



DL-3147-161(-261)

Index Guided AlGaInP Laser Diode

Overview

DL-3147-161(-261) is index guided 650 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-3147-161(-261) is suitable for applications such as optical disc systems (DVD-ROM) and other optical information systems.

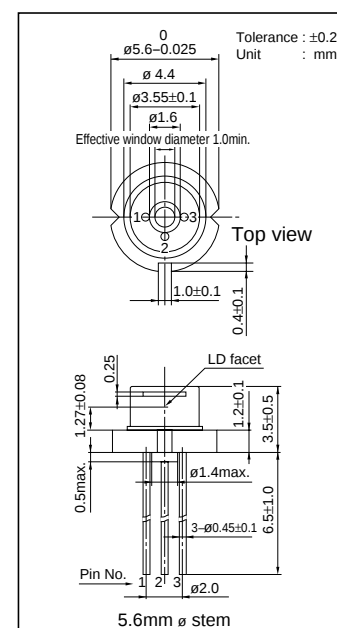
Features

- Short wavelength : 650 nm (Typ.)
- Low threshold current : $I_{th} = 45$ mA (Typ.)
- High operating temperature : 5 mW at 70°C
- TE mode °C

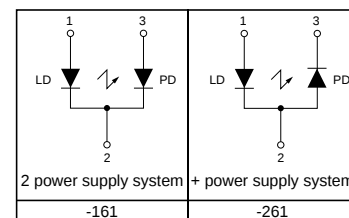
Absolute Maximum Ratings at $T_c=25^\circ\text{C}$

Parameter	Symbol	Ratings	Unit
Light Output	P_o	7	mW
Reverse Voltage	Laser PIN	V_R	V
		2	
		30	
Operating Temperature	T_{opr}	-10 to +70	°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	–	45	65	mA
Operating Current	I_{op}	$P_o=5\text{mW}$	–	60	80	mA
Operating Voltage	V_{op}	$P_o=5\text{mW}$	–	2.2	2.5	V
Lasing Wavelength	λ_p	$P_o=5\text{mW}$	–	650	660	nm
Beam $\ast$) Divergence	Perpendicular	$\theta_{\perp}$	$P_o=5\text{mW}$	25	30	deg.
	Parallel	$\theta_{//}$	$P_o=5\text{mW}$	6	7.5	deg.
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	–	–	±3	deg.
	Parallel	$\Delta\theta_{//}$	–	–	±2	deg.
Differential Efficiency	dP_o/dI_{op}	–	0.15	0.35	–	mW/mA
Monitoring Output Current	I_m	$P_o=5\text{mW}$	0.05	0.15	0.5	mA
Astigmatism	A_s	$P_o=5\text{mW}$	–	8	–	μm

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

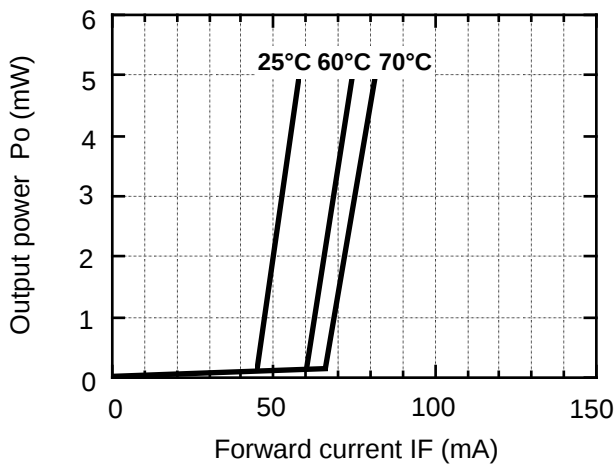
SANYO Electric Co.,Ltd. Semiconductor Business Headquarters

