



**DL-3038-033**

**Red Laser Diode**

**Features**

- Short wavelength : 635 nm (Typ.)
- Low threshold current : I<sub>th</sub> = 30 mA (Typ.)
- High operating temperature : 5 mW at 50°C
- Low operating voltage : V<sub>op</sub> = 2.2 V (Typ.)

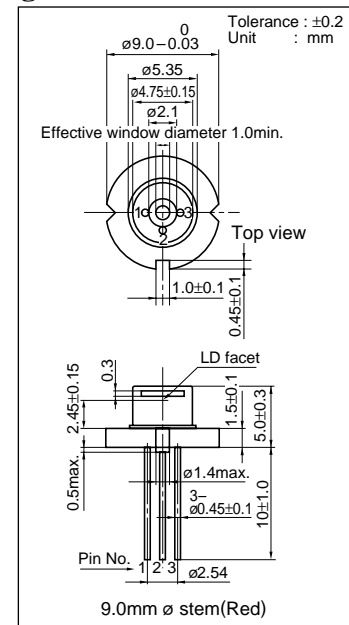
**Applications**

- Bar-code scanner
- Line marker, Leveler

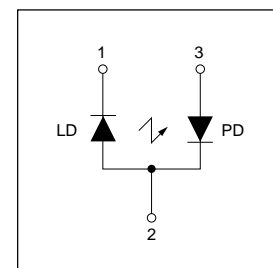
**Absolute Maximum Ratings at T<sub>c</sub>=25°C**

Parameter		Symbol	Ratings	Unit
Light Output	CW	P <sub>o</sub>	5	mW
Reverse Voltage	Laser	V <sub>R</sub>	2	V
	PD		30	
Operating Temperature		T <sub>opr</sub>	-10 to +50	°C
Storage Temperature		T <sub>stg</sub>	-40 to +85	°C

**Package Dimensions**



**Pin Connection**



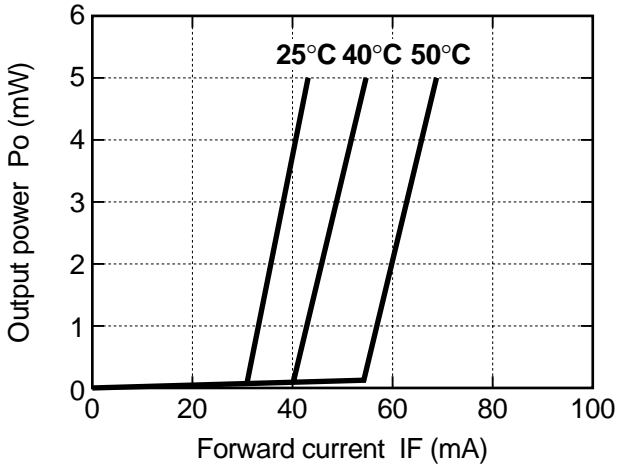
**Electrical and Optical Characteristics 1) 2) at T<sub>c</sub>=25°C**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	I <sub>th</sub>	CW	-	30	50	mA
Operating Current	I <sub>op</sub>	P <sub>o</sub> =5mW	-	40	60	mA
Operating Voltage	V <sub>op</sub>	P <sub>o</sub> =5mW	-	2.2	2.4	V
Lasing Wavelength	λ <sub>p</sub>	P <sub>o</sub> =5mW	-	635	640	nm
Beam 3) Divergence	Perpendicular	θ <sub>⊥</sub>	25	30	35	°
	Parallel	θ <sub>//</sub>	6	8	10	°
Off Axis Angle	Perpendicular	Δθ <sub>⊥</sub>	-	-	±3	°
	Parallel	Δθ <sub>//</sub>	-	-	±3	°
Differential Efficiency	dP <sub>o</sub> /dI <sub>op</sub>	-	-	0.4	-	mW/mA
Monitoring Output Current	I <sub>m</sub>	P <sub>o</sub> =5mW	0.1	0.2	0.5	mA
Astigmatism	A <sub>s</sub>	P <sub>o</sub> =5mW	-	8	-	μm

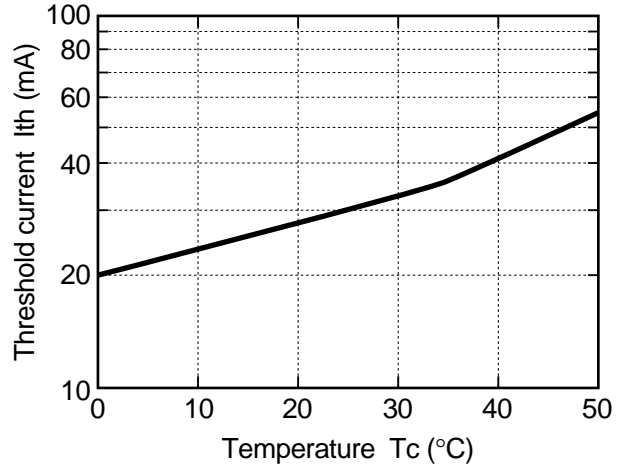
1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus  
 3) Full angle at half maximum Note : The above product specification are subject to change without notice.

