

RED LASER DIODE

DL-4148-021

SANYO

Ver.2 Apr. 2000

Features

- Short wavelength : 635 nm (Typ.)
- High output power : 10 mW CW
- Low threshold current : $I_{th} = 40$ mA (Typ.)
- Small package : $\phi 5.6$ mm

Applications

Line marker, Leveler

Absolute Maximum Ratings

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

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

Electrical and Optical Characteristics ^{1) 2)}

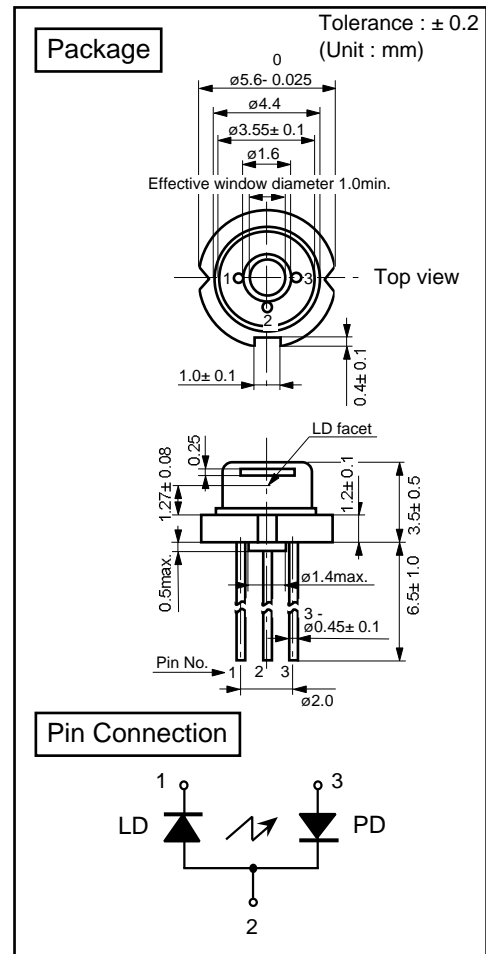
($T_c = 25^\circ\text{C}$)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		I_{th}	CW	-	40	60	mA
Operating Current		I_{op}	$P_o = 10\text{mW}$	-	60	80	mA
Operating Voltage		V_{op}	$P_o = 10\text{mW}$	-	2.3	2.5	V
Lasing Wavelength		L_p	$P_o = 10\text{mW}$	-	635	645	nm
Beam ³⁾ Divergence	Perpendicular	Q_v	$P_o = 10\text{mW}$	25	30	35	$^\circ$
	Parallel	Q_h	$P_o = 10\text{mW}$	6	8	10	$^\circ$
Off Axis Angle	Perpendicular	dQ_v	-	-	-	± 2	$^\circ$
	Parallel	dQ_h	-	-	-	± 2	$^\circ$
Differential Efficiency		dP_o/dI_{op}	-	-	0.5	-	mW/mA
Monitoring Output Current		I_m	$P_o = 10\text{mW}$	0.05	0.15	0.4	mA
Astigmatism		A_s	$P_o = 10\text{mW}$	-	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.

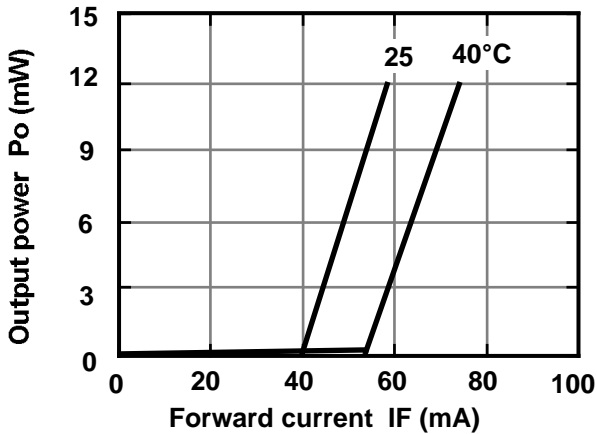


Tottori SANYO Electric Co., Ltd. Electronic Device Business Headquarters
LED Division

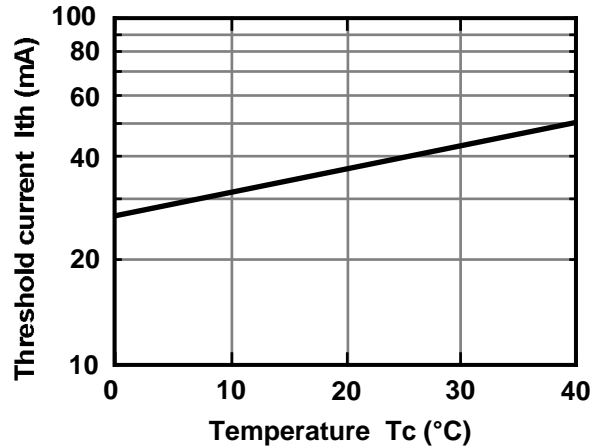
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Characteristics

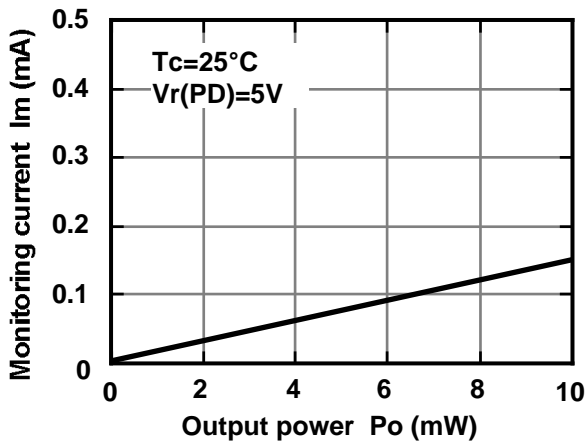
Output power vs. Forward current



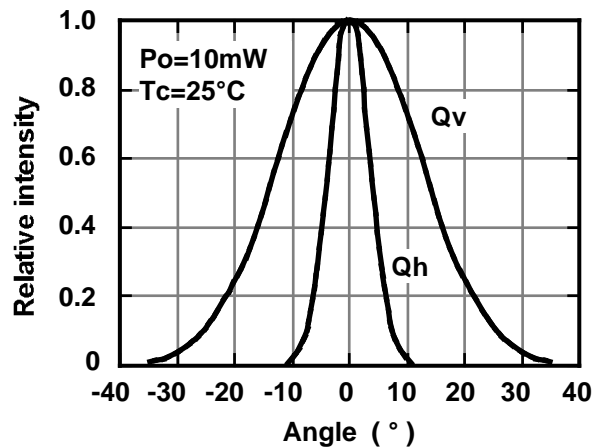
Threshold current vs. Temperature



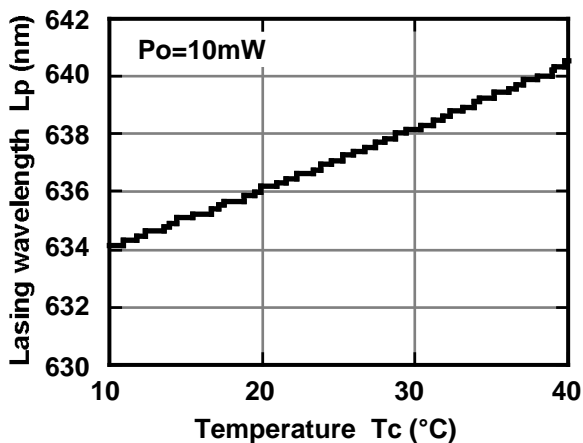
Monitoring current vs. Output power



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

