

**DL-3149-056****Index Guided AlGaInP Laser Diode****Overview**

DL-3149-056 is 670 nm (Typ.) index guided AlGaInP laser diode with low threshold current. The low threshold current and short wavelength are achieved by the use of a strained multiple quantum well active layer.

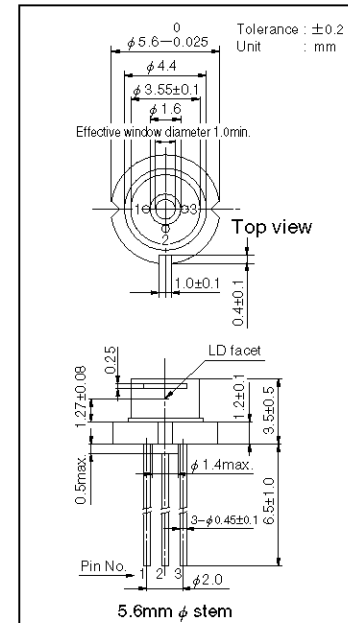
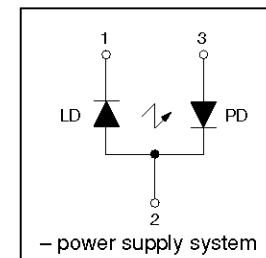
DL-3149-056 is suitable for laser pointers .

**Features**

- Short wavelength : 670 nm (Typ.)
- Output power : 3mW CW
- Low threshold current :  $I_{th} = 35\text{mA}$  (Typ.)
- Small package : 5.6 mm  $\phi$

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

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

**Package Dimensions****Electrical Connection****Electrical and Optical Characteristics at  $T_c=25^\circ\text{C}$** 

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	$I_{th}$	CW	-	35	60	mA
Operating Current	$I_{op}$	$P_o=3\text{mW}$	-	45	70	mA
Operating Voltage	$V_{op}$	$P_o=3\text{mW}$	-	2.3	2.6	V
Lasing Wavelength	$\lambda_p$	$P_o=3\text{mW}$	660	670	685	nm
Beam Divergence ※)	Perpendicular	$\theta_{\perp}$	25	33	40	deg.
	Parallel	$\theta_{\parallel}$	6	8	10	deg.
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	-	-	$\pm 3$	deg.
	Parallel	$\Delta\theta_{\parallel}$	-	-	$\pm 3$	deg.
Differential Efficiency	$dP_o/dI_{op}$	-	-	0.3	-	mW/mA
Monitoring Output Current	$I_m$	$P_o=3\text{mW}$	0.2	0.7	1.4	mA
Astigmatism	$A_s$	$P_o=3\text{mW}$	-	10	-	$\mu\text{m}$

※) Full angle at half maximum note : The above product specifications are subject to change without notice.

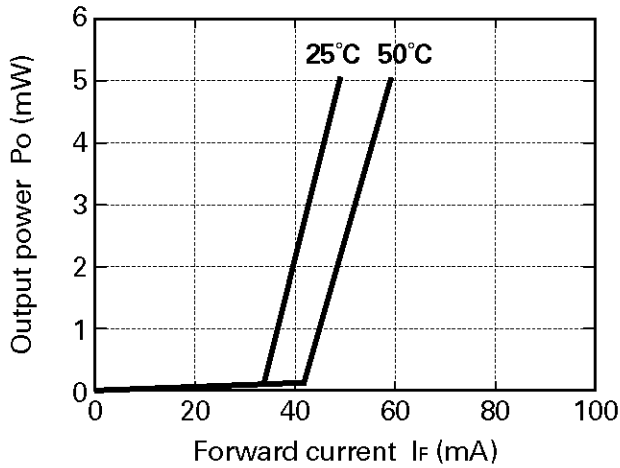
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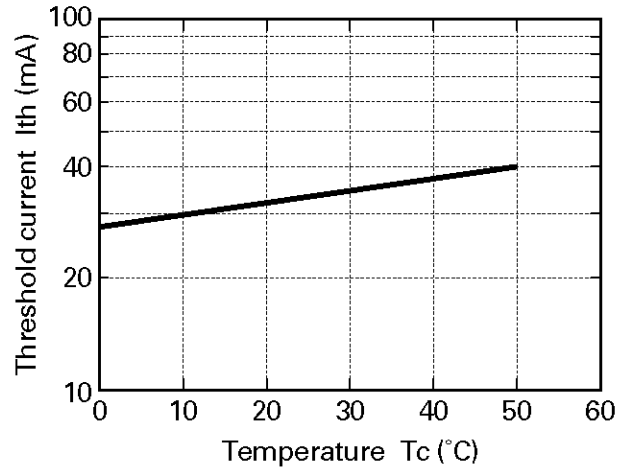
N2897 GI, (IM) No.5869 1/3

