Ordering number : ENN7585

Infrared Laser Diode

DL-7140-201M

Infrared Laser Diode

Features

- Wavelength : 783 nm (Typ.)
- Low threshold current : Ith = 30 mA (Typ.)
- High operating temperature : 180 mW (Pulse)
- Small package : ø 5.6 mm

Applications

- Optical disc system (CD-R)

Usage conditio

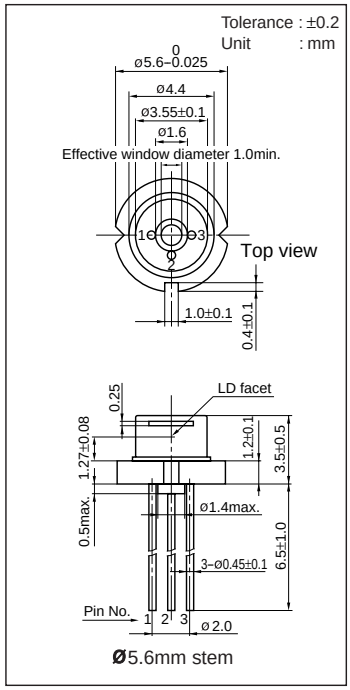
- CW : <70 mW Pulse : <180 mW (peak power)

Absolute Maximum Ratings at Tc=25°C

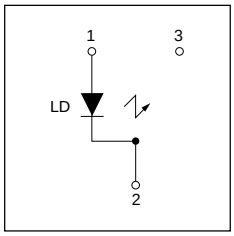
Parameter		Symbol	Ratings	Unit
Light Output	CW	Po (CW)	80	mW
	Pulse 1)	Po (pulse)	180	
Reverse Voltage (LD)		V_R	2	V
Operating Temperature	CW 2)	Topr	–10 to +60	°C
	Pulse 1) 2)	Topr	–10 to +70	
Storage Temperature		Tstg	–40 to +85	°C

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

Package Dimensions



Pin Connection



Electrical and Optical Characteristics 3) 4) 5) 7) at Tc=25°C

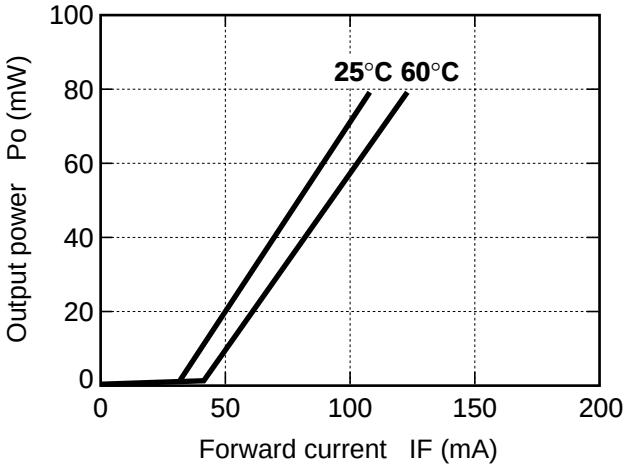
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	CW	15	30	50	mA
Operating Current	Tc=25°C	Iop	Po=70mW	60	100	130	mA
Lasing Wavelength		λ p	Po=70mW	778	783	788	nm
Beam Divergence 6)	Perpendicular	θ ⊥	Po=70mW	14	17	18	°
	Parallel	θ //	Po=70mW	7.5	8.5	9.0	°
Off Axis Angle	Perpendicular	Δ θ ⊥	Po=70mW	-	-	±2.0	°
	Parallel	Δ θ //	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.

