



# DL-3147-185

## Red Laser Diode

### Features

- Short wavelength : 650 nm (Typ.)
- Low threshold current :  $I_{th} = 25$  mA (Typ.)
- High operating temperature : 5 mW at 80°C
- TE mode

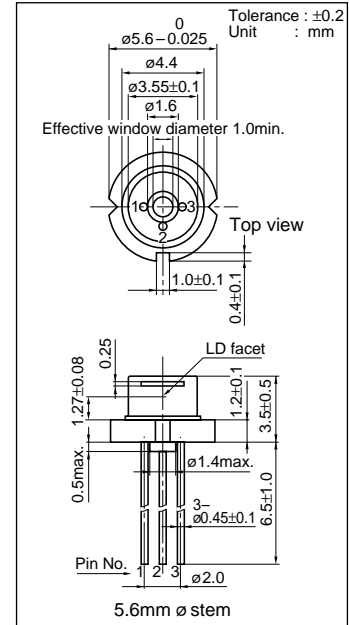
### Applications

- DVD-ROM/PLAYER

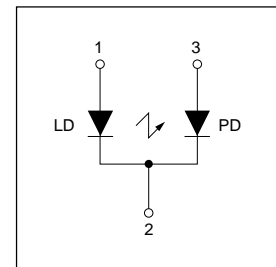
### Absolute Maximum Ratings at $T_c=25^\circ\text{C}$

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 +80	$^\circ\text{C}$
Storage Temperature		$T_{stg}$	-40 to +85	$^\circ\text{C}$

### Package Dimensions



### Pin Connection



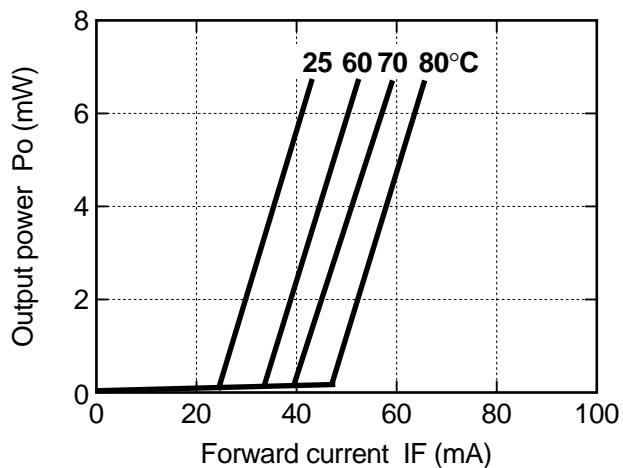
### Electrical and Optical Characteristics 1) 2) at $T_c=25^\circ\text{C}$

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		$\lambda_p$	$P_o=5\text{mW}$	645	650	660	nm
Beam 3)	Perpendicular	$\theta_{\perp}$	$P_o=5\text{mW}$	25	30	35	$^\circ$
	Parallel	$\theta_{//}$	$P_o=5\text{mW}$	7.0	8.0	10	$^\circ$
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	-	-	-	$\pm 3$	$^\circ$
	Parallel	$\Delta\theta_{//}$	-	-	-	$\pm 2$	$^\circ$
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	-	$\mu\text{m}$

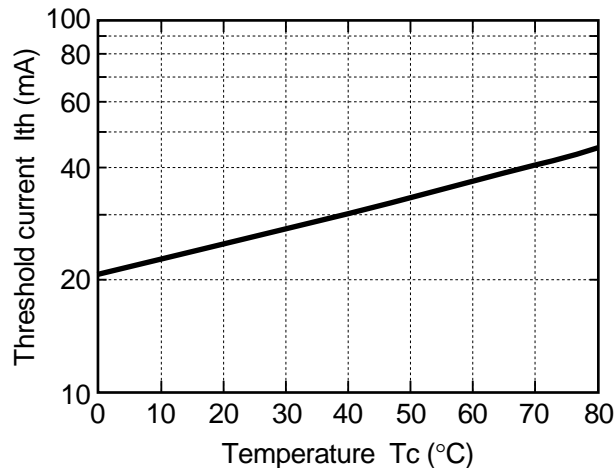
1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus  
 3) Full angle at half maximum Note : The above product specification are subject to change without notice.

