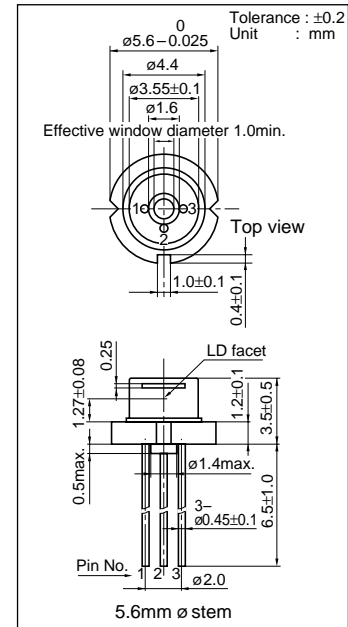


**DL-3148-033****Red Laser Diode****Features**

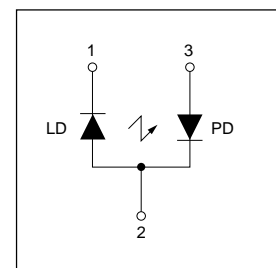
- Short wavelength : 635 nm (Typ.)
- Low threshold current : $I_{th} = 40$ mA (Typ.)
- High operating temperature : 5 mW at 50°C
- Small package : $\phi 5.6$ mm

Applications

- Bar-code scanner

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

Parameter		Symbol	Ratings	Unit
Light Output	CW	P_o	5	mW
Reverse Voltage	Laser	V_R	2	V
	PD		30	
Operating Temperature		T_{opr}	-10 to +50	$^\circ\text{C}$
Storage Temperature		T_{stg}	-40 to +85	$^\circ\text{C}$

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	-	40	60	mA
Operating Current	I_{op}	$P_o=5\text{mW}$	-	55	75	mA
Operating Voltage	V_{op}	$P_o=5\text{mW}$	-	2.2	2.4	V
Lasing Wavelength	λ_p	$P_o=5\text{mW}$	-	635	640	nm
Beam 3) 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}	-	-	0.4	-	mW/mA
Monitoring Output Current	I_m	$P_o=5\text{mW}$	0.1	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

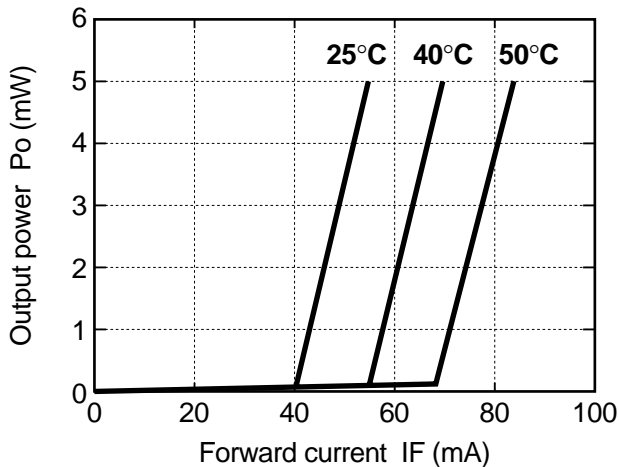
3) Full angle at half maximum Note : The above product specification are subject to change without notice.

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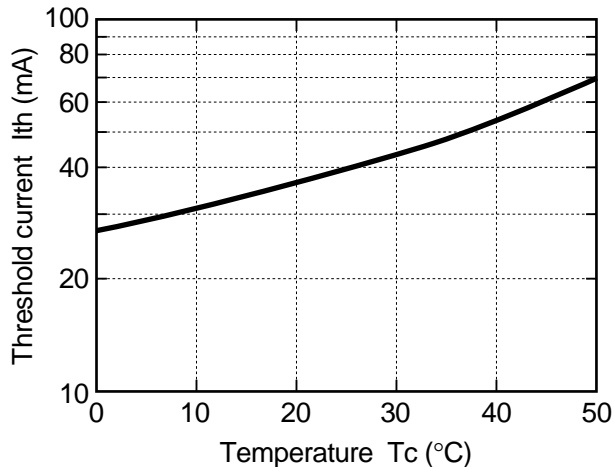
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Characteristics

