Ordering number : EN5853A

Red Laser Diode

DL-3038-011

Index Guided AlGaInP Laser Diode

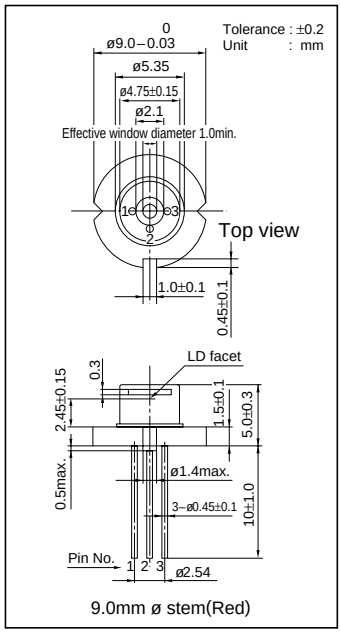
Overview

DL-3038-011 is index guided 635 nm (Typ.) AlGaInP laser diode.
The low threshold current and short wavelength are achieved by a strained multiple quantum well active layer.
The lasing wavelength is the same as He-Ne gas lasers. DL-3038-011 is suitable for laser pointers.

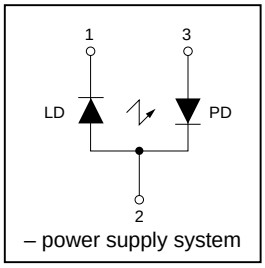
Features

- Short wavelength : 635 nm (Typ.)
- High output power : 5 mW CW
- Low threshold current : Ith = 40 mA (Typ.)
- Low operating voltage : Vop = 2.2 V (Typ.)

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 +40	°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	-	40	70	mA
Operating Current		Iop	Po=5mW	-	55	85	mA
Operating Voltage		Vop	Po=5mW	-	2.2	2.4	V
Lasing Wavelength		λp	Po=5mW	-	635	640	nm
Beam Divergence ❊)	Perpendicular	θ⊥	Po=5mW	25	35	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	-	0.1	0.3	-	mW/mA
Monitoring Output Current		Im	Po=5mW	0.05	0.2	-	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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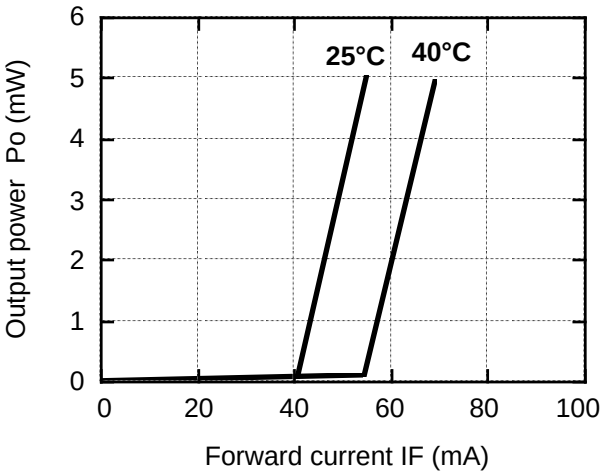
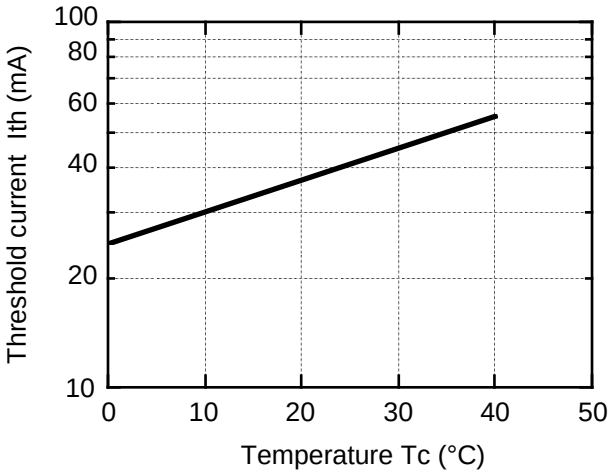
Characteristics

