Ordering number : EN5867A

Red Laser Diode

DL-3149-054

Index Guided AlGaInP Laser Diode

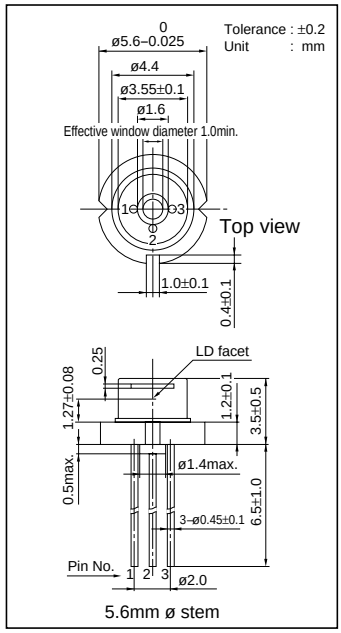
Overview

DL-3149-054 is 670 nm (Typ.) index guided AlGaInP laser diode with low threshold current and high operating temperature. The low threshold current and high operating temperature are achieved by the use of a strained multiple quantum well active layer. DL-3149-054 is suitable for applications such as bar-code scanners, laser pointers and other optical information systems.

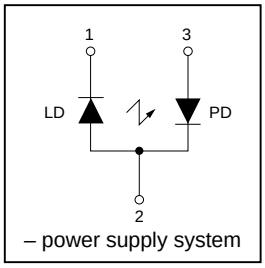
Features

- •Short wavelength : 670 nm (Typ.)
- •High operating temperature : 5 mW at 60°C
- •Low threshold current : Ith = 30 mA (Typ.)
- •Small package : 5.6 mmØ

Package Dimensions



Electrical Connection



Absolute Maximum Ratings at Tc=25°C

Parameter		Symbol	Ratings	Unit
Light Output		Po	5	mW
Reverse Voltage	Laser	VR	2	V
	PIN		30	
Operating Temperature		Topr	−10 to +60	°C
Storage Temperature		Tstg	−40 to +85	°C

Electrical and Optical Characteristics at Tc=25°C

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	CW	–	30	50	mA
Operating Current		Iop	Po=5mW	–	45	60	mA
Operating Voltage		Vop	Po=5mW	–	2.3	2.6	V
Lasing Wavelength		λp	Po=5mW	660	670	680	nm
Beam ❋) Divergence	Perpendicular	θ⊥	Po=5mW	25	33	40	deg.
	Parallel	θ//	Po=5mW	6	8	10	deg.
Off Axis Angle	Perpendicular	Δθ⊥	–	–	–	±3	deg.
	Parallel	Δθ//	–	–	–	±3	deg.
Differential Efficiency		dPo/dIop	–	0.15	0.3	–	mW/mA
Monitoring Output Current		Im	Po=5mW	0.4	1.2	2.0	mA
Astigmatism		As	Po=5mW	–	8	–	μm

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

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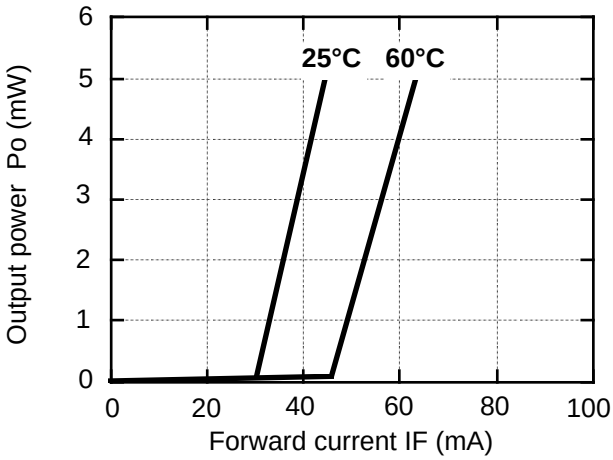
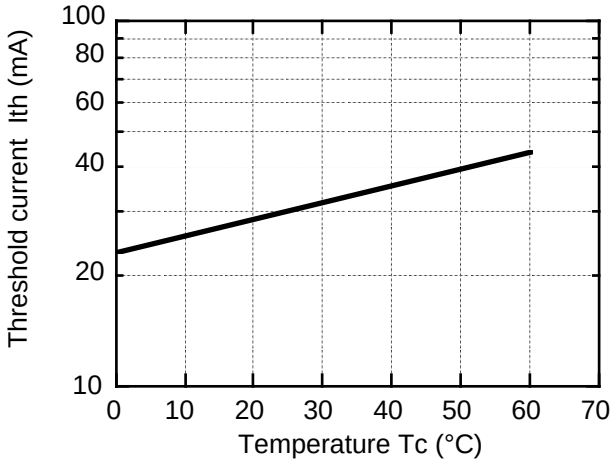
Characteristics

