

# RED LASER DIODE

## DL-4147-062

# SANYO

Ver.1 Jun. 2002

### Features

- Wavelength : 650 nm (Typ.)
- Low threshold current :  $I_{th} = 30$  mA (Typ.)
- High operating temperature : 10 mW at 70°C
- TE mode

### Applications

- Bar-code scanner
- Industrial use

### Absolute Maximum Ratings

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

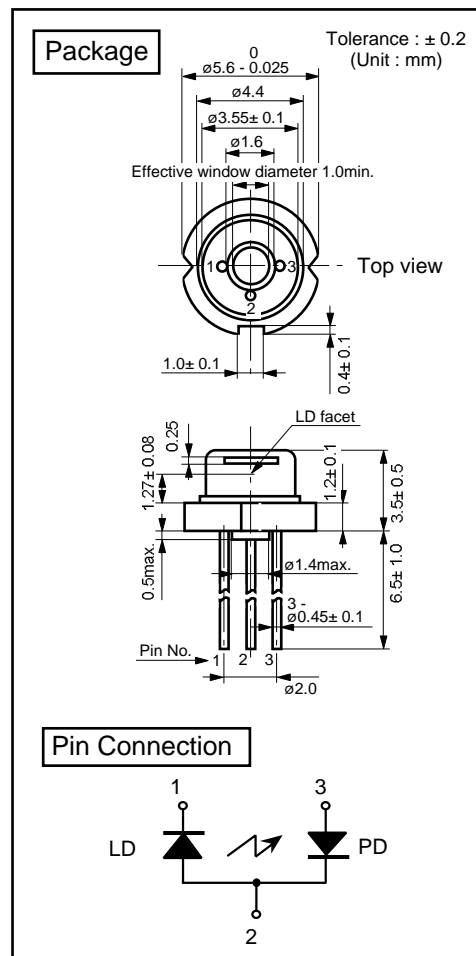
Parameter		Symbol	Ratings	Unit
Light Output	CW	$P_o$	12	mW
Reverse Voltage	Laser	VR	2	V
	PD		30	
Operating Temperature		$T_{opr}$	-10 to +70	°C
Storage Temperature		$T_{stg}$	-40 to +85	°C

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

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		$I_{th}$	CW	-	30	50	mA
Operating Current		$I_{op}$	$P_o=10$ mW	-	50	70	mA
Operating Voltage		$V_{op}$	$P_o=10$ mW	-	2.3	2.6	V
Lasing Wavelength		$\lambda_p$	$P_o=10$ mW	-	650	660	nm
Beam <sup>1)</sup> Divergence	Perpendicular	Qv	$P_o=10$ mW	23	30	35	°
	Parallel	Qh	$P_o=10$ mW	7	8	10	°
Off Axis Angle	Perpendicular	dQv	-	-	-	± 3	°
	Parallel	dQh	-	-	-	± 2	°
Differential Efficiency		$dP_o/dI_{op}$	-	0.2	0.5	0.8	mW/mA
Monitoring Output Current		$I_m$	$P_o=10$ mW	0.1	0.3	0.5	mA
Astigmatism		As	$P_o=10$ mW	-	8	-	μm

1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus 3) Full angle at half maximum

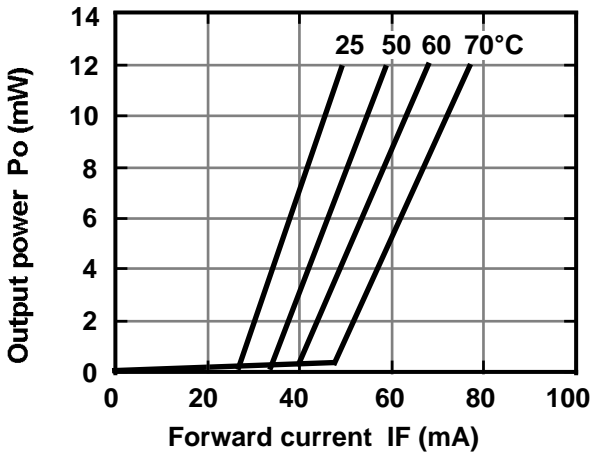
Note : The above product specification are subject to change without notice.



