

RED LASER DIODE

DL-5038-031

SANYO

Ver.1 May. 2002

Features

- Short wavelength : 635 nm (Typ.)
- High output power : 30 mW at 50°C
- Low threshold current : $I_{th} = 50$ mA (Typ.)
- TE mode (Conventional 635nm : TM mode)

Applications

- Bar-code scanner
- Line marker

Absolute Maximum Ratings

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

Parameter		Symbol	Rated	Unit
Light Output	CW	P_o	35	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 ^{1) 2)}

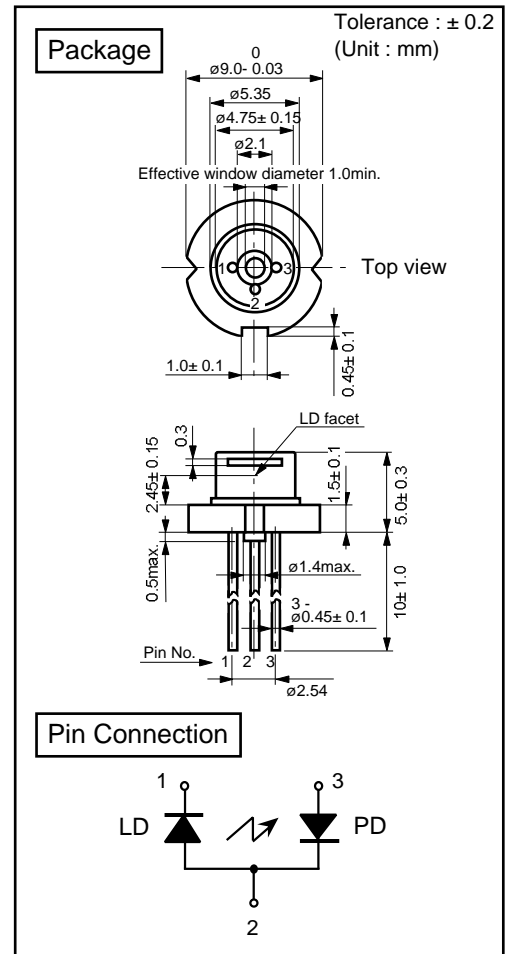
($T_c=25^\circ\text{C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current	I_{th}	CW	-	50	70	mA
Operating Current	I_{op}	$P_o=30\text{mW}$	-	90	110	mA
Operating Voltage	V_{op}	$P_o=30\text{mW}$	-	2.4	2.7	V
Lasing Wavelength	L_p	$P_o=30\text{mW}$	-	635	645	nm
Beam ³⁾ Divergence	Perpendicular	Q_v	25	30	35	$^\circ$
	Parallel	Q_h	6	7	9	$^\circ$
Off Axis Angle	Perpendicular	dQ_v	-	-	± 3	$^\circ$
	Parallel	dQ_h	-	-	± 3	$^\circ$
Differential Efficiency	dP_o/dI_{op}	-	-	0.7	-	mW/mA
Monitoring Output Current	I_m	$P_o=30\text{mW}$	0.1	0.3	0.6	mA
Astigmatism	A_s	$P_o=30\text{mW}$	-	10	-	μm

