Ordering number : EN5862A

Red Laser Diode

DL-3147-041

Index Guided AlGaInP Laser Diode

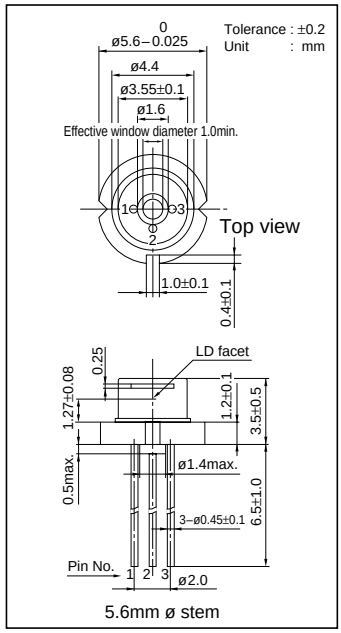
Overview

DL-3147-041 is index guided 645 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-3147-041 is suitable for applications such as bar-code reader, optical disc systems and other optical information systems.

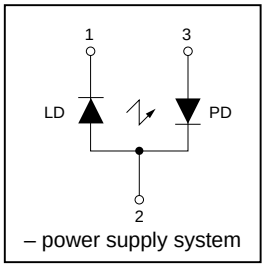
Features

- Short wavelength : 645 nm (Typ.)
- Low threshold current : Ith = 45 mA (Typ.)
- High operating temperature : 5 mW at 60°C
- TE mode

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	25	45	60	mA
Operating Current		Iop	Po=5mW	40	60	80	mA
Operating Voltage		Vop	Po=5mW	2.0	2.2	2.5	V
Lasing Wavelength		λp	Po=5mW	635	645	655	nm
Beam ❋) Divergence	Perpendicular	θ⊥	Po=5mW	25	30	40	deg.
	Parallel	q //	Po=5mW	7.0	7.5	10	deg.
Off Axis Angle	Perpendicular	Δθ⊥	–	–	–	±3	deg.
	Parallel	Δθ//	–	–	–	±2	deg.
Differential Efficiency		dPo/dIop	–	0.15	0.35	0.8	mW/mA
Monitoring Output Current		Im	Po=5mW	0.05	0.15	0.5	mA
Astigmatism		As	Po=5mW	–	8	–	mm

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

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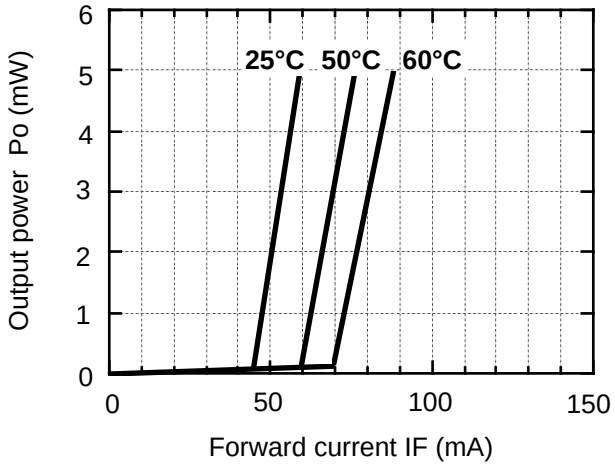
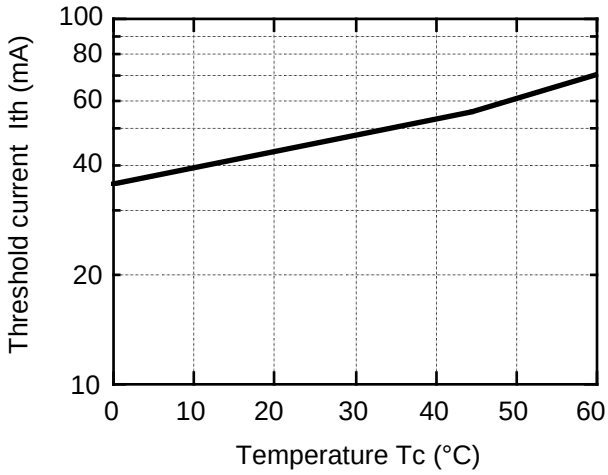
Characteristics