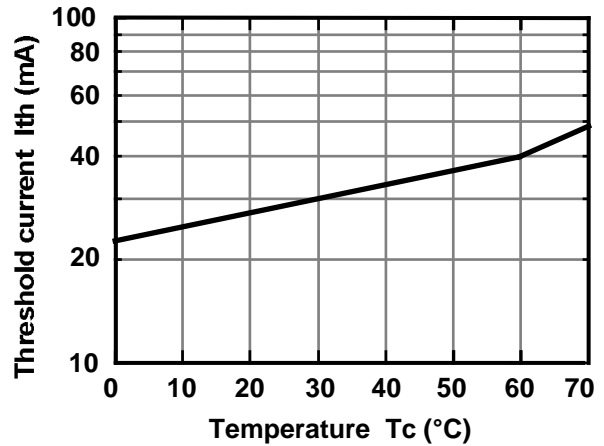
( $T_c=25^\circ\text{C}$ )

## Characteristics

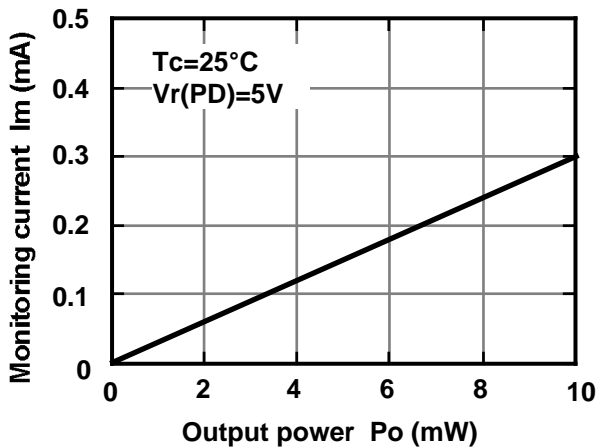
Output power vs. Forward current



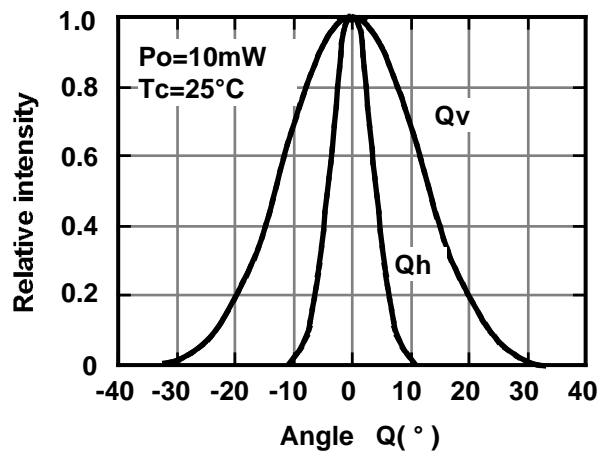
Threshold current vs. Temperature



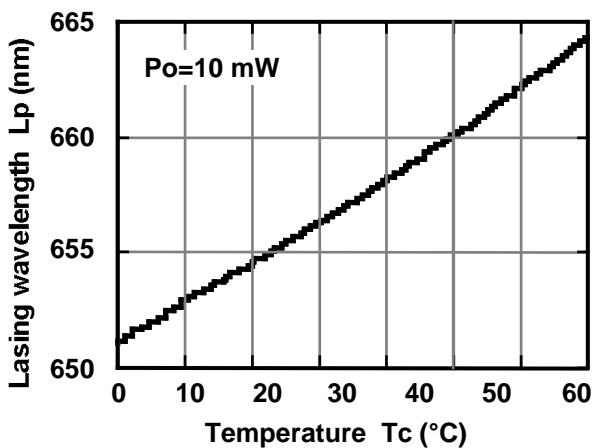
Monitoring current vs. Output power



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

