



DL-3147-165

Red Laser Diode

Features

- Short wavelength : 650 nm (Typ.)
- Low threshold current : $I_{th} = 25$ mA (Typ.)
- High operating temperature : 5 mW at 70°C
- TE mode

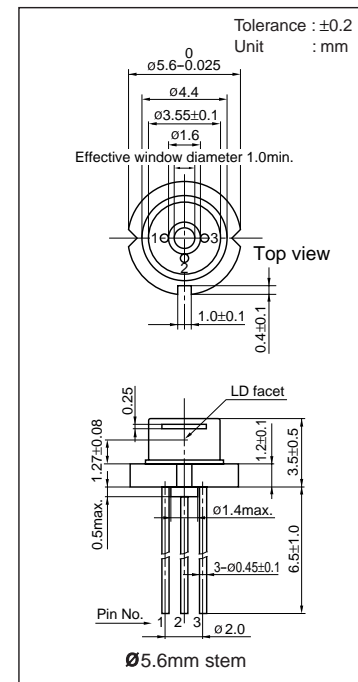
Applications

- DVD-ROM/PLAYER

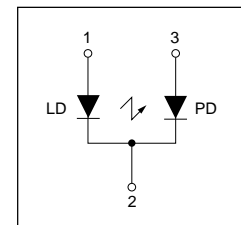
Absolute Maximum Ratings at $T_c=25^\circ\text{C}$

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 +70	$^\circ\text{C}$
Storage Temperature		T_{stg}	-40 to +85	$^\circ\text{C}$

Package Dimensions



Pin Connection

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

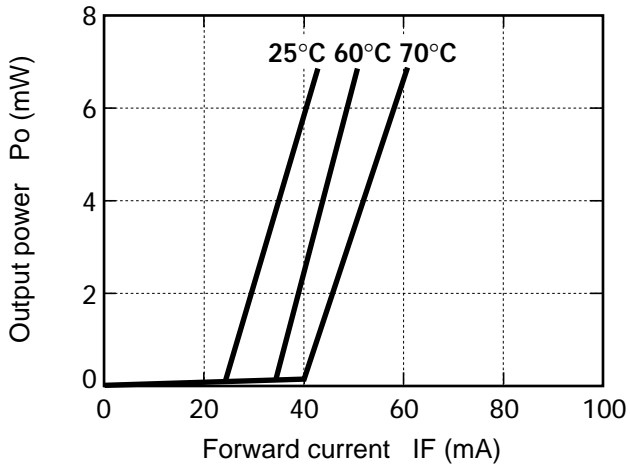
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		I_{th}	CW	-	25	40	mA
Operating Current		I_{op}	$P_o=5\text{mW}$	-	35	50	mA
Operating Voltage		V_{op}	$P_o=5\text{mW}$	-	2.3	2.6	V
Lasing Wavelength		λ_p	$P_o=5\text{mW}$	645	650	660	nm
Beam 3)	Perpendicular	θ_{\perp}	$P_o=5\text{mW}$	25	30	35	$^\circ$
	Parallel	$\theta_{//}$	$P_o=5\text{mW}$	7	8	10	$^\circ$
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	-	-	-	± 3	$^\circ$
	Parallel	$\Delta\theta_{//}$	-	-	-	± 2	$^\circ$
Differential Efficiency		dP_o/dI_{op}	-	0.3	0.5	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

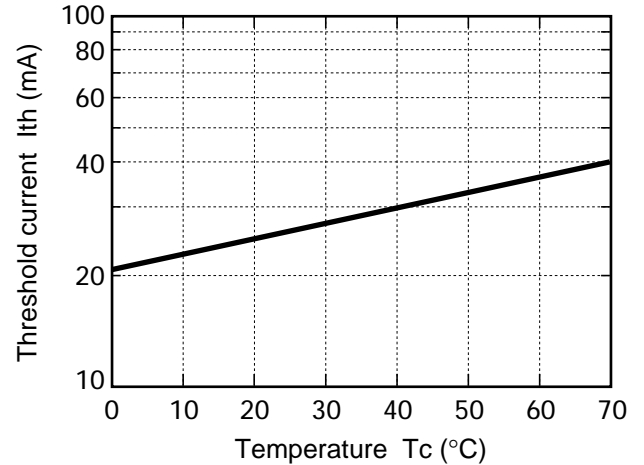
3) Full angle at half maximum Note : The above product specification are subject to change without notice.

