

**DL-3038-041****Index Guided AlGaInP Laser Diode****Overview**

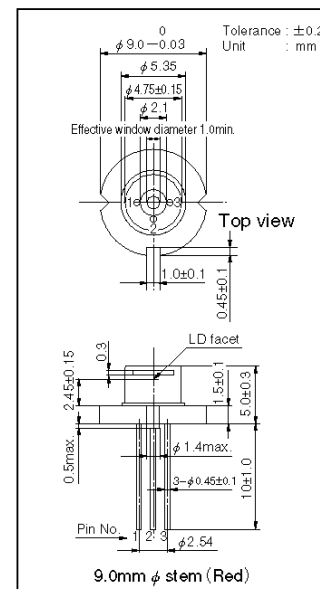
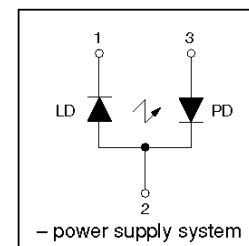
DL-3038-041 is index guided 635 nm (Typ.) AlGaInP laser diode with low threshold current and high operating temperature. The low threshold current and high operating temperature are achieved by a strained multiple quantum well active layer. DL-3038-041 is suitable for applications such as bar-code scanners, optical disc systems and other optical information systems.

**Features**

- Short wavelength : 635 nm (Typ.)
- Low threshold current :  $I_{th} = 40$  mA (Typ.)
- High operating temperature : 60 °C at 5 mW
- Low operating voltage :  $V_{op} = 2.2$  V (Typ.)

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

Parameter	Symbol	Ratings	Unit
Light Output	$P_o$	5	mW
Reverse Voltage	Laser	2	V
	PIN	30	
Operating Temperature	$T_{opr}$	-10 to +60	°C
Storage Temperature	$T_{stg}$	-40 to +85	°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	—	40	60	mA
Operating Current	$I_{op}$	$P_o=5$ mW	—	55	80	mA
Operating Voltage	$V_{op}$	$P_o=5$ mW	—	2.2	2.4	V
Lasing Wavelength	$\lambda_p$	$P_o=5$ mW	—	635	645	nm
Beam ※ ) Divergence	Perpendicular	$\theta_{\perp}$	25	35	40	deg.
	Parallel	$\theta_{\parallel}$	6	8	10	deg.
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	—	—	±3	deg.
	Parallel	$\Delta\theta_{\parallel}$	—	—	±3	deg.
Differential Efficiency	$dP_o/dI_{op}$	—	—	0.4	—	mW/mA
Monitoring Output Current	$I_m$	$P_o=5$ mW	0.05	0.15	—	mA
Astigmatism	As	$P_o=5$ mW	—	8	—	μm

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

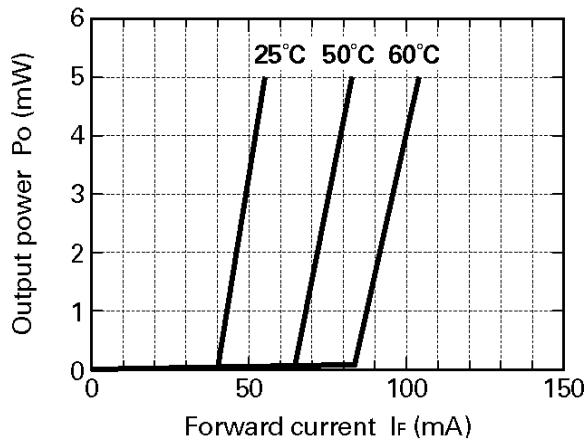
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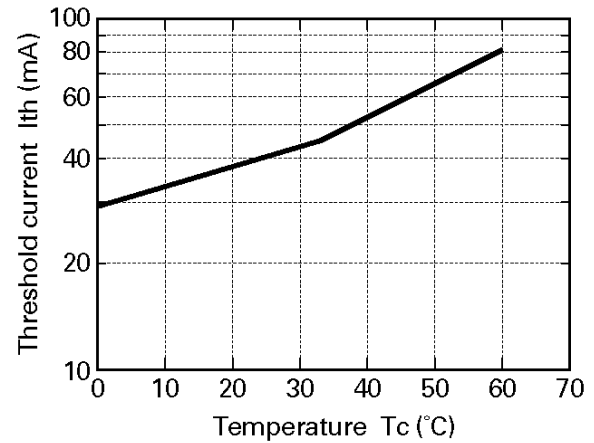
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## Characteristics

