



DL-3038-013

Red Laser Diode

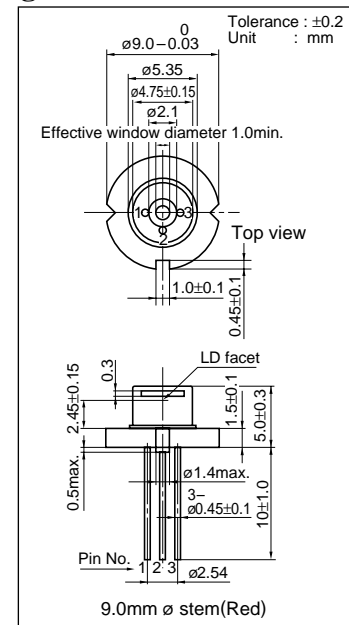
Features

- Short wavelength : 635 nm (Typ.)
- Light output power : 5 mW CW
- Low threshold current : I_{th} = 30 mA (Typ.)
- Low operating voltage : V_{op} = 2.2 V (Typ.)

Applications

- Laser pointer

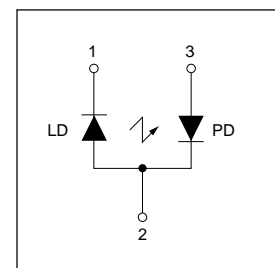
Package Dimensions



Absolute Maximum Ratings at T_c=25°C

Parameter		Symbol	Ratings	Unit
Light Output	CW	P _o	7	mW
Reverse Voltage	Laser	V _R	2	V
	PD		30	
Operating Temperature		T _{opr}	-10 to +40	°C
Storage Temperature		T _{stg}	-40 to +85	°C

Pin Connection



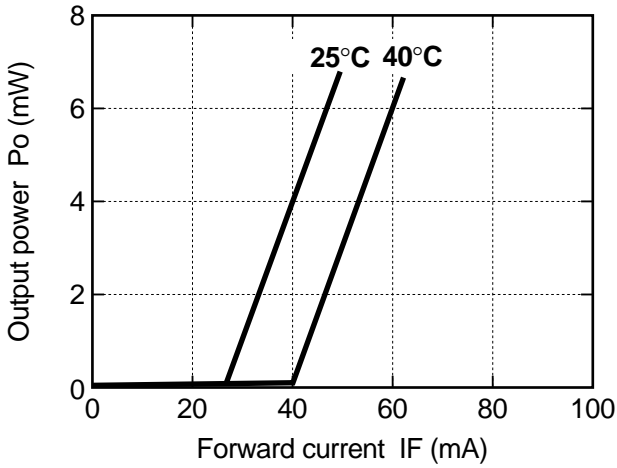
Electrical and Optical Characteristics 1) 2) at T_c=25°C

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		I _{th}	CW	-	30	45	mA
Operating Current		I _{op}	P _o =5mW	-	45	60	mA
Operating Voltage		V _{op}	P _o =5mW	-	2.2	2.5	V
Lasing Wavelength		λ _p	P _o =5mW	-	635	643	nm
Beam 3)	Perpendicular	θ _⊥	P _o =5mW	25	30	35	°
	Parallel	θ _{//}	P _o =5mW	6	8	10	°
Off Axis Angle	Perpendicular	Δθ _⊥	-	-	-	±3	°
	Parallel	Δθ _{//}	-	-	-	±3	°
Differential Efficiency		dP _o /dI _{op}	-	0.2	0.4	0.8	mW/mA
Monitoring Output Current		I _m	P _o =5mW	0.08	0.2	0.4	mA
Astigmatism		A _s	P _o =5mW	-	8	-	μm

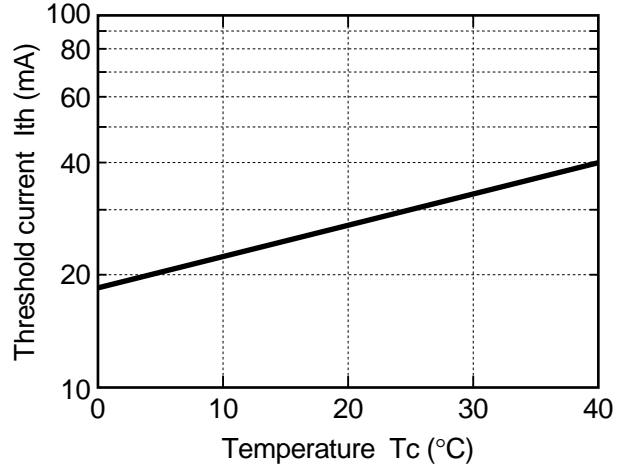
1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus
 3) Full angle at half maximum Note : The above product specification are subject to change without notice.