## Characteristics

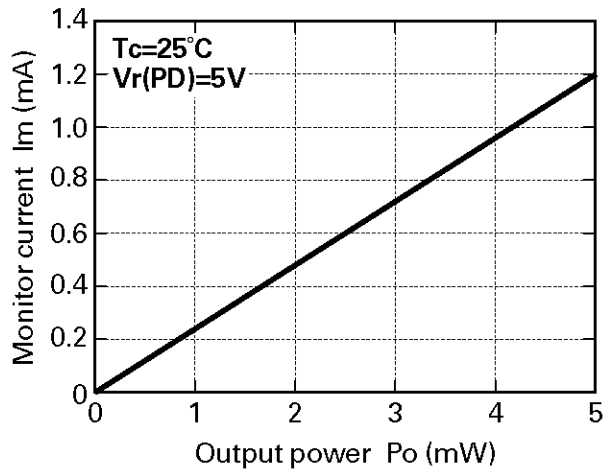
### Output power vs. Forward current



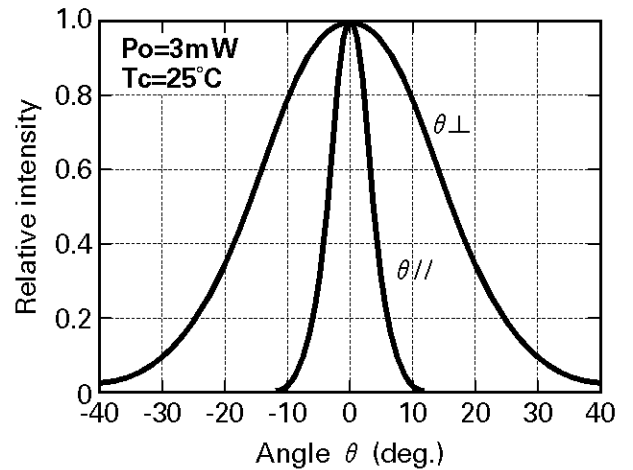
### Threshold current vs. Temperature



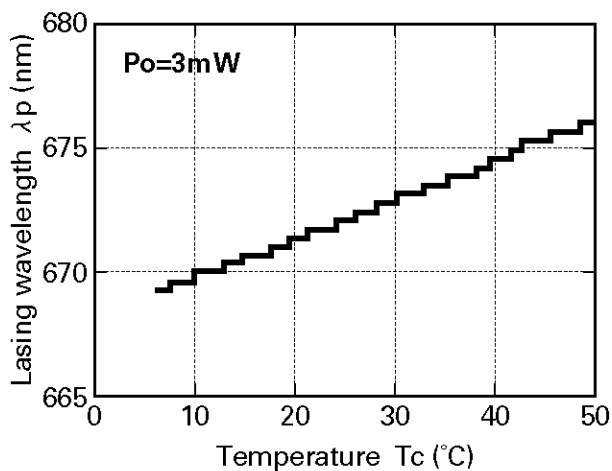
### Monitor current vs. Output power



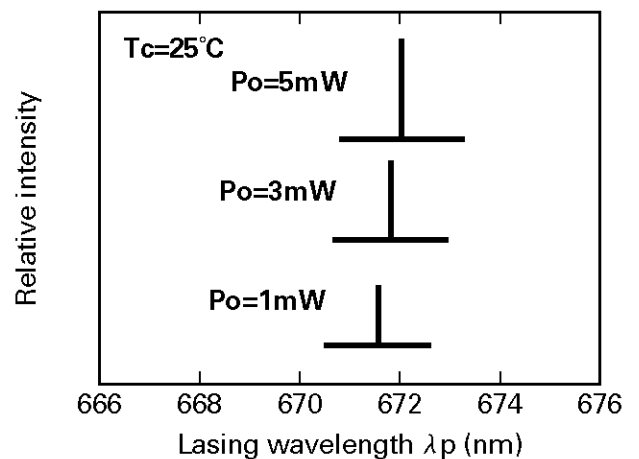
### Beam divergence



### Lasing wavelength vs. Temperature



### Output power vs. Lasing wavelength





## 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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