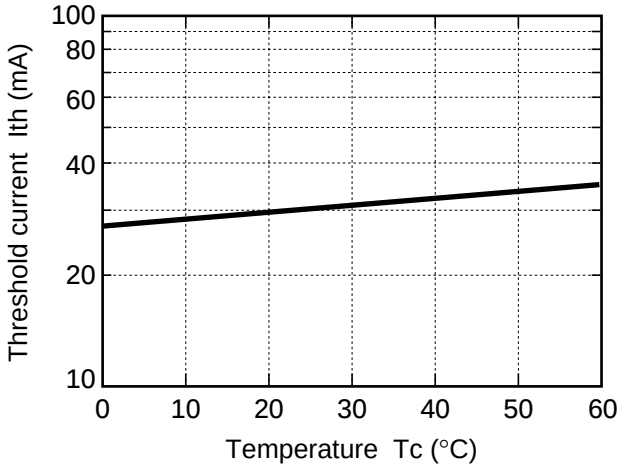
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Characteristics

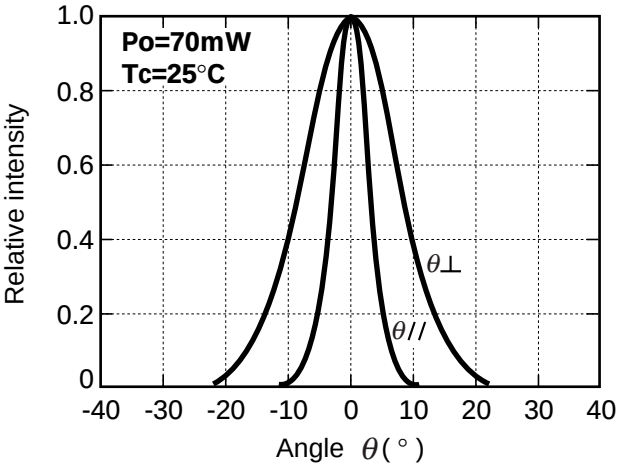
Output power vs. Forward current



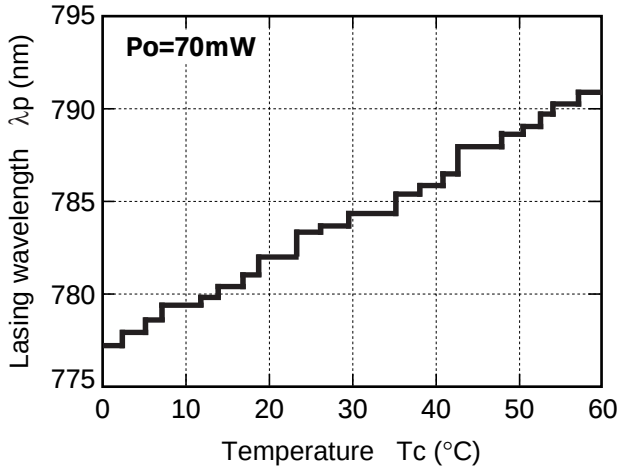
Threshold current vs. Temperature



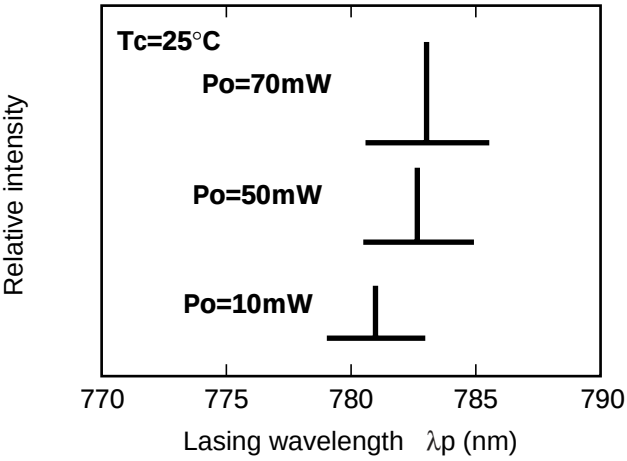
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



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Precautionary instructions in handling gallium arsenic products

Special precautions must be taken in handling this product because it contains, gallium arsenic, which is designated as a toxic substance by law. Be sure to adhere strictly to all applicable laws and regulations enacted for this substance, particularly when it comes to disposal.

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