



DL-3148-013

Red Laser Diode

Features

- Short wavelength : 635 nm (Typ.)
- Low threshold current : $I_{th} = 30$ mA (Typ.)
- High operating temperature : 5 mW at 40°C
- Low operating voltage : $V_{op} = 2.2$ V (Typ.)

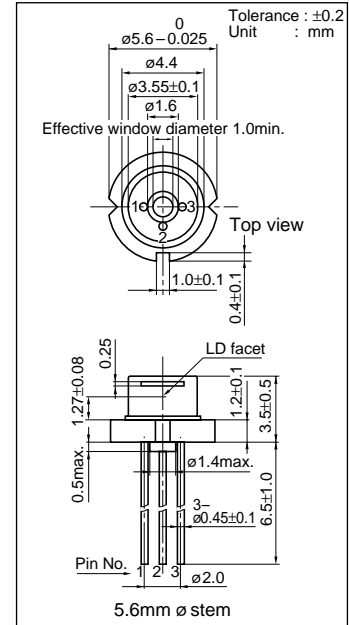
Applications

- Laser pointer

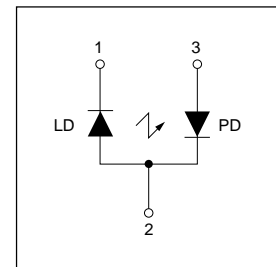
Absolute Maximum Ratings at $T_c=25^\circ\text{C}$

Parameter		Symbol	Ratings	Unit
Light Output	CW	P_o	7	mW
Reverse Voltage	Laser	V_R	2	V
	PD		30	
Operating Temperature		T_{opr}	-10 to +40	°C
Storage Temperature		T_{stg}	-40 to +85	°C

Package Dimensions



Pin Connection



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

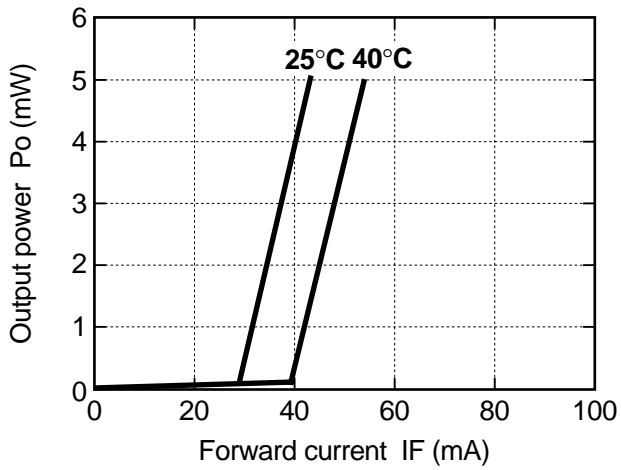
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	I_{th}	CW	-	30	45	mA
Operating Current	I_{op}	$P_o=5\text{mW}$	-	45	60	mA
Operating Voltage	V_{op}	$P_o=5\text{mW}$	-	2.2	2.5	V
Lasing Wavelength	λ_p	$P_o=5\text{mW}$	-	635	643	nm
Beam 3) Divergence	Perpendicular	θ_{\perp}	25	30	35	°
	Parallel	$\theta_{//}$	6	8	10	°
Off Axis Angle	Perpendicular	$\Delta \theta_{\perp}$	-	-	± 3	°
	Parallel	$\Delta \theta_{//}$	-	-	± 3	°
Differential Efficiency	dP_o/dI_{op}	-	0.2	0.4	0.8	mW/mA
Monitoring Output Current	I_m	$P_o=5\text{mW}$	0.08	0.2	0.4	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

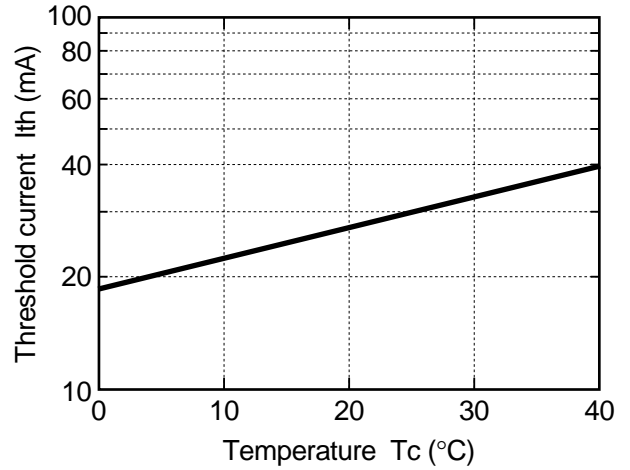
3) Full angle at half maximum Note : The above product specification are subject to change without notice.

