INFRARED LASER DIODE

DL-7140-201M

SANYO

Ver.1.2 May. 2003

Features

- Wavelength : 783 nm (Typ.)
- Low threshold current : Ith = 30 mA (Typ.)
- High operating temperature : 180mW(Pulse)
- Small package : ø5.6mm

Applications

- Optical disc system (CD-R)

Usage condition

CW:<70mW Pulse:<180mW(peak power)

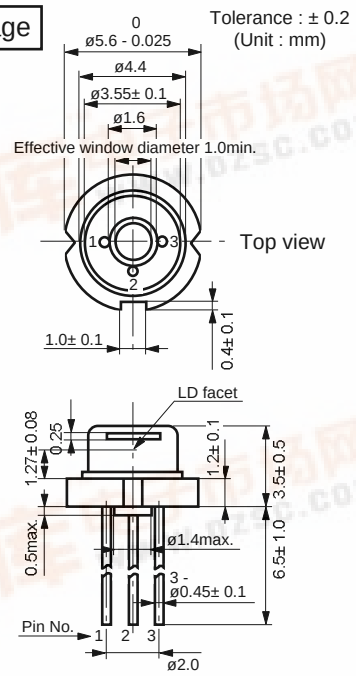
Absolute Maximum Ratings

(Tc=25°C)

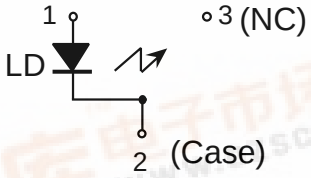
Parameter		Symbol	Ratings	Unit
Light Output	CW	Po (CW)	80	mW
	Pulse[1)]	Po(pulse)	180	
Reverse Voltage (LD)		VR	2	V
Operating Temperature	CW[2)]	Topr	-10 to +60	°C
	Pulse[1) 2)]	Topr	-10 to +70	
Storage Temperature		Tstg	-40 to +85	°C

1) Pulse Width ≤0.2µs, Duty 50%,Peak power
2) Case temperature

Package



Pin Connection



Electrical and Optical Characteristics 3) 4) 5) 7)

(Tc=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	CW	15	30	50	mA
Operating Current	Tc=25°C	Iop	Po=70mW	60	100	130	mA
Lasing Wavelength		Lp	Po=70mW	778	783	788	nm
Beam Divergence[6)]	Perpendicular	Qv	Po=70mW	14	17	18	°
	Parallel	Qh	Po=70mW	7.5	8.5	9.0	°
Off Axis Angle	Perpendicular	dQv	Po=70mW	-	-	± 2.0	°
	Parallel	dQh	Po=70mW	-	-	± 1.5	°
Differential Efficiency		dPo/dIop	Po=70mW	0.8	1.1	1.3	mW/mA
Astigmatism		As	Po=70mW	-	-	5	µm

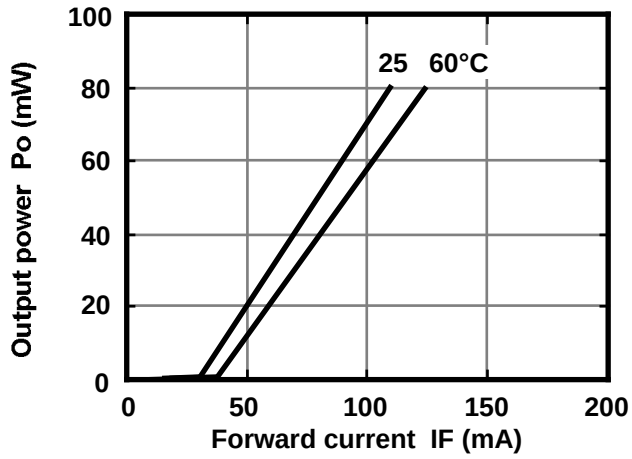
3) Initial values. 4) All the above values are evaluated with Tottori sanyo's measuring apparatus.
5) Reference values. 6)Full angle at half maximum. 7) Measured at CW .

