

# RED LASER DIODE

## DL-3147-031



Ver.1 Apr. 2001

### Features

- Short wavelength : 650 nm (Typ.)
- Low threshold current :  $I_{th} = 25$  mA (Typ.)
- TE mode

### Applications

Bar-code scanner

### Absolute Maximum Ratings

( $T_c=25^\circ\text{C}$ )

Parameter		Symbol	Ratings	Unit
Light Output	CW	$P_o$	7	mW
Reverse Voltage	Laser	VR	2	V
	PD		30	
Operating Temperature		$T_{opr}$	-10 to +50	$^\circ\text{C}$
Storage Temperature		$T_{stg}$	-40 to +85	$^\circ\text{C}$

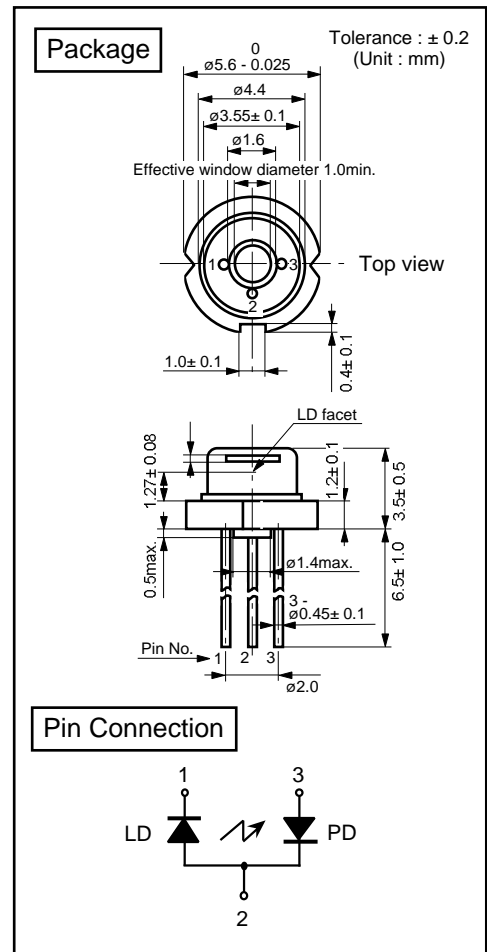
### Electrical and Optical Characteristics<sup>(1)(2)</sup>

( $T_c=25^\circ\text{C}$ )

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		$I_{th}$	CW	-	25	40	mA
Operating Current		$I_{op}$	$P_o=5\text{mW}$	-	35	50	mA
Operating Voltage		$V_{op}$	$P_o=5\text{mW}$	-	2.3	2.6	V
Lasing Wavelength		$L_p$	$P_o=5\text{mW}$	645	650	660	nm
Beam <sup>3)</sup> Divergence	Perpendicular	$Q_v$	$P_o=5\text{mW}$	25	30	35	$^\circ$
	Parallel	$Q_h$	$P_o=5\text{mW}$	7.0	8.0	10	$^\circ$
Off Axis Angle	Perpendicular	$dQ_v$	-	-	-	$\pm 3$	$^\circ$
	Parallel	$dQ_h$	-	-	-	$\pm 2$	$^\circ$
Differential Efficiency		$dP_o/dI_{op}$	-	0.3	0.5	0.8	mW/mA
Monitoring Output Current		$I_m$	$P_o=5\text{mW}$	0.1	0.2	0.4	mA
Astigmatism		$A_s$	$P_o=5\text{mW}$	-	8	-	$\mu\text{m}$

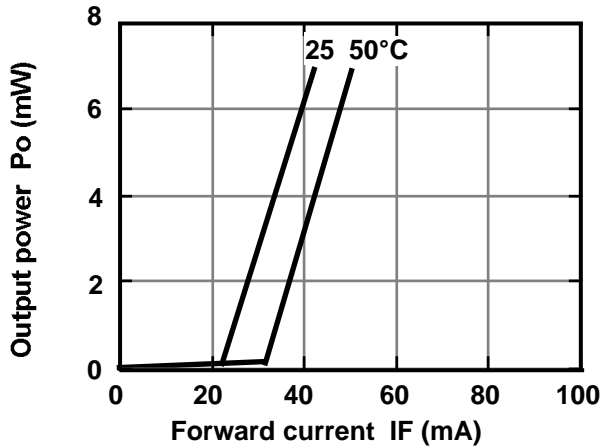
1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus

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

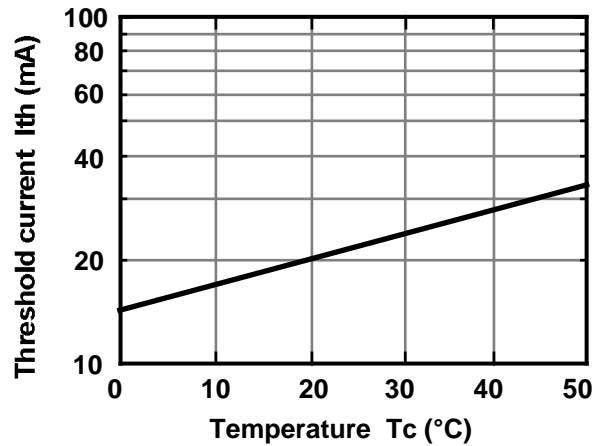


## Characteristics

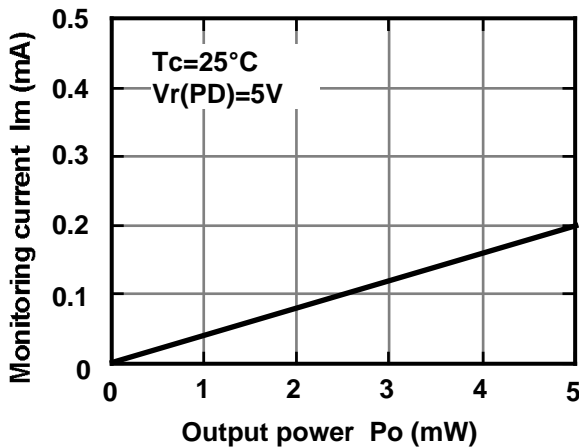
Output power vs. Forward current



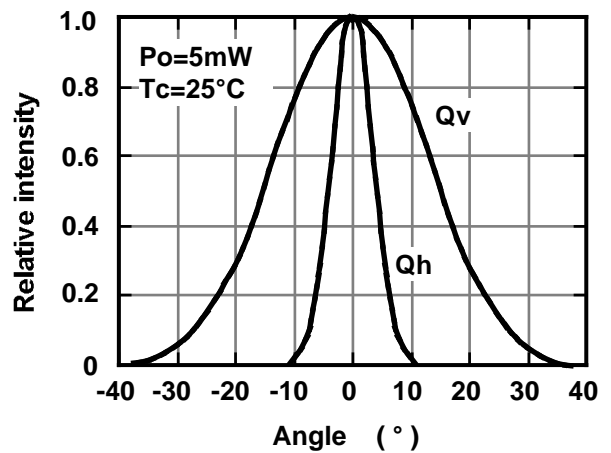
Threshold current vs. Temperature



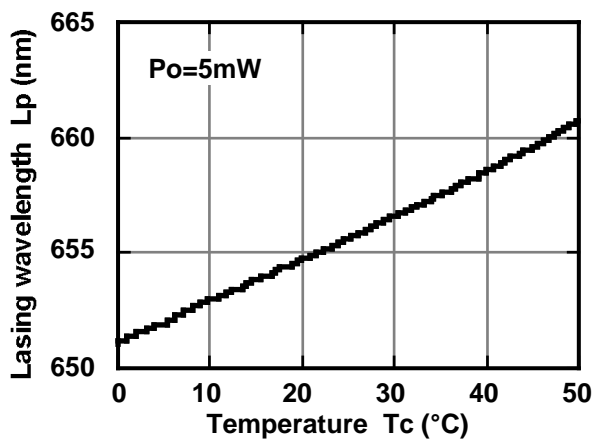
Monitoring current vs. Output power



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