Characteristics

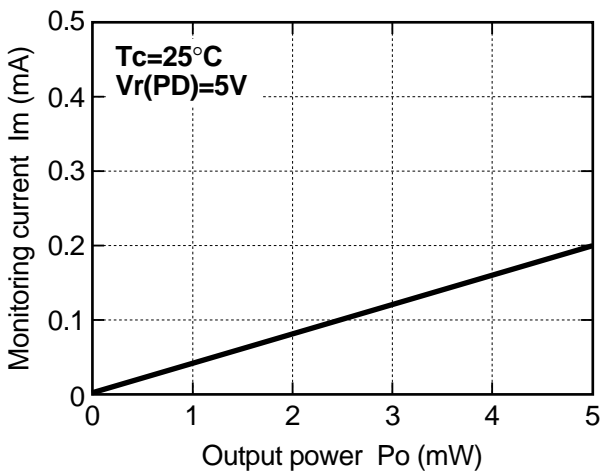
Output power vs. Forward current



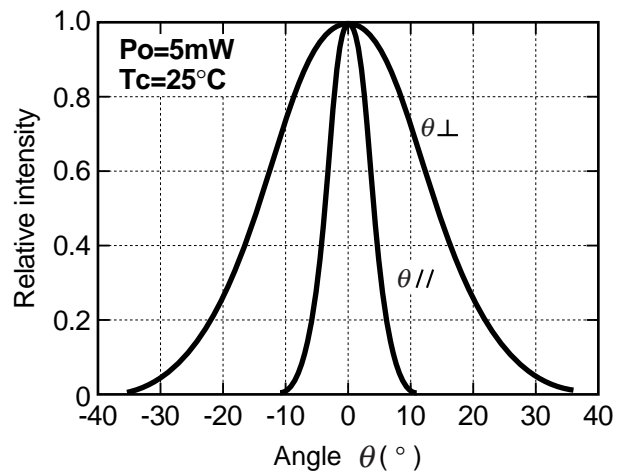
Threshold current vs. Temperature



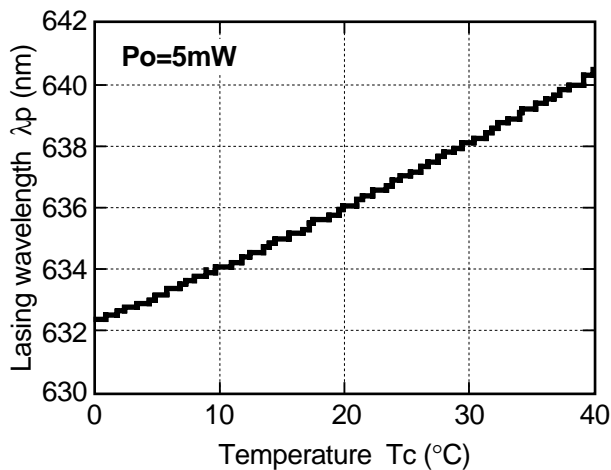
Monitoring current vs. Output power



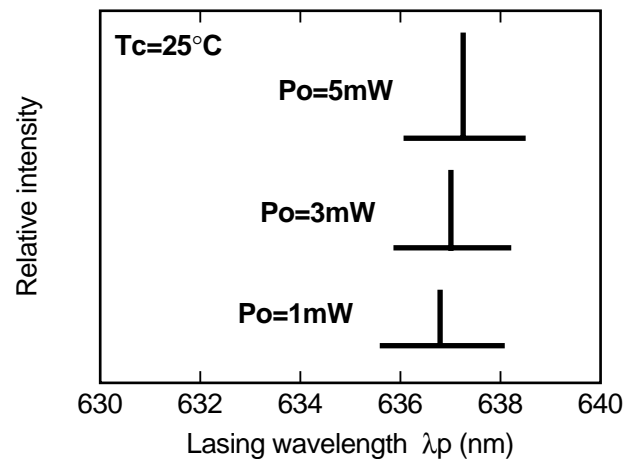
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



 **CAUTION**

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.
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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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