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

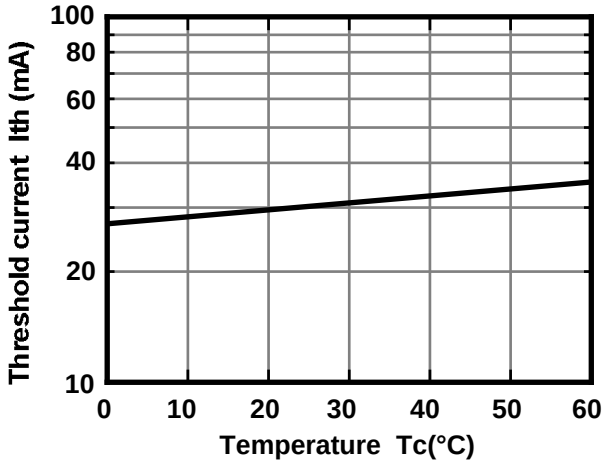
Tottori SANYO Electric Co., Ltd. LED Business Unit
5-318, Tachikawa, Tottori 680-8634 Japan TEL : +81-857-21-2137 FAX : +81-857-21-2161

Characteristics

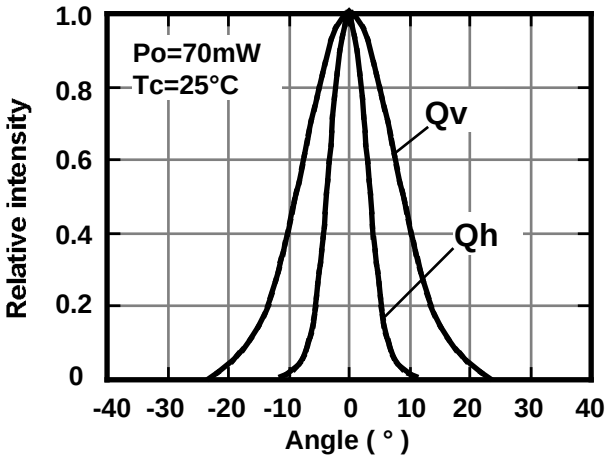
Output power vs. Forward current



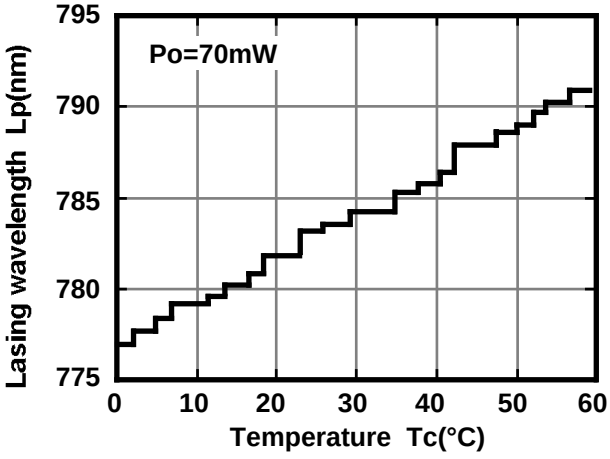
Threshold current vs. Temperature



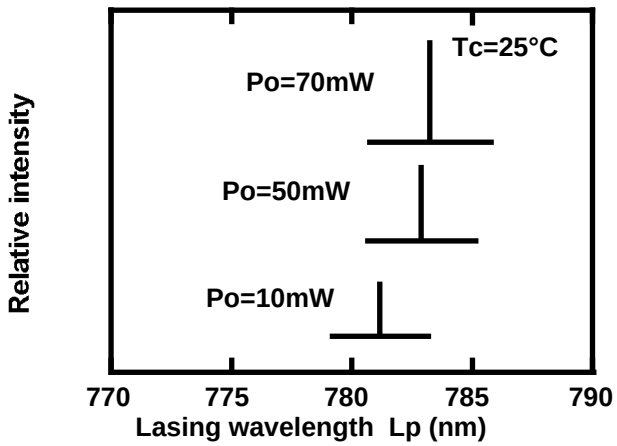
Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength



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