

DL3148-025 Red Laser Diode

Features

- Short wavelength : 635 nm (Typ.)
- Output power : 5 mW CW
- Low threshold current : $I_{th} = 20$ mA (Typ.)
- Low operating voltage : $V_{op} = 2.2$ V (Typ.)
- Small package : ϕ 5.6 mm

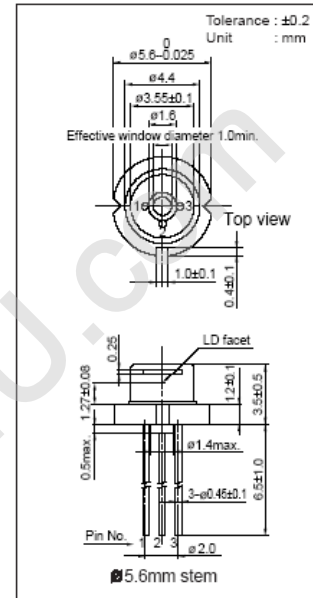
Applications

- Laser pointer

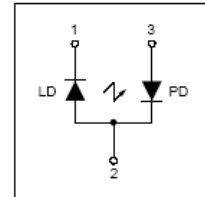
Absolute Maximum Ratings at $T_c=25^\circ\text{C}$

Parameter	Symbol	Unit	Ratings
Light Output	CW	Po	6 mW
Reverse Voltage	Laser	VR	2 V
	PD		30 V
Operating Temperature	Topr	$^\circ\text{C}$	-10 to +40
Storage Temperature	Tstg	$^\circ\text{C}$	-40 to +85

Package Dimensions



Pin Connection



Electrical and Optical Characteristics 1) 2) at $T_c=25^\circ\text{C}$

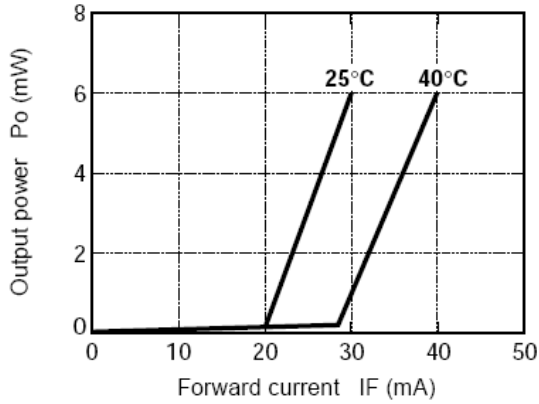
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	I_{th}	CW	-	20	35	mA
Operating Current	I_{op}	$P_o=5\text{mW}$	-	30	45	mA
Operating Voltage	V_{op}	$P_o=5\text{mW}$	-	2.2	2.4	V
Lasing Wavelength	λ_p	$P_o=5\text{mW}$	630	635	640	nm
Beam Divergence	Perpendicular	θ_{\perp}	25	30	35	$^\circ$
	Parallel	$\theta_{//}$	6	8	10	$^\circ$
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	-	-	± 3	$^\circ$
	Parallel	$\Delta\theta_{//}$	-	-	± 3	$^\circ$
Differential Efficiency	dP_o/dI_{op}	-	-	0.5	-	mW/mA
Monitoring Output Current	I_m	$P_o=5\text{mW}$	0.08	0.2	0.5	mA
Astigmatism	A_s	$P_o=5\text{mW}$	-	8	-	μm

1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus

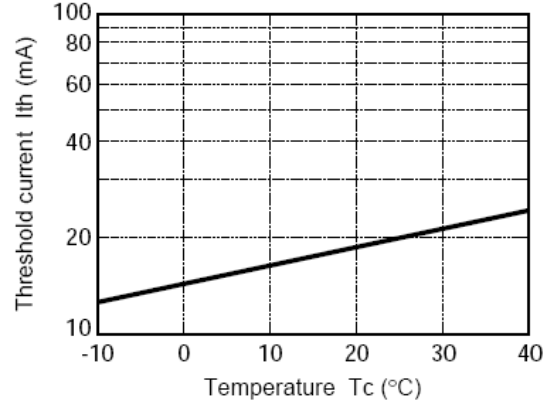
3) Full angle at half maximum Note : The above product specification are subject to change without notice.

Characteristics

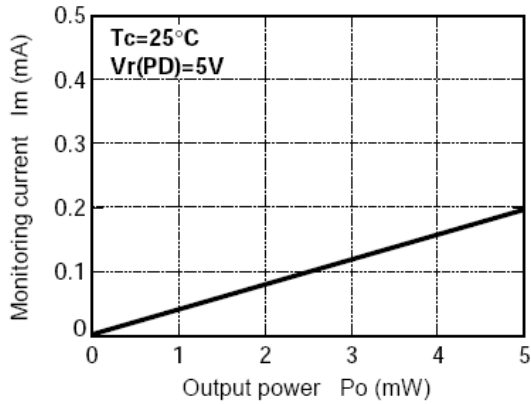
Output power vs. Forward current



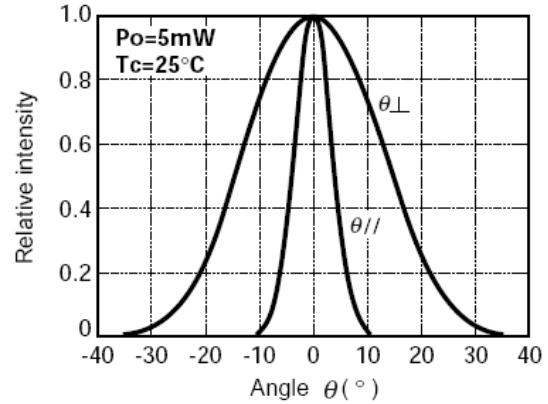
Threshold current vs. Temperature



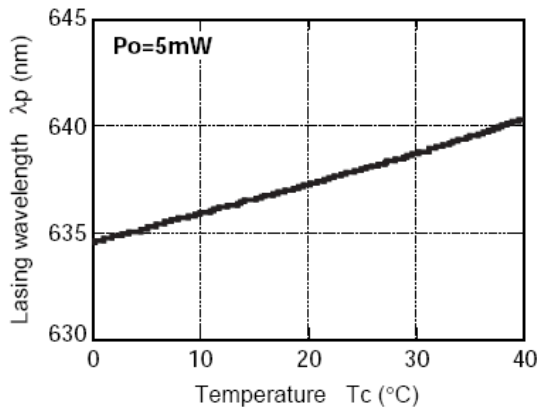
Monitoring current vs. Output power



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