1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus

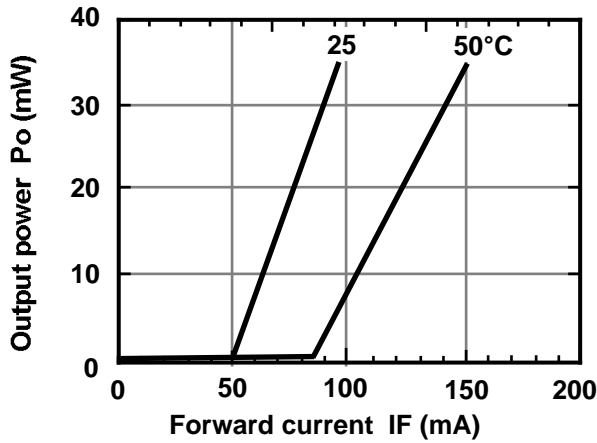
3) Full angle at half maximum

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

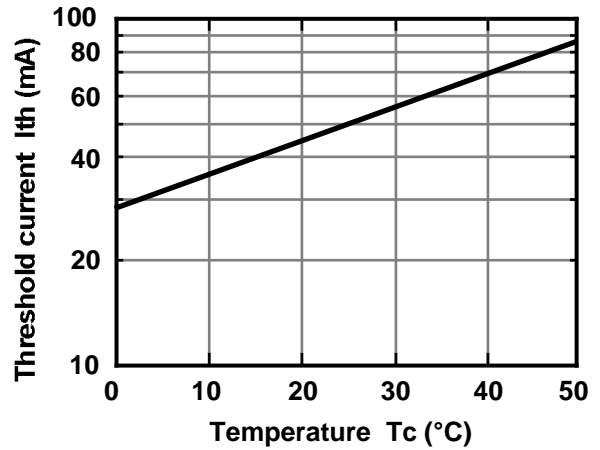


Characteristics

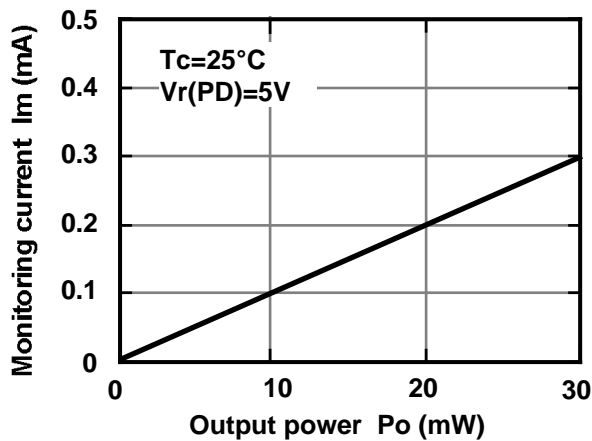
Output power vs. Forward current



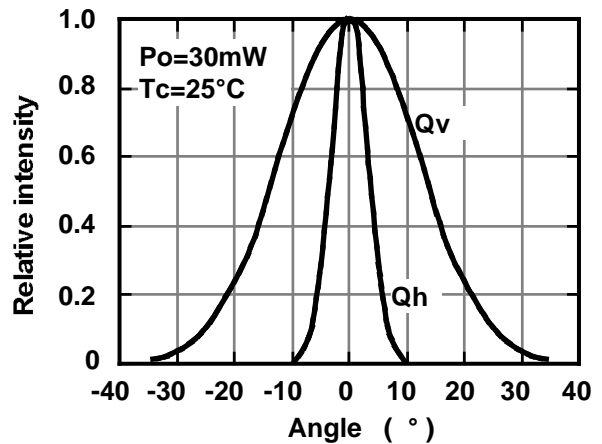
Threshold current vs. Temperature



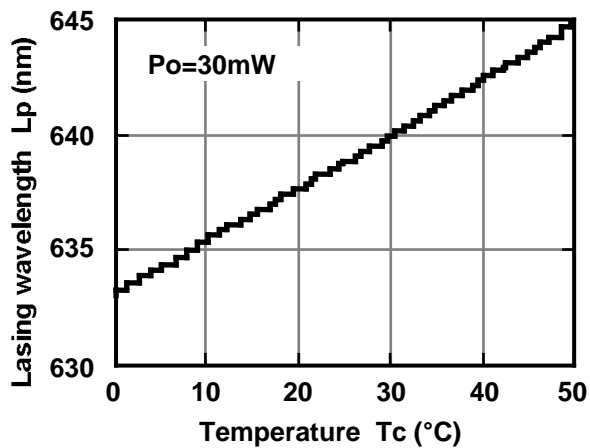
Monitoring current vs. Output power



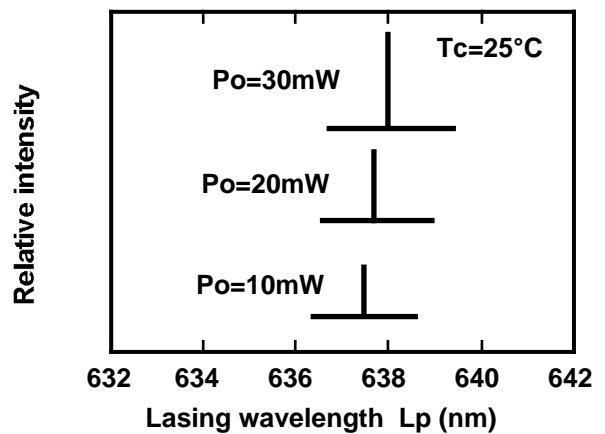
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



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