

RED LASER DIODE

DL-4147-162

SANYO

Ver.1 Mar. 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
- DVD-ROM/PLAYER

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	$^\circ\text{C}$
Storage Temperature		T_{stg}	-40 to +85	$^\circ\text{C}$

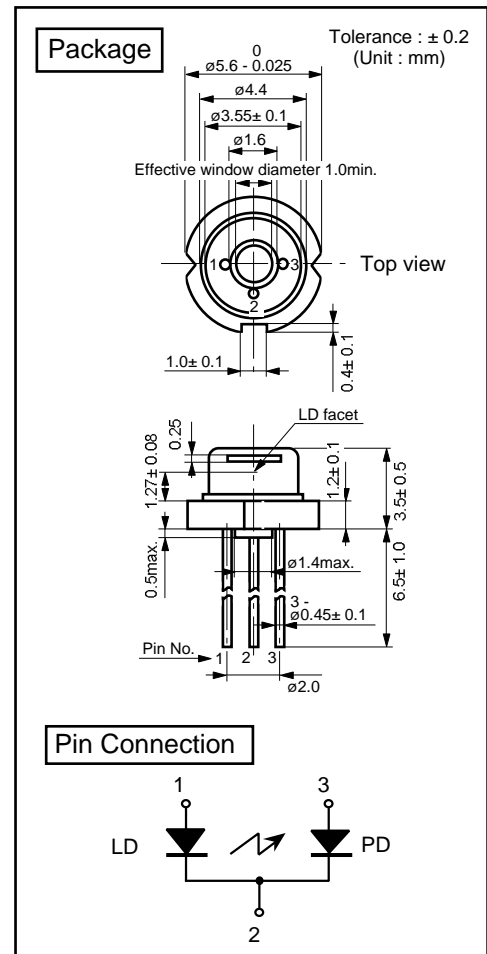
Electrical and Optical Characteristics

1) 2)

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		λ_p	$P_o=10$ mW	-	650	660	nm
Beam Divergence	Perpendicular	Qv	$P_o=10$ mW	23	30	35	$^\circ$
	Parallel	Qh	$P_o=10$ mW	7	8	10	$^\circ$
Off Axis Angle	Perpendicular	dQv	-	-	-	± 3	$^\circ$
	Parallel	dQh	-	-	-	± 2	$^\circ$
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
Differential Resistance		R_s	$P_o=10$ mW	-	9	-	

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

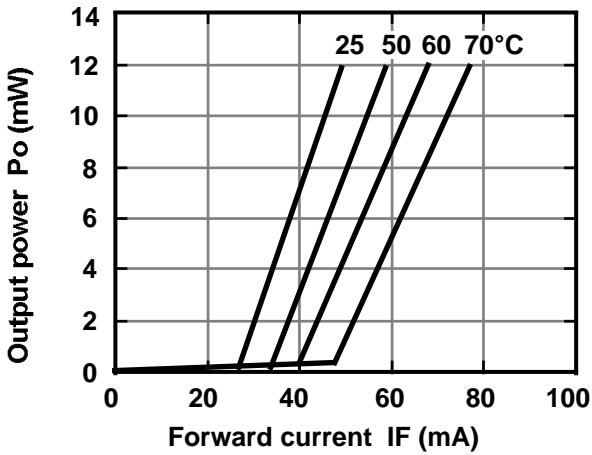
Note : The above product specification are subject to change without notice.



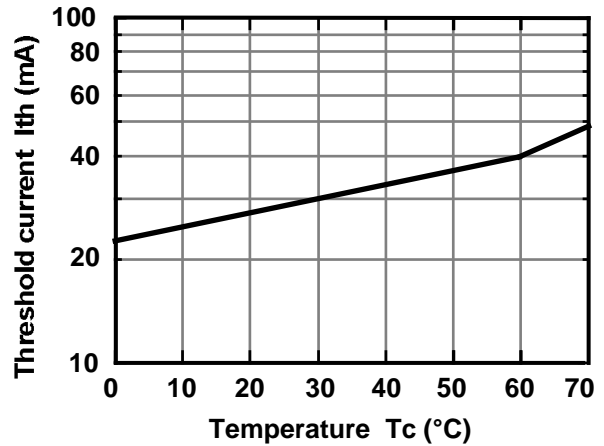
($T_c=25^\circ\text{C}$)