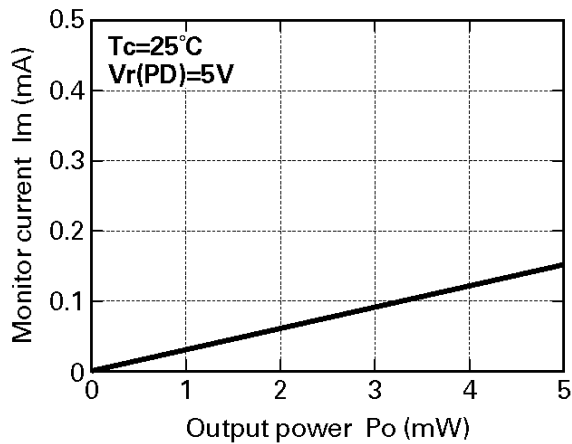
Output power vs. Forward current



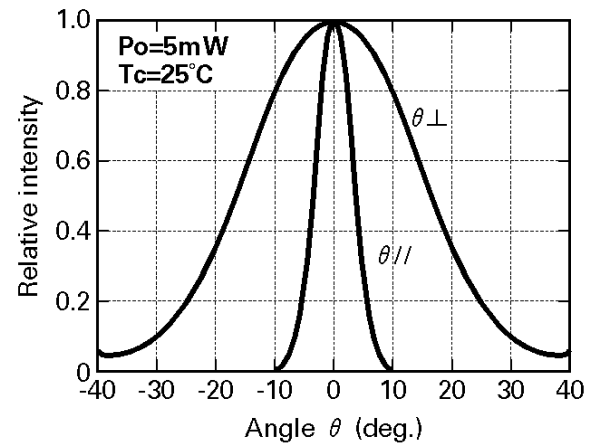
Threshold current vs. Temperature



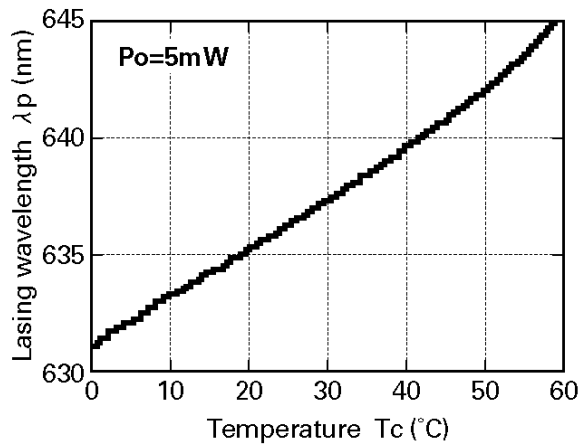
Monitor current vs. Output power



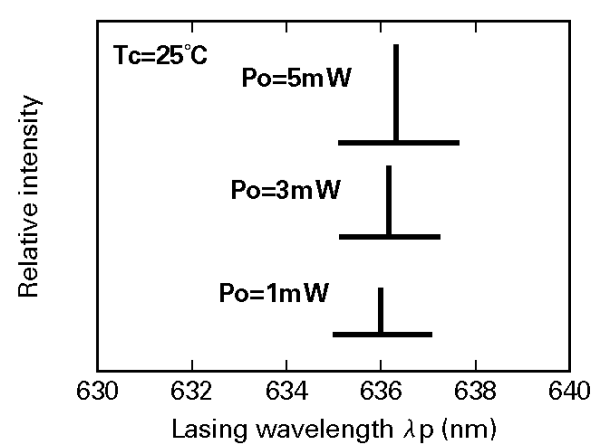
Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength



## CAUTION

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.
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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.

Manufactured by ; **Tottori SANYO Electric Co., Ltd.**

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