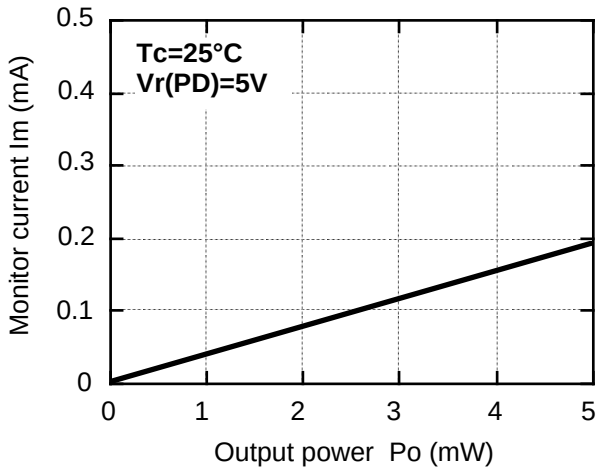
Output power vs. Forward current



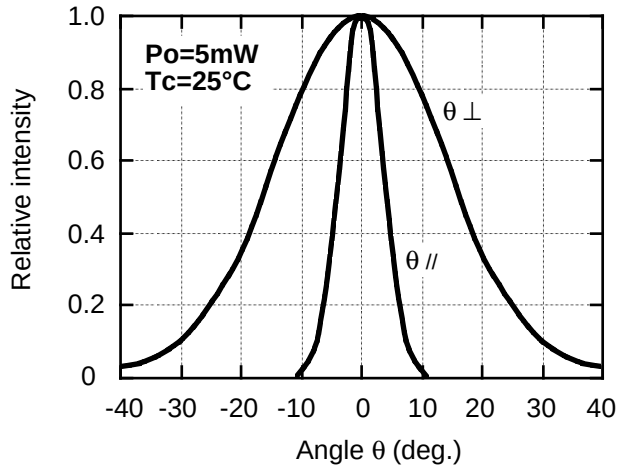
Threshold current vs. Temperature



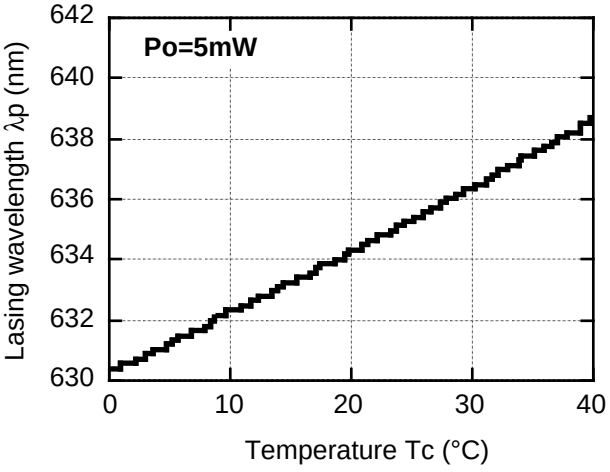
Monitor current vs. Output power



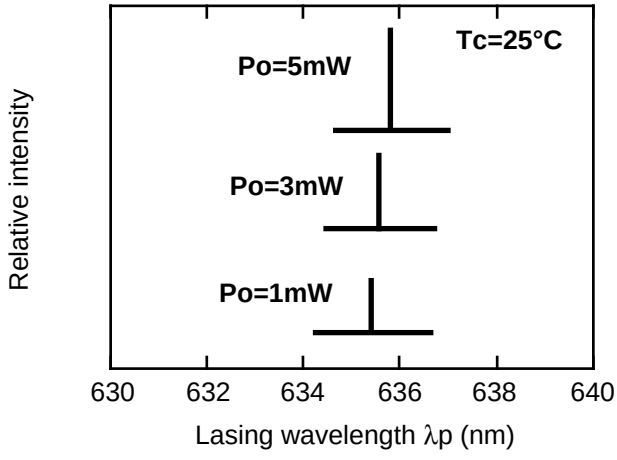
Beam divergence



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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