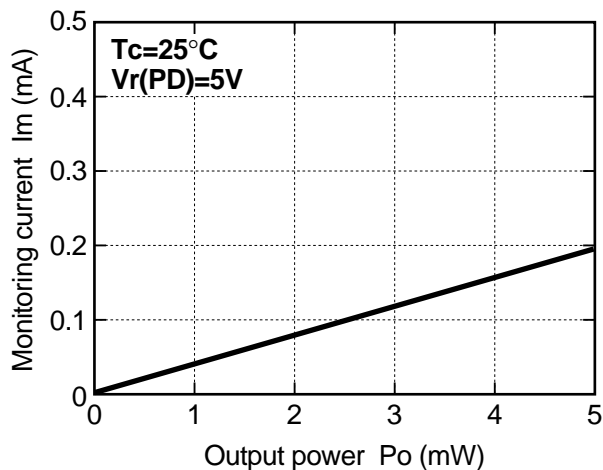
Output power vs. Forward current



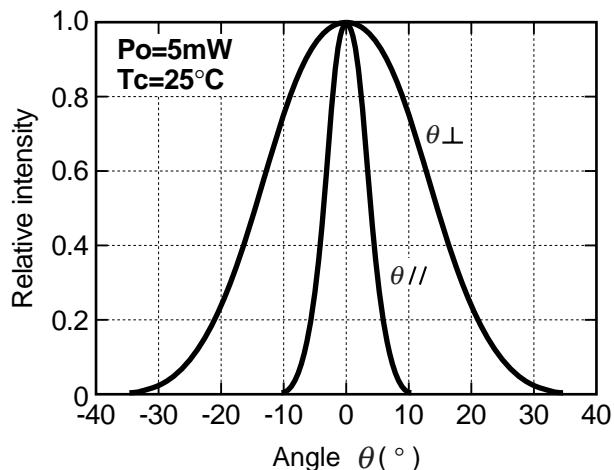
Threshold current vs. Temperature



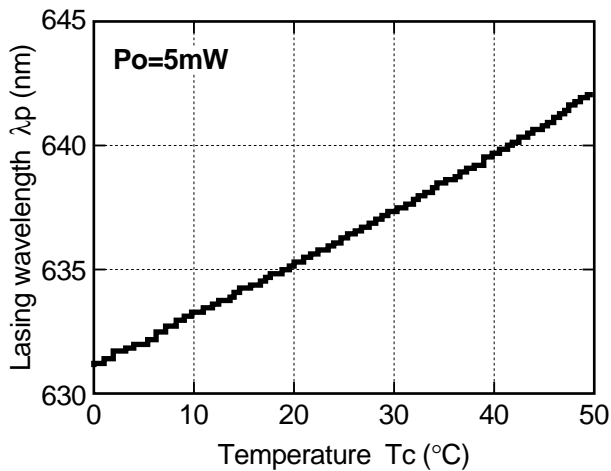
Monitoring current vs. Output power



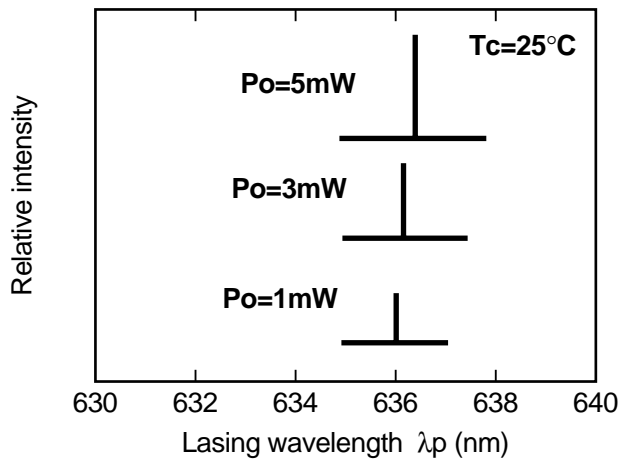
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



 **CAUTION**

1. No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster / crime-prevention equipment or the like, and the failure of which may directly or indirectly cause injury, death or property loss.
2. Anyone purchasing any products described or contained herein for an above-mentioned use shall:
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 - 2) Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., it's affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
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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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