

# RED LASER DIODE

## DL-3147-060

# SANYO

Ver.1 July. 2003

### Features

- Wavelength : 650 nm (Typ.)
- Low threshold current :  $I_{th} = 20\text{mA}$  (Typ.)
- High operating temperature : 5 mW at 70°C
- TE mode

### Applications

DVD-ROM/PLAYER  
Laser module  
industrial instrument

### 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 +70	°C
Storage Temperature		$T_{stg}$	-40 to +85	°C

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

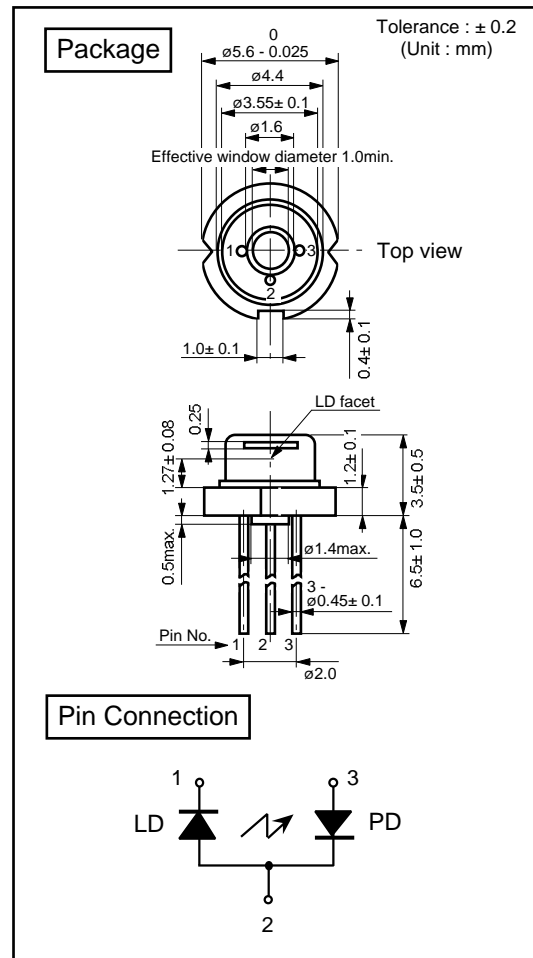
( $T_c=25^\circ\text{C}$ )

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		$I_{th}$	CW	-	20	35	mA
Operating Current		$I_{op}$	$P_o=5\text{mW}$	-	30	45	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	°
	Parallel	$Q_h$	$P_o=5\text{mW}$	7.0	8.0	10	°
Off Axis Angle	Perpendicular	$dQ_v$	-	-	-	$\pm 3$	°
	Parallel	$dQ_h$	-	-	-	$\pm 2$	°
Differential Efficiency		$dP_o/dI_{op}$	-	0.3	0.5	0.8	mW/mA
Monitoring Output Current		$I_m$	$P_o=5\text{mW}$	0.08	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

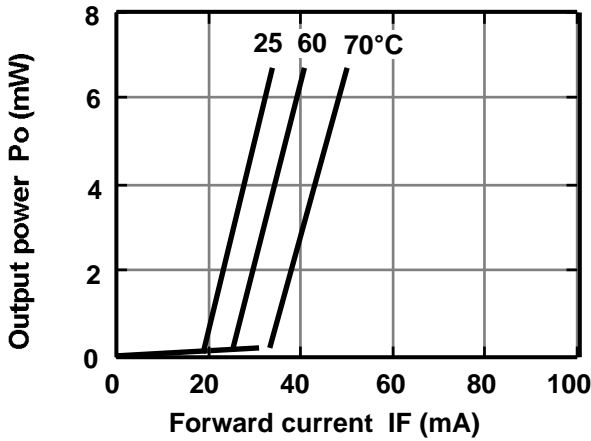
3) Full angle at half maximum

Note : The above product specification are subject to change without notice.

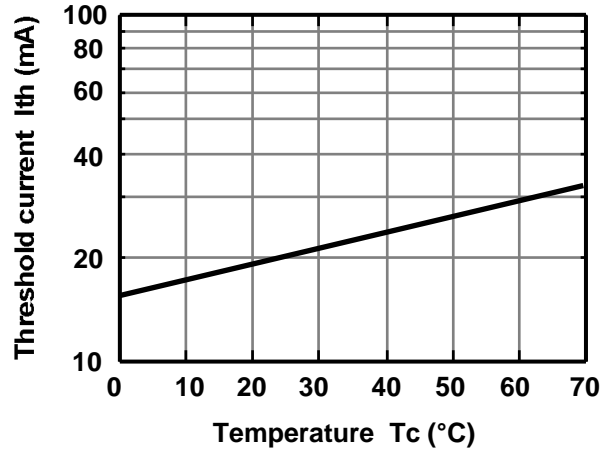


## Characteristics

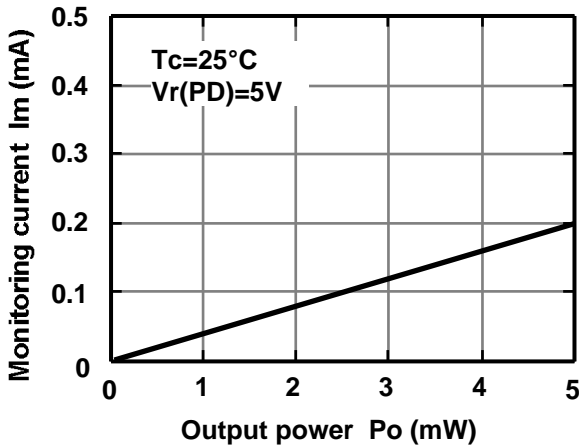
Output power vs. Forward current



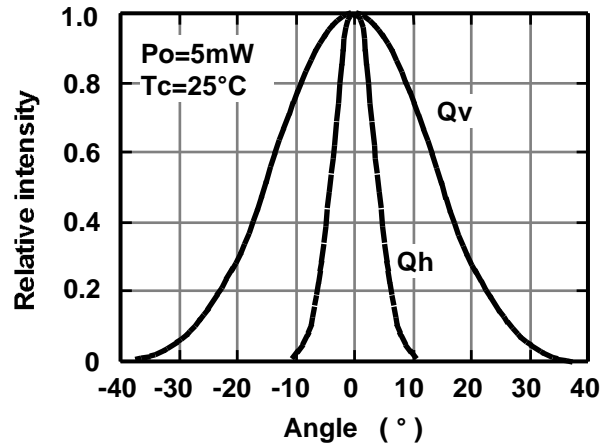
Threshold current vs. Temperature



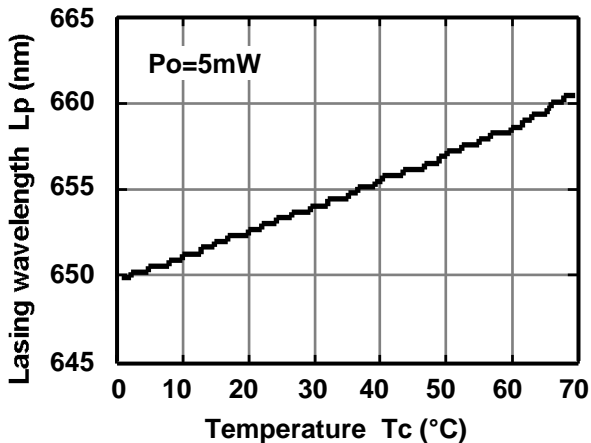
Monitoring current vs. Output power



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