## Characteristics

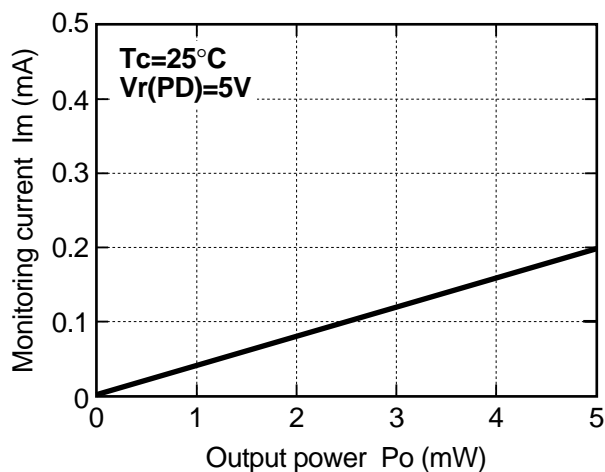
Output power vs. Forward current



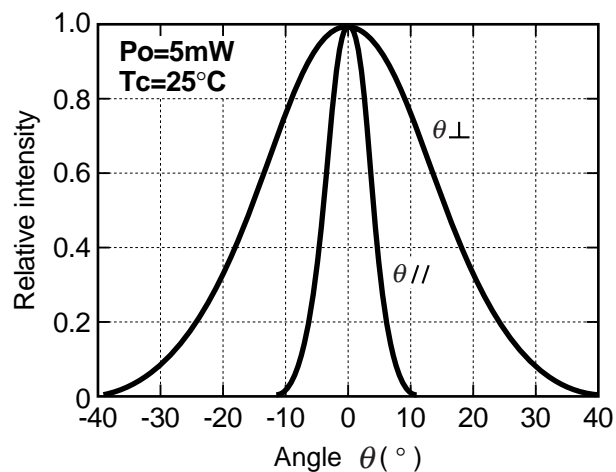
Threshold current vs. Temperature



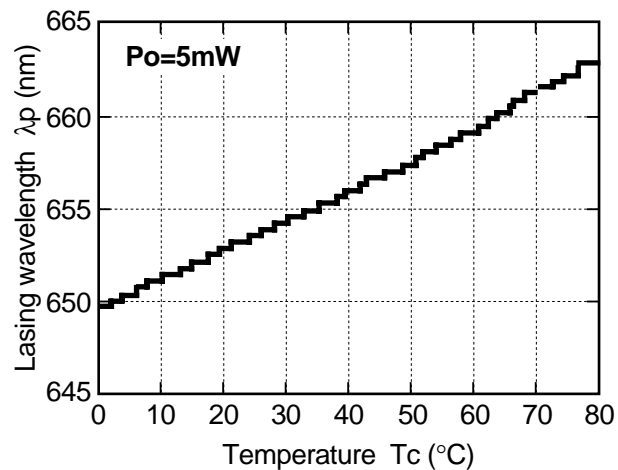
Monitoring current vs. Output power



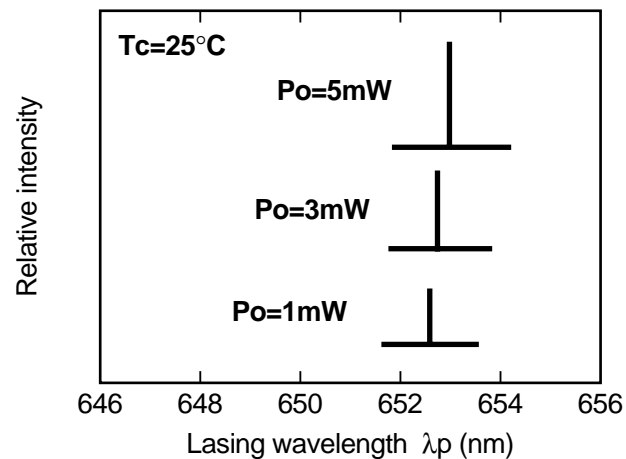
Beam divergence



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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