Ordering number : EN5902

Red Laser Diode

DL-4038-025

High Power AlGaInP Laser Diode

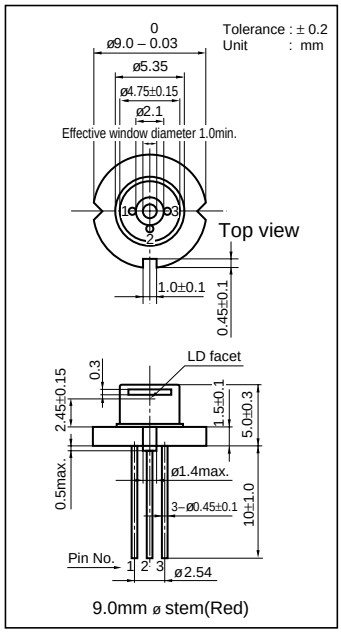
Overview

DL-4038-025 is a high power 635 nm (Typ.) AlGaInP laser diode.The lasing wavelength is the same as He-Ne gas lasers. DL-4038-025 is suitable for applications such as laser printers, line markers and other optical information systems.

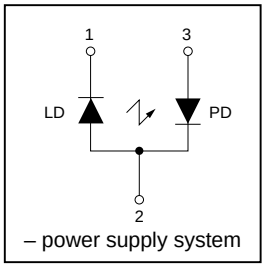
Features

- Short wavelength : 635 nm (Typ.)
- High output power : 20mW CW
- Low threshold current : Ith = 45 mA (Typ.)
- Low operating voltage : Vop = 2.3 V (Typ.)

Package Dimensions



Electrical Connection



Absolute Maximum Ratings at Tc=25°C

Parameter		Symbol	Ratings	Unit
Light Output	CW	Po	20	mW
Reverse Voltage	Laser	V_R	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	–	45	70	mA
Operating Current		Iop	Po=20mW	–	80	110	mA
Operating Voltage		Vop	Po=20mW	–	2.3	2.5	V
Lasing Wavelength		λ p	Po=20mW	–	635	645	nm
Beam 1) Divergence	Perpendicular	$\theta\perp$	Po=20mW	20	25	35	deg.
	Parallel	θ //	Po=20mW	6	7	10	deg.
Off Axis Angle	Perpendicular	$\Delta\theta\perp$	–	–	–	±3	deg.
	Parallel	$\Delta\theta$ //	–	–	–	±3	deg.
Differential Efficiency		dPo/dIop	–	–	0.6	–	mW/mA
Monitoring Output Current		Im	Po=20mW	–	0.03	–	mA
Astigmatism		As	Po=20mW	–	10	–	µm

1) **Full angle at half maximum** **Note : The above product specification are subject to change without notice.**

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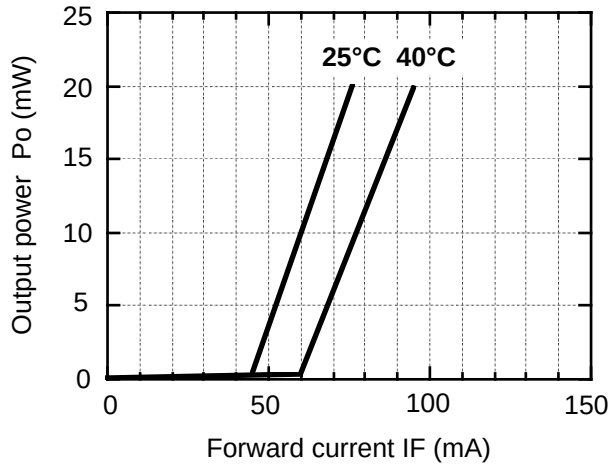
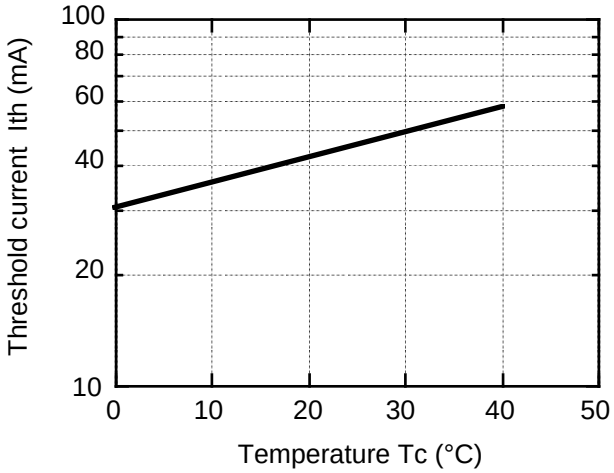
Characteristics

