Ordering number : EN5853A

Red Laser Diode

DL-3038-011

Index Guided AlGaInP Laser Diode

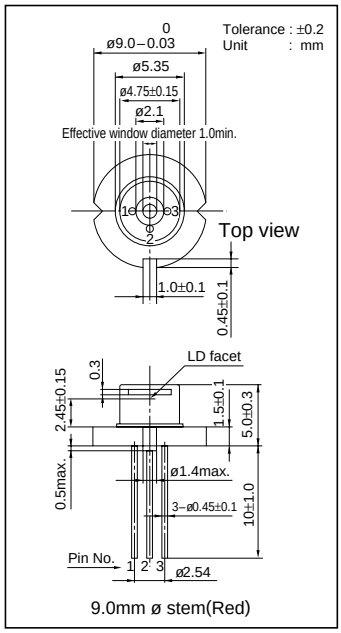
Overview

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.

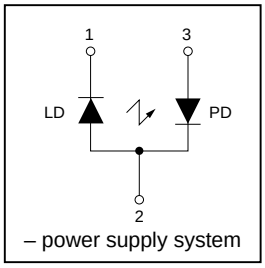
Features

- 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

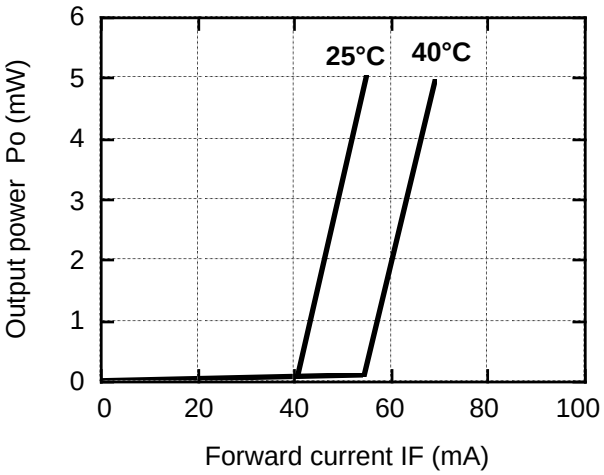
❊) Full angle at half maximum note : The above product specifications are subject to change without notice.

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquarters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

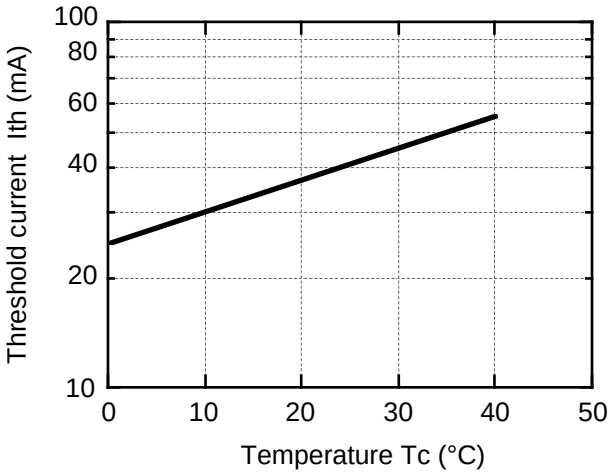
This datasheet has been downloaded from http://www.digchip.com at this page

