



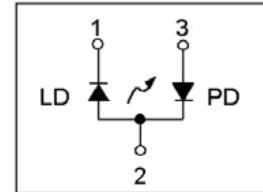
Samsung Semiconductor Laser

1. SLD63518240

Application : Measuring Instrument

Features

- Lasing wavelength : $\lambda_p = 635\text{nm}$
- Optical output power : $P_o = 5\text{mW}$ (CW)
- Package type : TO-18 [$\Phi 5.6$]
- Built-in photodiode for optical power monitoring
- InGaAlP laser with multi-quantum well structure



[SLD63518240]

Absolute maximum ratings [$T_c = 25^\circ\text{C}$]

Parameter	Symbol	Value	Unit
Optical output power	P_o	7	mW
LD reverse voltage	V_R	2	V
PD reverse voltage	V_R	30	V
Operating temperature	T_{opr}	-10 ~ +40	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 ~ +85	$^\circ\text{C}$

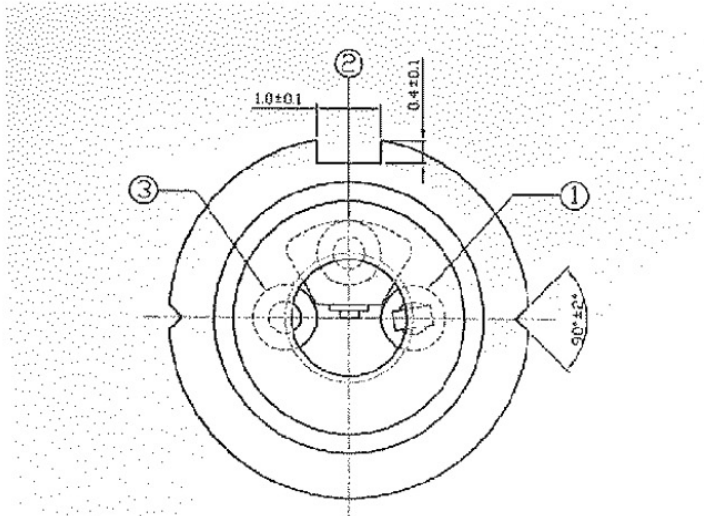
Electrical & optical characteristics [$T_c = 25^\circ\text{C}$]

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Optical output power	P_o	-	-	5	-	mW
Threshold current	I_{th}	-	-	30	35	mA
Operating current	I_{op}	$P_o = 5\text{mW}$	-	38	40	mA
Operating voltage	V_{op}	$P_o = 5\text{mW}$	-	2.2	2.7	V
Monitor current	I_m	$P_o = 5\text{mW}$	0.01	0.04	0.1	mA
Lasing wavelength	λ	$P_o = 5\text{mW}$	630	637	640	nm
Beam divergence	$\theta_{//}$	$P_o = 5\text{mW}$	6	8	15	degree
	θ_{\perp}	$P_o = 5\text{mW}$	22	33	40	
Beam angle accuracy	$\Delta\theta_{//}$	$P_o = 5\text{mW}$	-	-	± 1.5	
	$\Delta\theta_{\perp}$	$P_o = 5\text{mW}$	-	-	± 2.5	
Positional accuracy	$\Delta X, \Delta Y, \Delta Z$	$P_o = 5\text{mW}$	-	-	± 60	μm
Differential efficiency	η	-	0.3	0.5	0.7	mW/mA
Astigmatism	A_s	$P_o = 5\text{mW}$	-	-	-	μm



Package : TO-18 ($\Phi 5.6\text{mm}$)

Top view



Front view