Characteristics

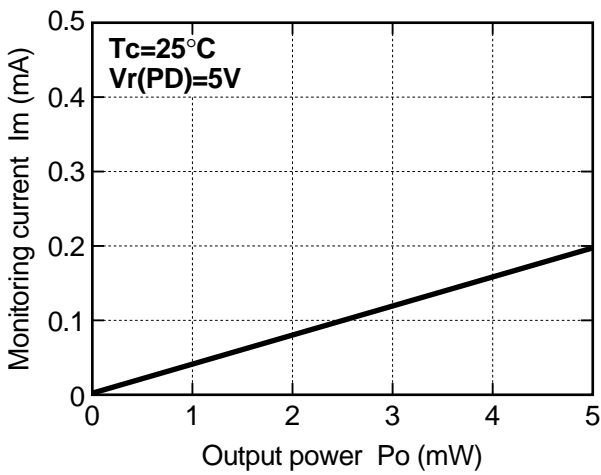
Output power vs. Forward current



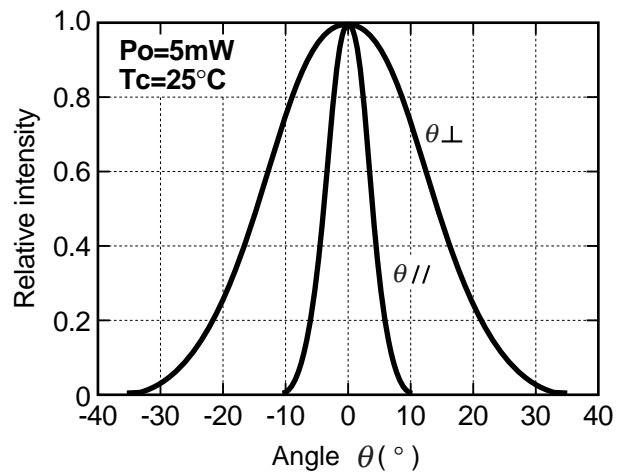
Threshold current vs. Temperature



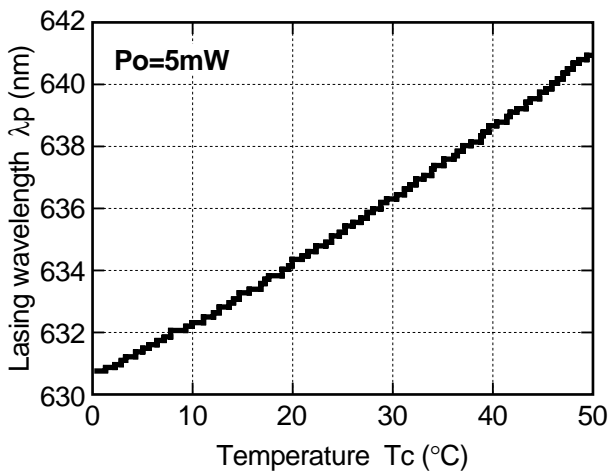
Monitoring current vs. Output power



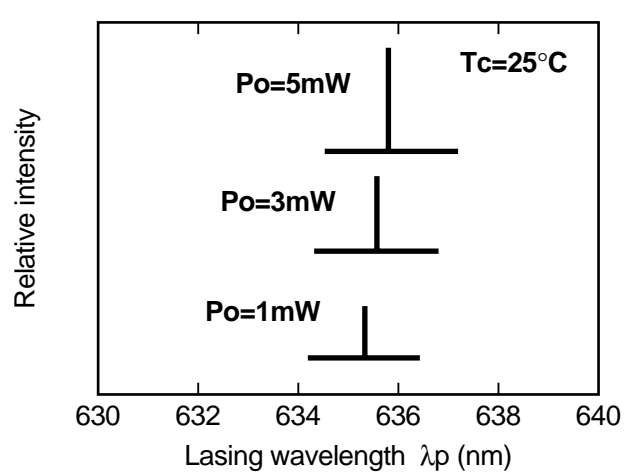
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



 **CAUTION**

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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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