Characteristics

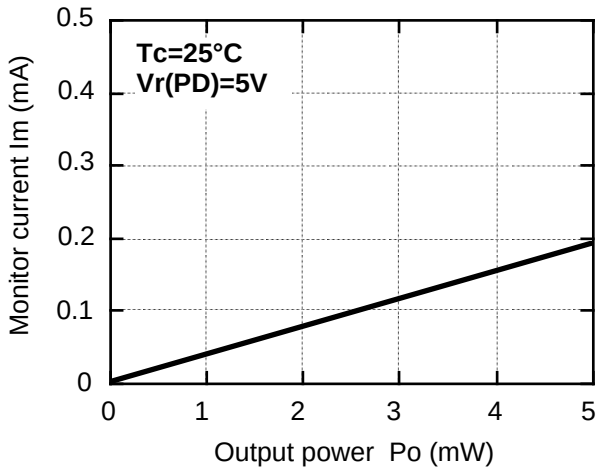
Output power vs. Forward current



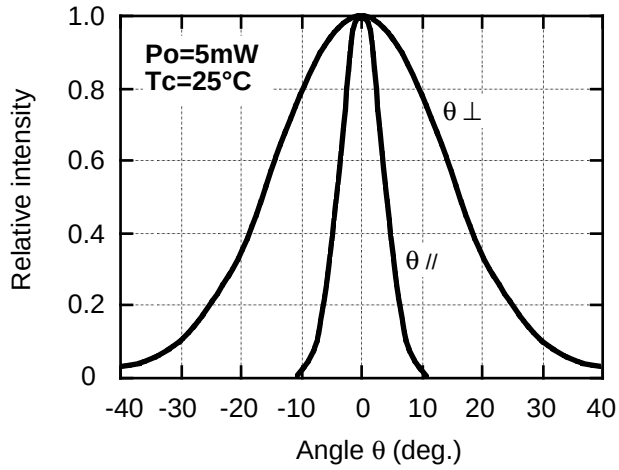
Threshold current vs. Temperature



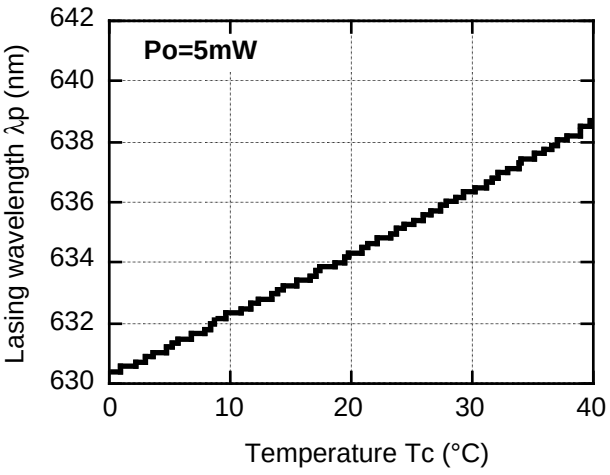
Monitor current vs. Output power



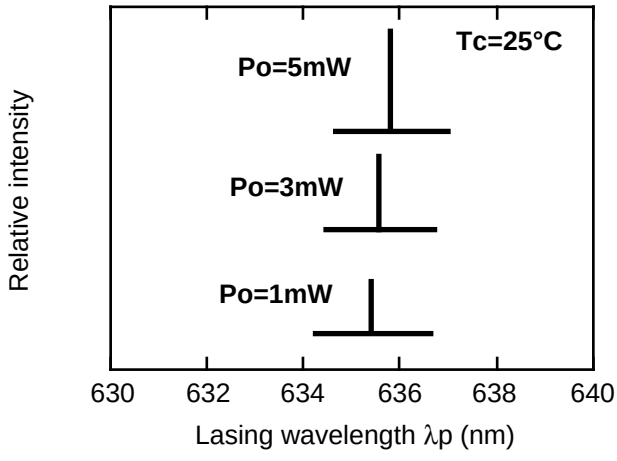
Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength



⚠ CAUTION

1. No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster / crime-prevention equipment or the like, and the failure of which may directly or indirectly cause injury, death or property loss.

2. Anyone purchasing any products described or contained herein for an above-mentioned use shall:
   1) Accept full responsibility and indemnify and defend SANYO ELECTRIC CO.,LTD., it's affiliates, subsidiaries and distributors or any of their officers and employees, jointly and severally, against any and all claims and litigation and all damages, costs and expenses associated with such use.
   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.

3. Information (including circuit diagrams and circuit parameters) disclosed herein is for example only; it is not guaranteed for mass production, SANYO believes the information disclosed herein is accurate and reliable, but no guarantees are made or implied regarding it's use or any infringements of intellectual property rights or other rights of third parties.

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.

Manufactured by ; **Tottori SANYO Electric Co., Ltd.**
Electronics Device Bussiness Headquaters LED Division
5-318, Tachikawa-cho, Tottori City, 680-8634 Japan
TEL: +81-857-21-2137 FAX: +81-857-21-2161