on request

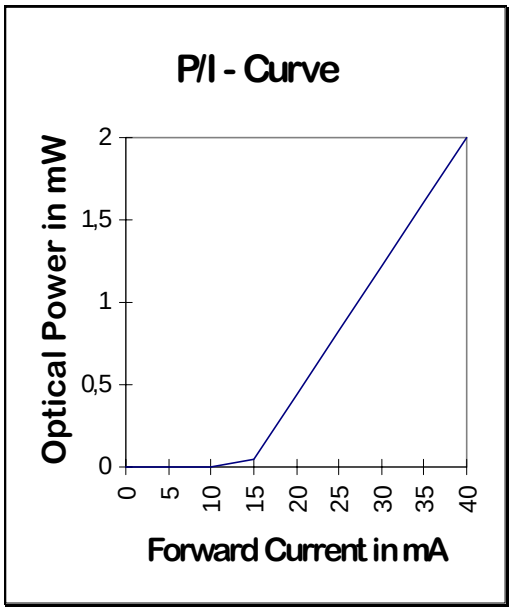
Characteristics

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

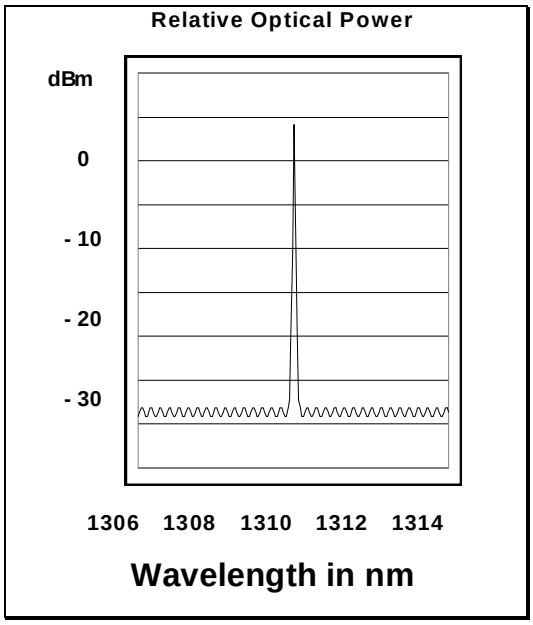
Laser Diode	**Symbol**	**Values**		**Unit**
		Min.	Max.	
Optical Peak Output Power	Φ_{pk}	2,4		mW
Optical Average Output Power	Φ_{av}	1,0		mW
Emission wavelength center of range Φ_{av} =1 mW	λ	1280	1330	nm
Spectral bandwidth Φ_{av} =1mW (RMS)	$\Delta\lambda$		0,1	nm
Side mode suppression ratio	SSR	30		dB
Threshold current (0...+75°C)	I_{th}		55	mA
Forward voltage Φ_{av} =1mW	V_F		1,5	V
Radiant power at threshold	Φ_{eth}		80	µW
Slope Efficiency (0...+75°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

Monitor Diode	**Symbol**	**Values**		**Unit**
		Min.	Max.	
Dark Current, V_R =5V, Φ_{av} = 0	I_R		10	nA
Photocurrent, Φ_{av} =1mW	I_P	100	1500	µA

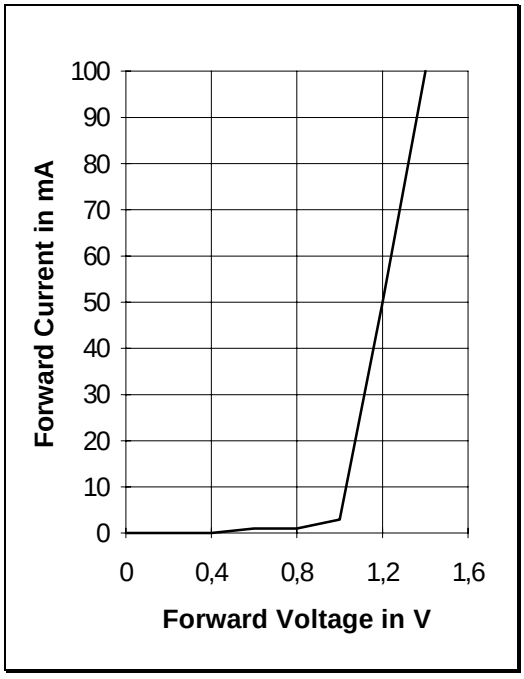
Laser Diode
Radiant Power in Singlemode Fibre



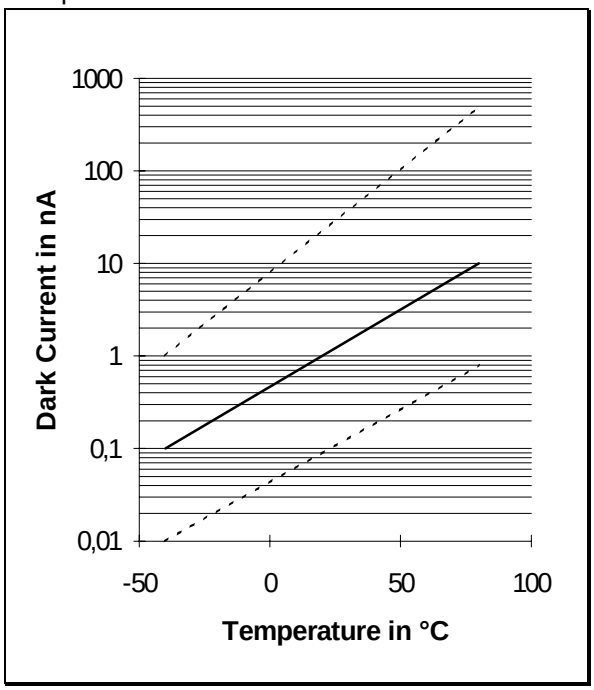
Relative Radiant Power
$\Phi_{av} = f(\lambda)$



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
STH61004G	Q62702-P3154	FC / without flange
STH61004A	Q62702-P3128	DIN / without flange
STH61005G	Q62702-P3187	FC / with flange
STH61005A	Q62702-P3221	DIN / with flange

Component with other connector types on request

Package Dimension:
STH61004x

STH61005x (with flange)