

# RED LASER DIODE

## DL-3148-034

# SANYO

Ver.3 Apr. 1999

### Features

- Short wavelength : 635 nm (Typ.)
- Low threshold current :  $I_{th} = 40$  mA (Typ.)
- High operating temperature : 5mW at 50°C
- Small package :  $\phi 5.6$  mm

### Applications

Bar-code scanner

### Absolute Maximum Ratings

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

Parameter		Symbol	Ratings	Unit
Light Output	CW	$P_o$	5	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>

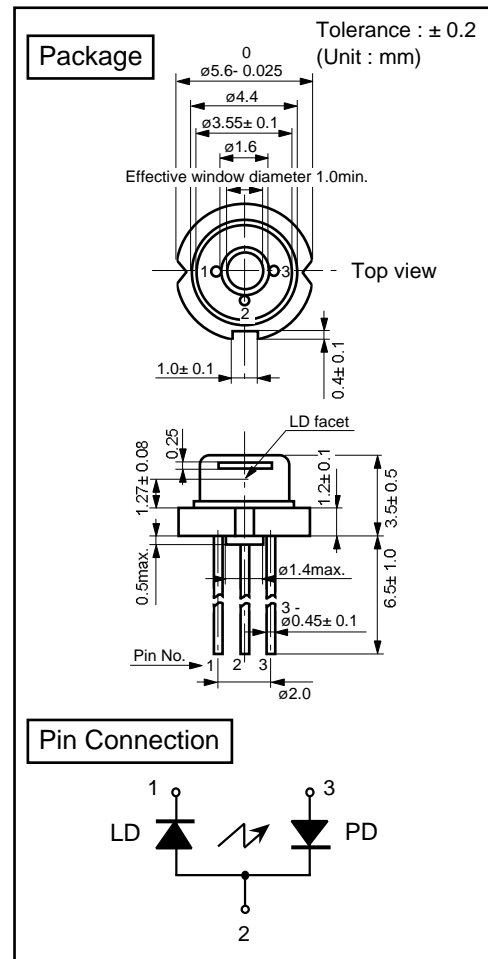
( $T_c=25^\circ\text{C}$ )

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		$I_{th}$	CW	-	40	60	mA
Operating Current		$I_{op}$	$P_o=5\text{mW}$	-	55	75	mA
Operating Voltage		$V_{op}$	$P_o=5\text{mW}$	-	2.2	2.4	V
Lasing Wavelength		$L_p$	$P_o=5\text{mW}$	-	635	645	nm
Beam <sup>3)</sup> Divergence	Perpendicular	$Q_v$	$P_o=5\text{mW}$	25	30	35	$^\circ$
	Parallel	$Q_h$	$P_o=5\text{mW}$	6	8	10	$^\circ$
Off Axis Angle	Perpendicular	$dQ_v$	-	-	-	$\pm 3.0$	$^\circ$
	Parallel	$dQ_h$	-	-	-	$\pm 3.0$	$^\circ$
Differential Efficiency		$dP_o/dI_{op}$	-	-	0.4	-	mG/mA
Monitoring Output Current		$I_m$	$P_o=5\text{mW}$	0.1	0.2	0.5	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.



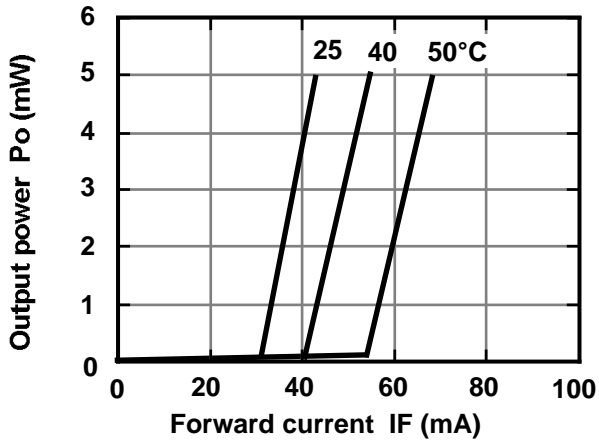
Tottori SANYO Electric Co., Ltd. Electronic Device Business Headquarters

LED Division

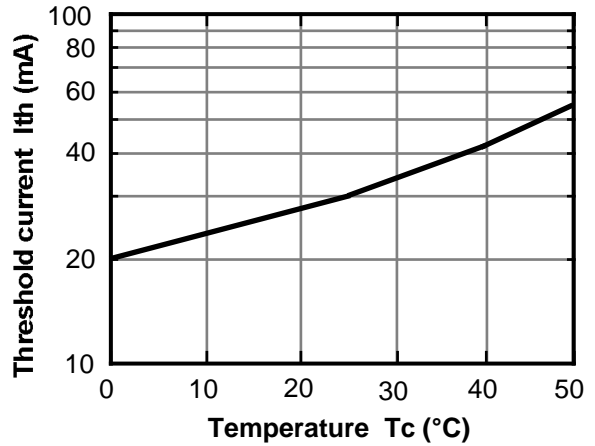
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## Characteristics