Characteristics

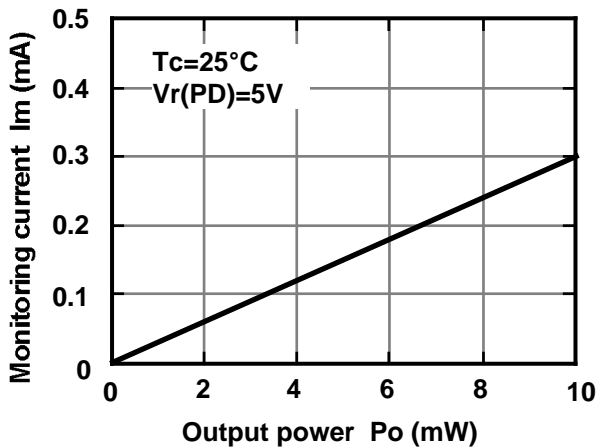
Output power vs. Forward current



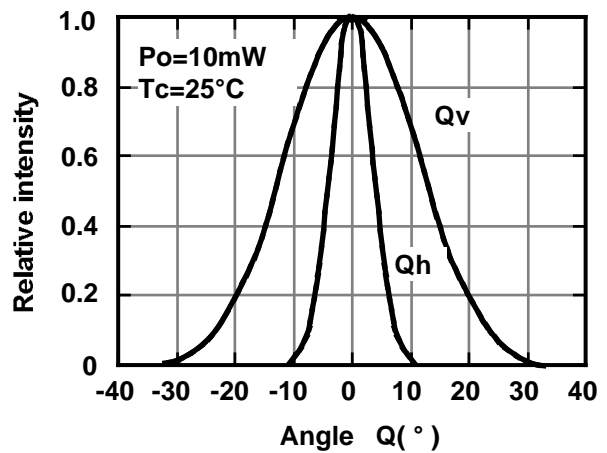
Threshold current vs. Temperature



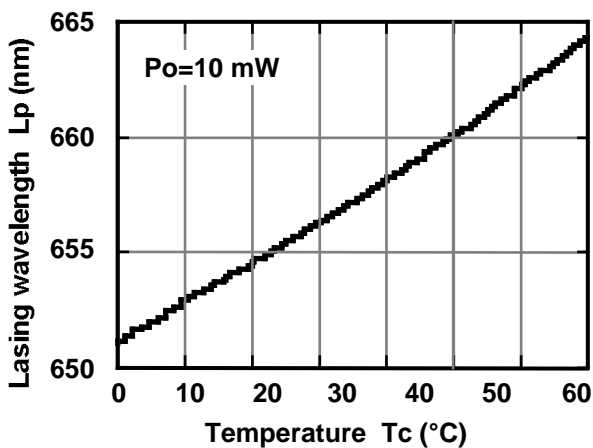
Monitoring current vs. Output power



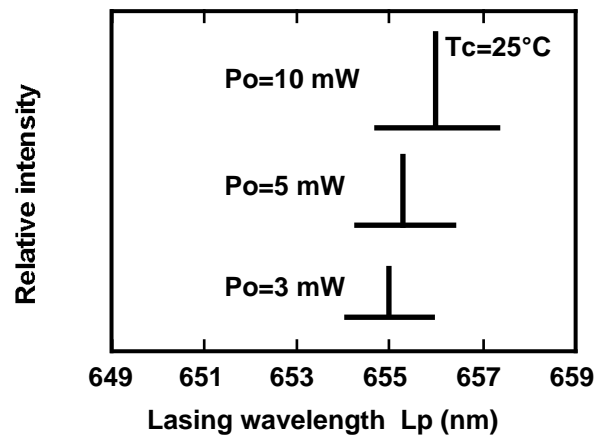
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



This is typical data and it may not represent all products.