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

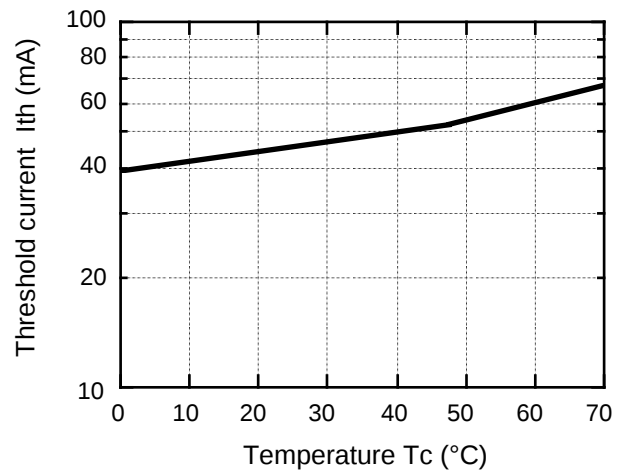
N2798 GI / N2897 GI, (IM) No.5864 1/3

Characteristics

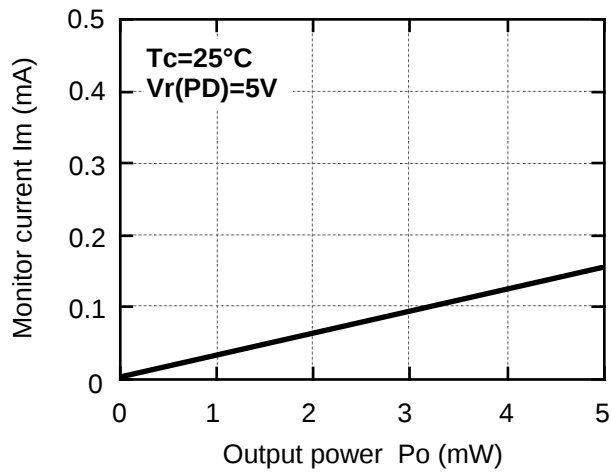
Output power vs. Forward current



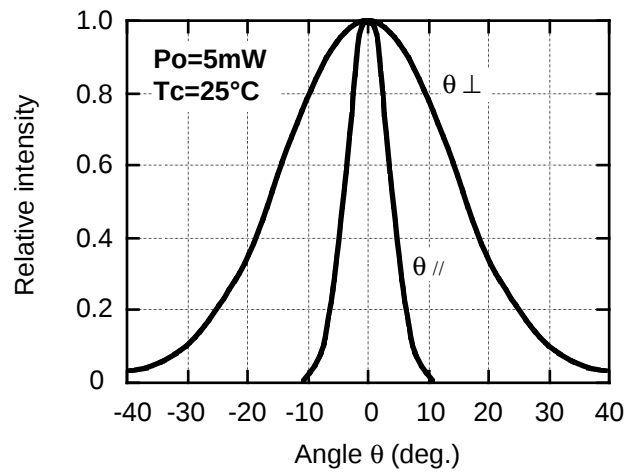
Threshold current vs. Temperature



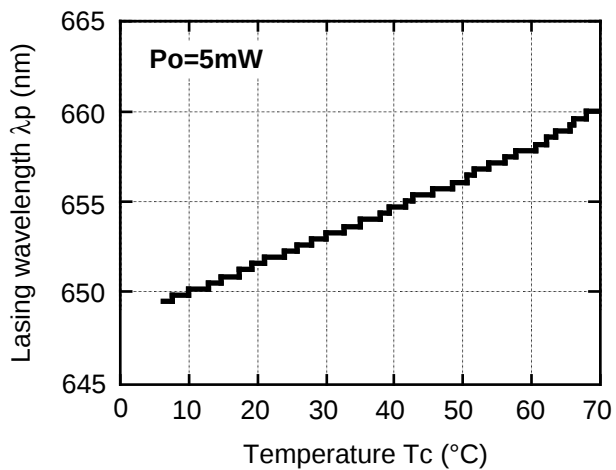
Monitor current vs. Output power



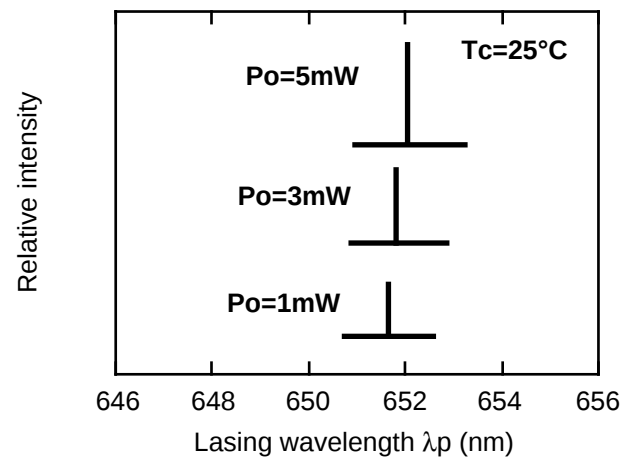
Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength





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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.**
Electronics Device Bussiness Headquarters LED Division
5-318, Tachikawa-cho, Tottori City, 680-8634 Japan
TEL: +81-857-21-2137 FAX: +81-857-21-2161