

# DL3148-025 Red Laser Diode

### Features

- Short wavelength : 635 nm (Typ.)
- Output power : 5 mW CW
- Low threshold current : I<sub>th</sub> = 20 mA (Typ.)
- Low operating voltage : V<sub>op</sub> = 2.2 V (Typ.)
- Small package : ø 5.6 mm

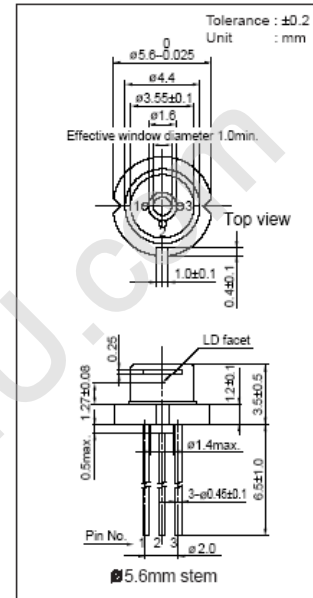
### Applications

- Laser pointer

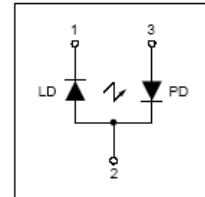
### Absolute Maximum Ratings at T<sub>c</sub>=25°C

Parameter	Symbol	Unit	Rating
Light Output	CW Po	mW	6
Reverse Voltage	Laser V <sub>R</sub>	V	2
	PD	V	30
Operating Temperature	T <sub>opr</sub>	°C	-10 to +40
Storage Temperature	T <sub>stg</sub>	°C	-40 to +85

### Package Dimensions



### Pin Connection



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

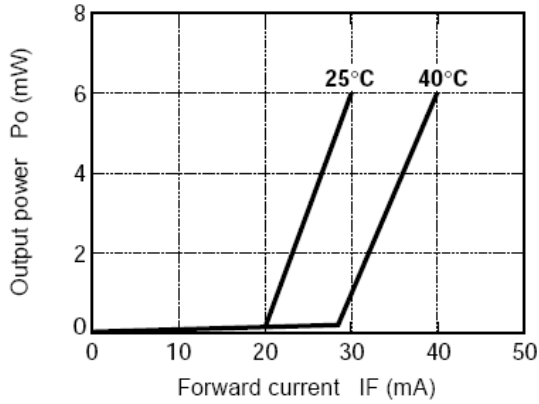
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	I <sub>th</sub>	CW	-	20	35	mA
Operating Current	I <sub>op</sub>	P <sub>o</sub> =5mW	-	30	45	mA
Operating Voltage	V <sub>op</sub>	P <sub>o</sub> =5mW	-	2.2	2.4	V
Lasing Wavelength	λ <sub>p</sub>	P <sub>o</sub> =5mW	630	635	640	nm
Beam Divergence	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>	-	-	0.5	-	mW/mA
Monitoring Output Current	I <sub>m</sub>	P <sub>o</sub> =5mW	0.08	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

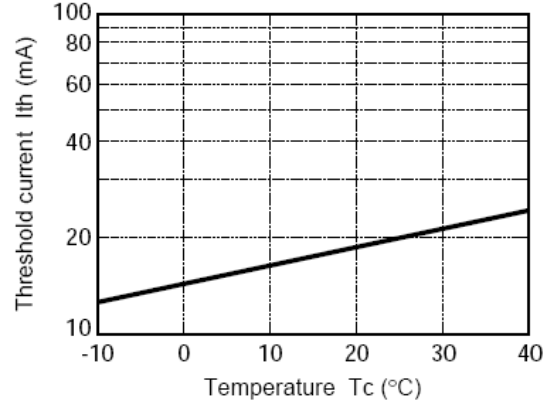
3) Full angle at half maximum Note : The above product specification are subject to change without notice.

**Characteristics**

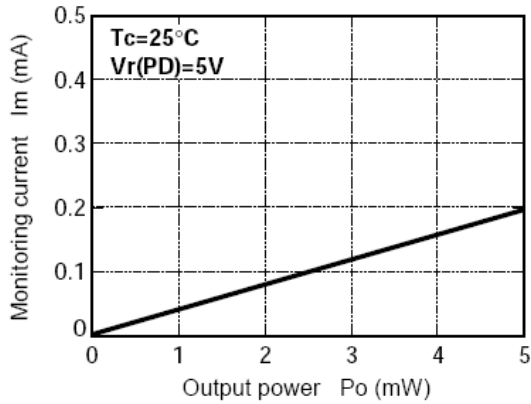
**Output power vs. Forward current**



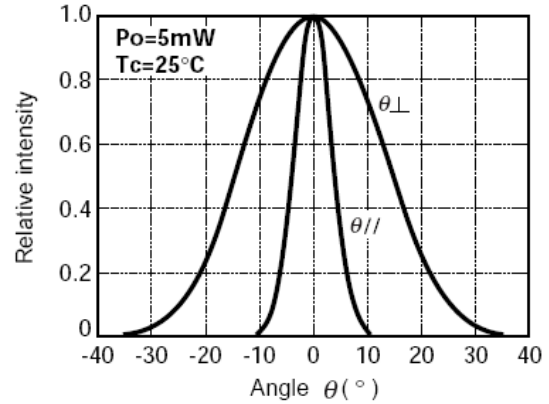
**Threshold current vs. Temperature**



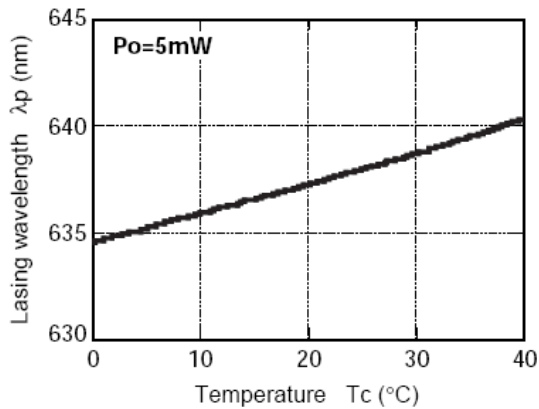
**Monitoring current vs. Output power**



**Beam divergence**



**Lasing wavelength vs. Temperature**



**Lasing wavelength vs. Output power**