Characteristics

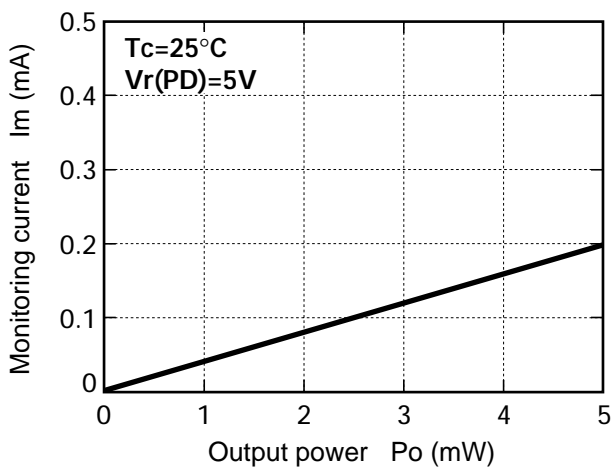
Output power vs. Forward current



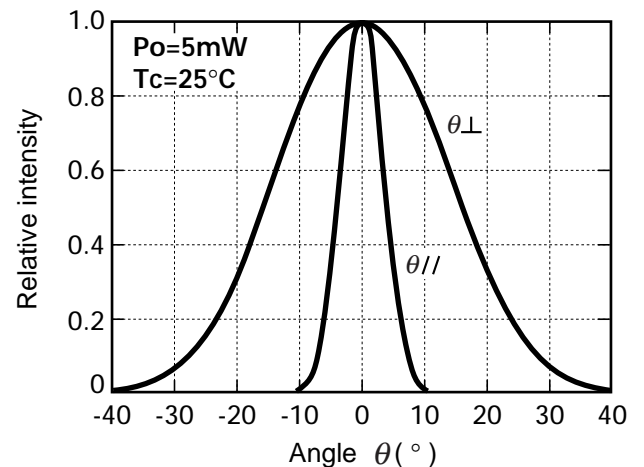
Threshold current vs. Temperature



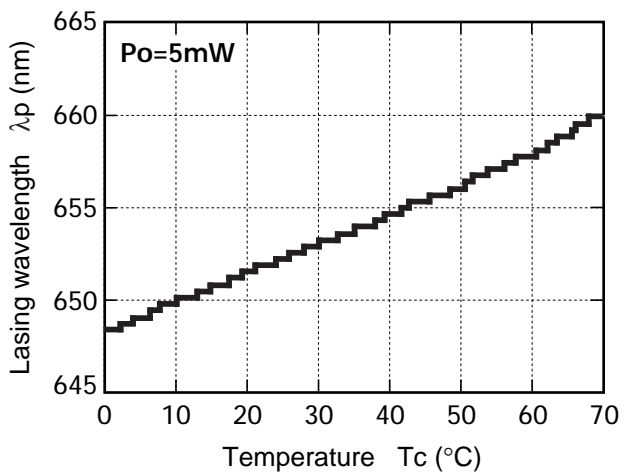
Monitoring current vs. Output power



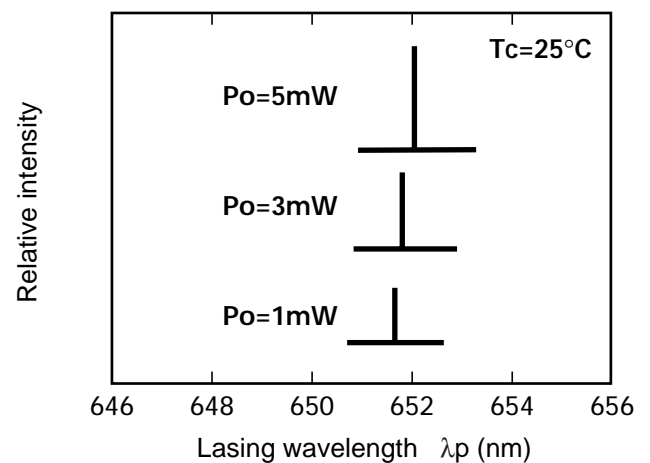
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



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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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