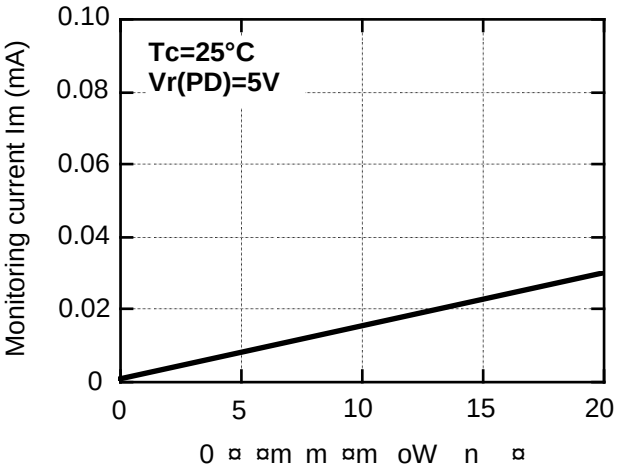
Output power vs. Forward current



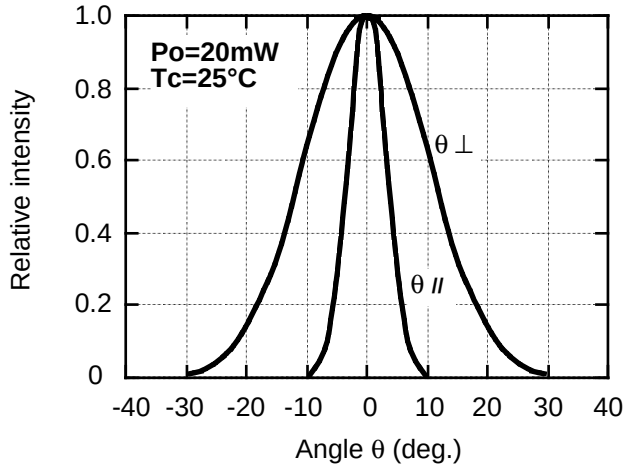
Threshold current vs. Temperature



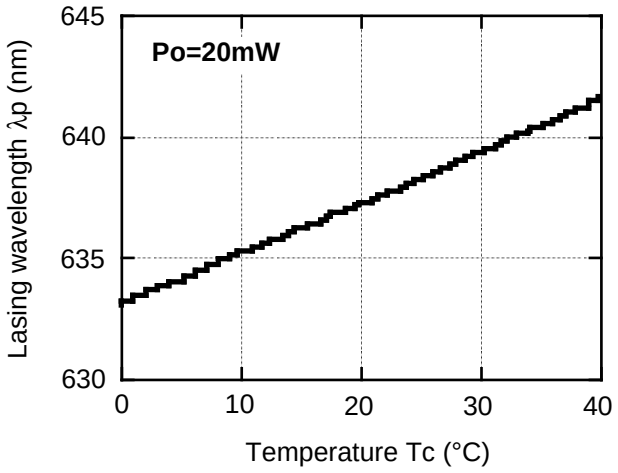
Monitoring current vs. Output power



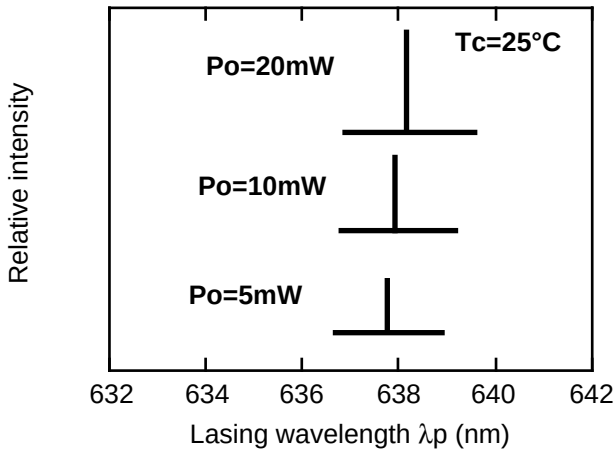
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



⚠ 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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