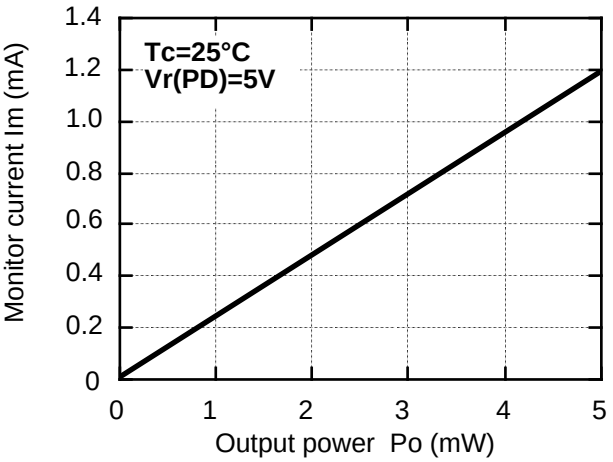
Output power vs. Forward current



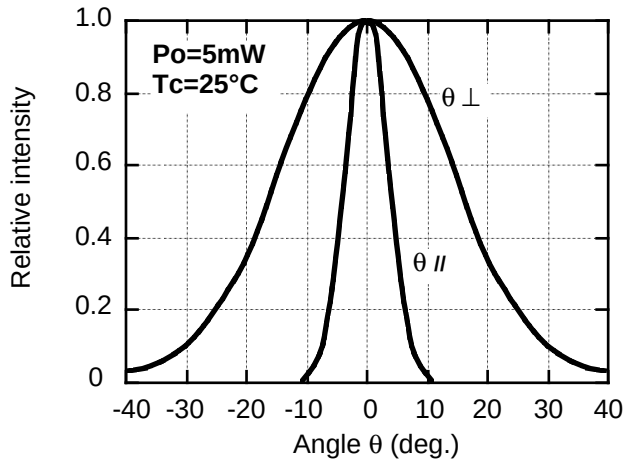
Threshold current vs. Temperature



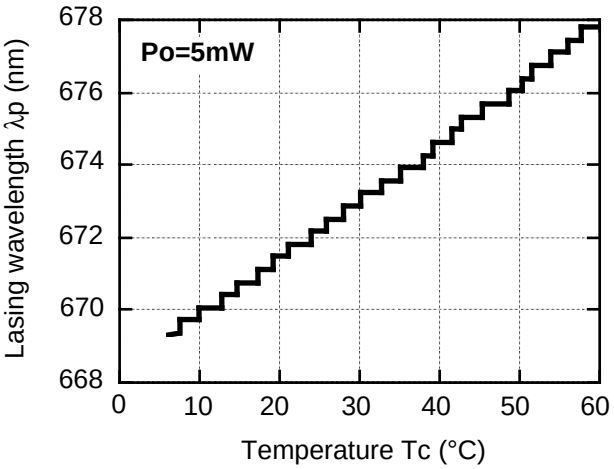
Monitor current vs. Output power



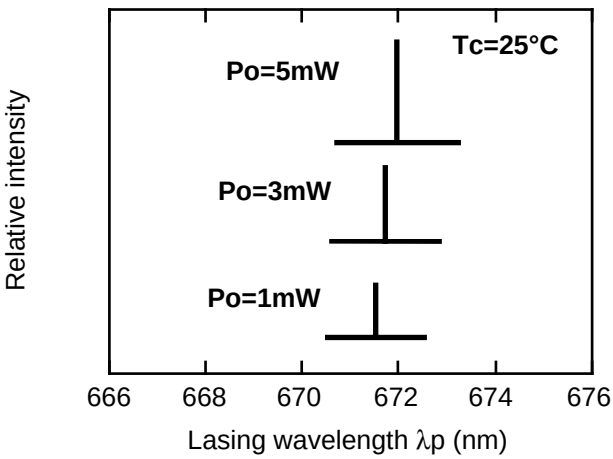
Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength



⚠ CAUTION

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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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