

INFRARED LASER DIODE

SANYO**DL-7140-201P**

Ver.2 Jun. 2002

Features

- Wavelength : 783 nm (Typ.)
- Low threshold current : I_{th} = 40 mA (Typ.)
- High operating temperature : 200mW(Pulse)
- Small package : $\phi 5.6$ mm

Applications

- Optical disc system (CD-R)

Usage condition

CW:<90mW Pulse:<200mW(peak power)

Absolute Maximum Ratings(T_c=25°C)

Parameter		Symbol	Ratings	Unit
Light Output	CW	P _o (CW)	90	mW
	Pulse ¹⁾	P _o (pulse)	200	
Reverse Voltage (LD)		VR	2	V
Operating Temperature	CW ²⁾	Topr	-10 to +60	°C
	Pulse ^{1) 2)}	Topr	-10 to +70	
Storage Temperature		T _{stg}	-40 to +85	°C

1) Pulse Width $\leq 0.1\mu\text{s}$, Duty 50%, Peak power

2) Case temperature

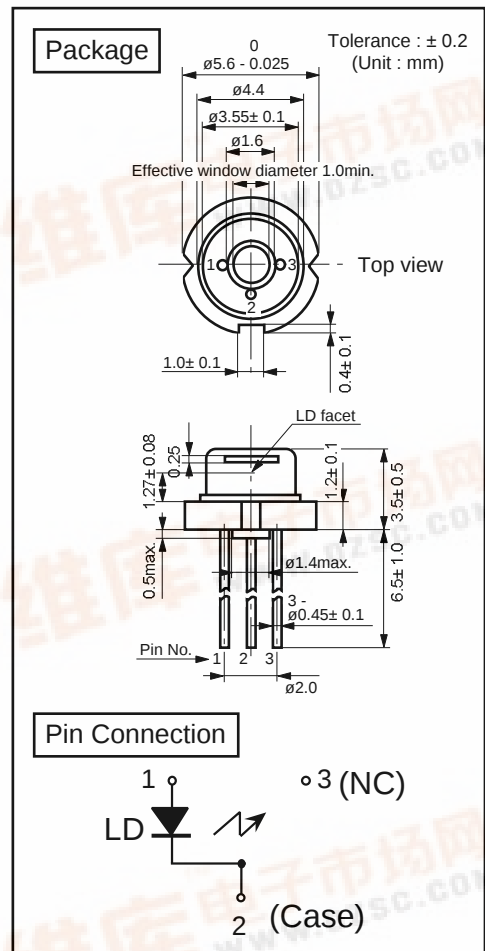
Electrical and Optical Characteristics 3) 4) 5) 7)(T_c=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		I _{th}	CW	25	40	60	mA
Operating Current	T _c =25°C	I _{op}	P _o =70mW	80	110	140	mA
Lasing Wavelength		L _p	P _o =70mW	778	783	788	nm
Beam 6) Divergence	Perpendicular	Q _v	P _o =70mW	14	16	18	°
	Parallel	Q _h	P _o =70mW	7.5	8.5	9.0	°
Off Axis Angle	Perpendicular	dQ _v	P _o =70mW	-	-	± 2.0	°
	Parallel	dQ _h	P _o =70mW	-	-	± 1.5	°
Differential Efficiency		dP _o /dI _{op}	P _o =70mW	0.8	1.1	1.3	mW/mA
Astigmatism		As	P _o =70mW	-	-	5	μm

3) Initial values. 4) All the above values are evaluated with Tottori sanyo's measuring apparatus.

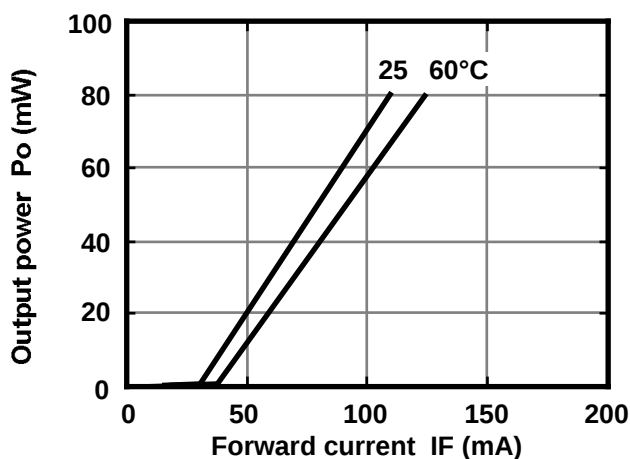
5) Reference values. 6) Full angle at half maximum. 7) Measured at CW.

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

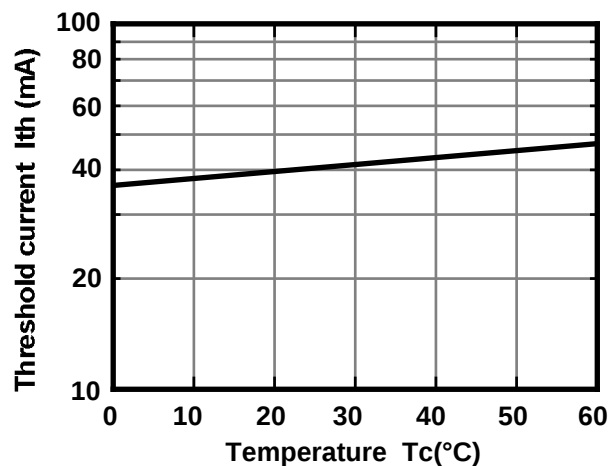


Characteristics

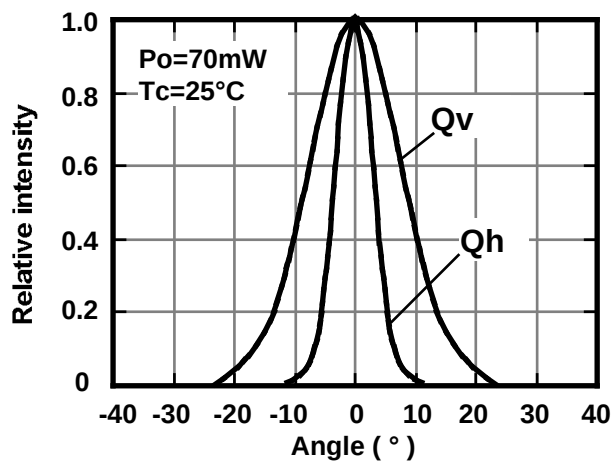
Output power vs. Forward current



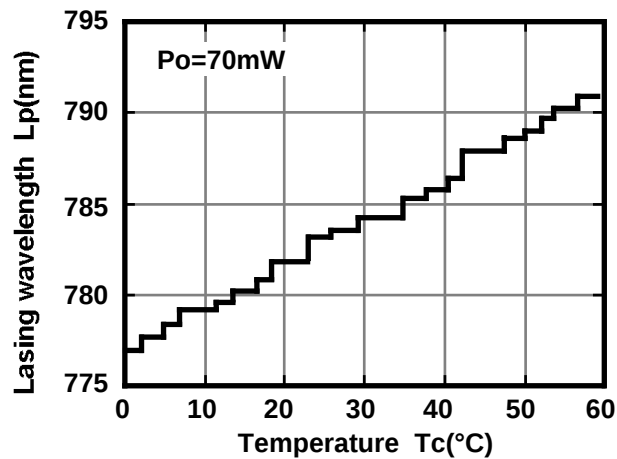
Threshold current vs. Temperature



Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength