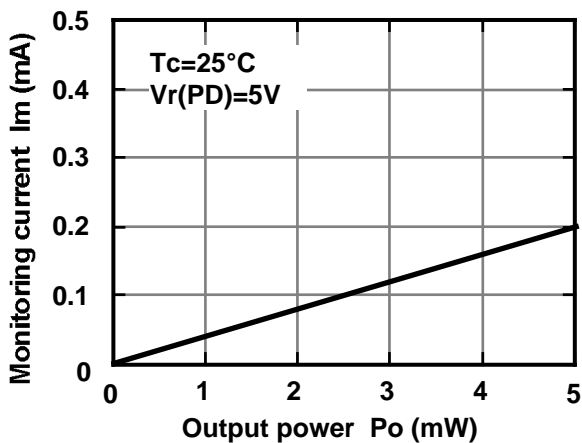
Output power vs. Forward current



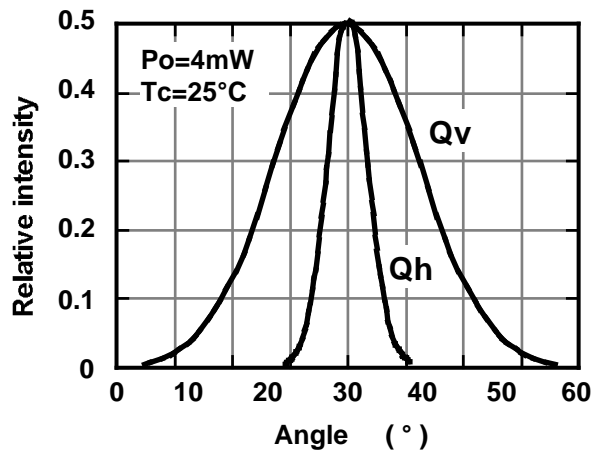
Threshold current vs. Temperature



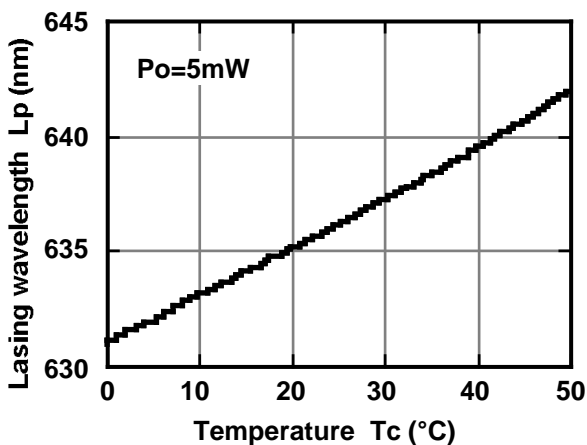
Monitoring current vs. Output power



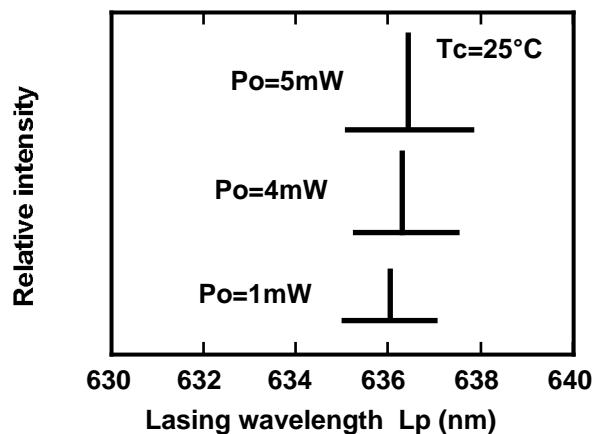
Beam divergence



Lasing wavelength vs. Temperature

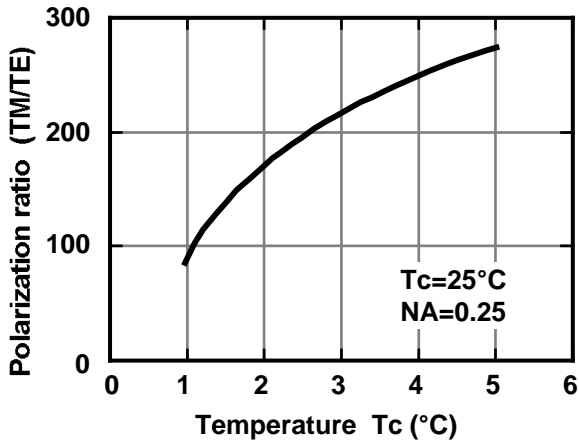


Lasing wavelength vs. Output power



Characteristics

Polarization ratio vs. Output power



Astigmatism vs. Output power

