Ordering number : EN5902

Red Laser Diode

DL-4038-025

High Power AlGaInP Laser Diode

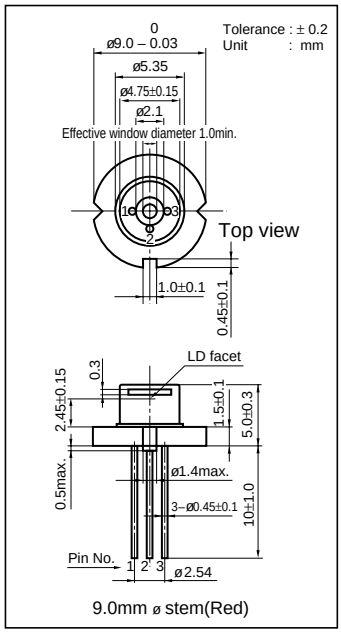
Overview

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.

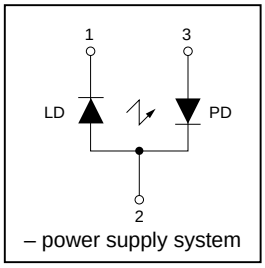
Features

- 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		λp	Po=20mW	–	635	645	nm
Beam Divergence 1)	Perpendicular	θ⊥	Po=20mW	20	25	35	deg.
	Parallel	θ//	Po=20mW	6	7	10	deg.
Off Axis Angle	Perpendicular	Δθ⊥	–	–	–	±3	deg.
	Parallel	Δθ//	–	–	–	±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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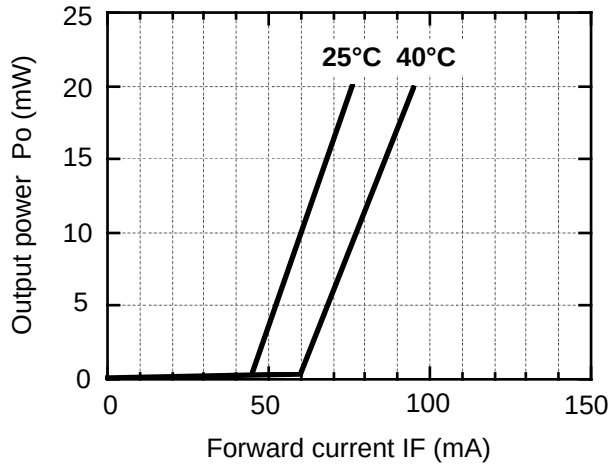
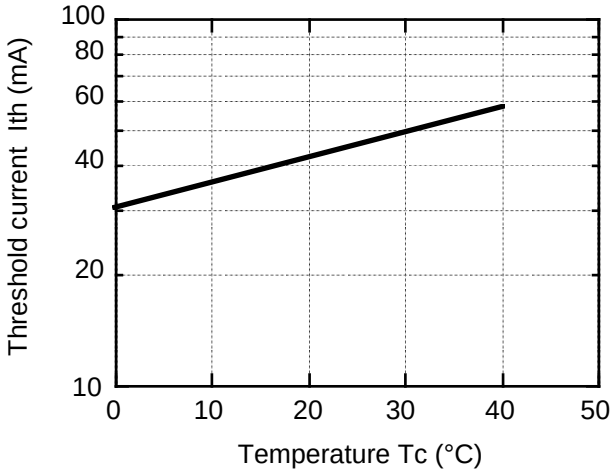
Characteristics

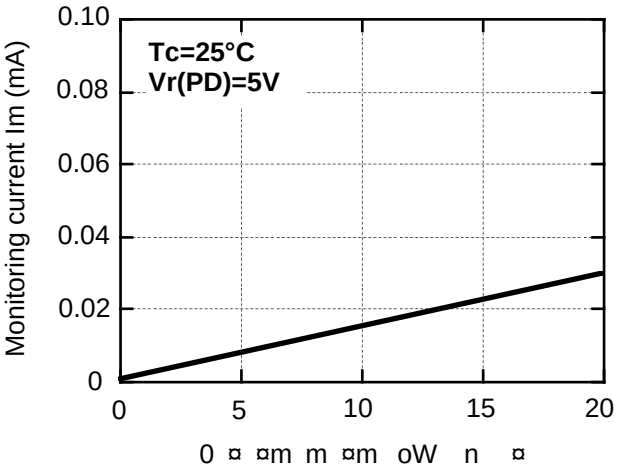
Output power vs. Forward current



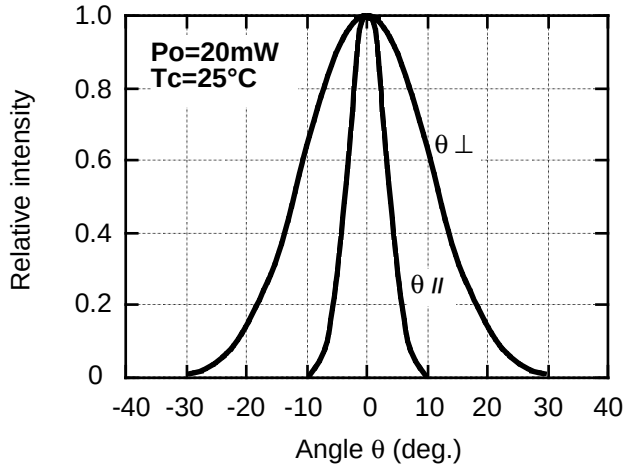
Threshold current vs. Temperature



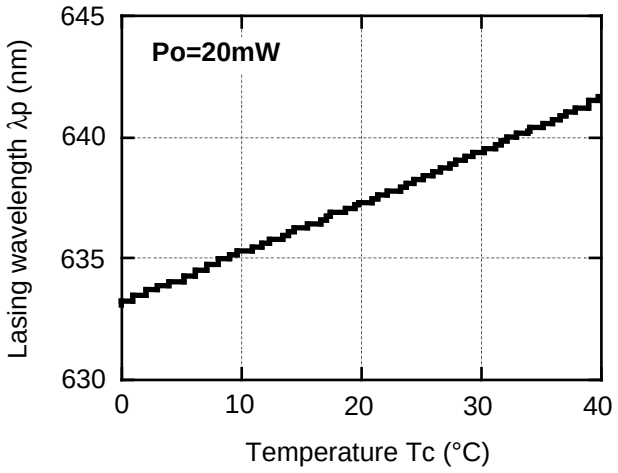
Monitoring current vs. Output power



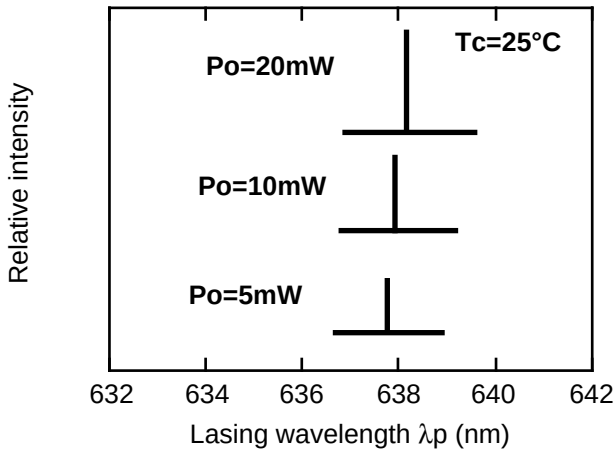
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



⚠ CAUTION

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   2) Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., it's affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

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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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