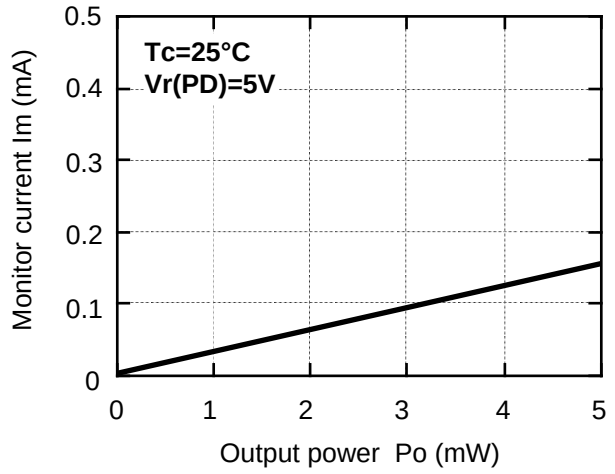
Output power vs. Forward current



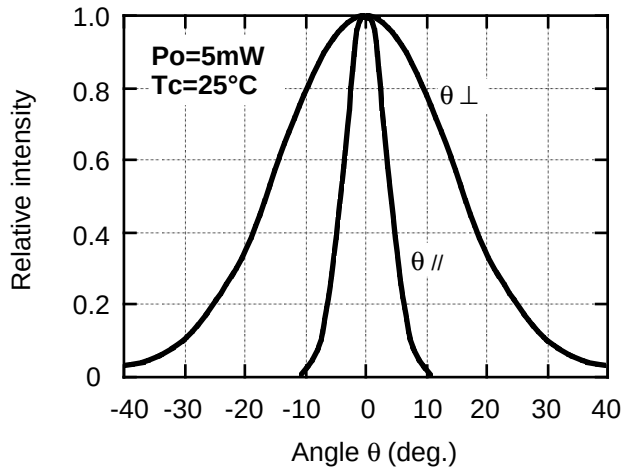
Threshold current vs. Temperature



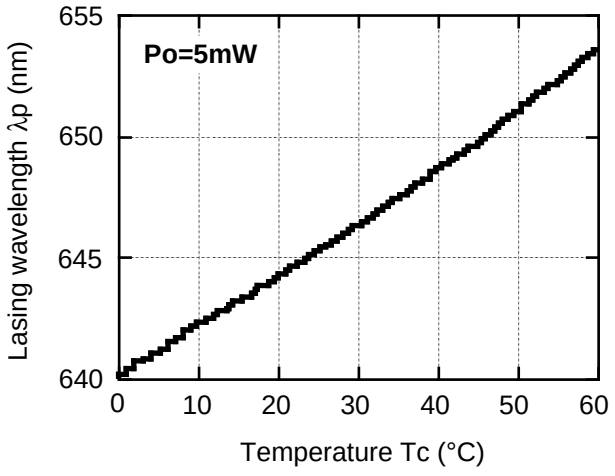
Monitor current vs. Output power



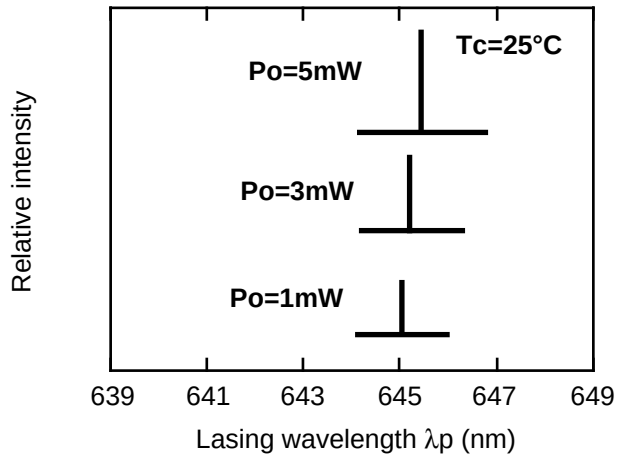
Beam divergence



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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