Characteristics

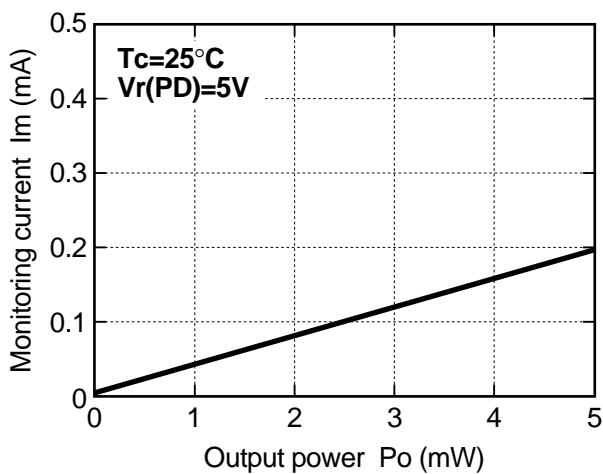
Output power vs. Forward current



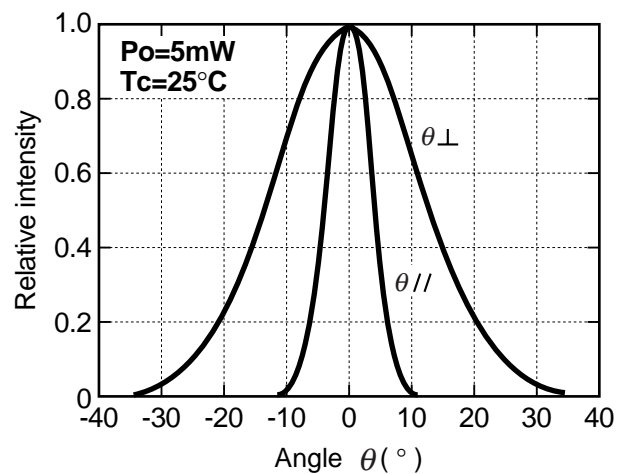
Threshold current vs. Temperature



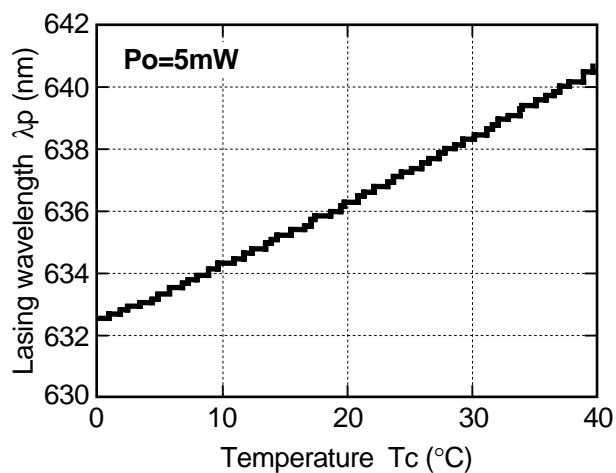
Monitoring current vs. Output power



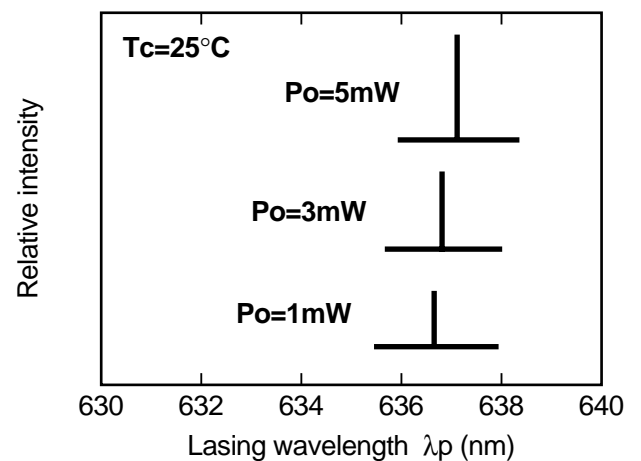
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



 **CAUTION**

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Precautionary instructions in handling gallium arsenic products

Special precautions must be taken in handling this product because it contains, gallium arsenic, which is designated as a toxic substance by law. Be sure to adhere strictly to all applicable laws and regulations enacted for this substance, particularly when it comes to disposal.

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