Ordering number : ENN7587

Infrared Laser Diode

DL-7140-201S

Infrared Laser Diode

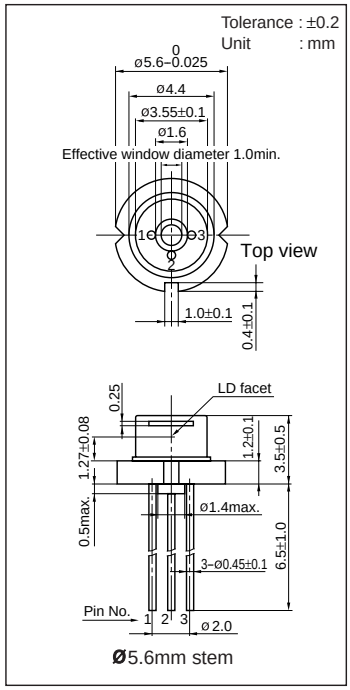
Features

- Wavelength : 785 nm (Typ.)
- Low threshold current : Ith = 30 mA (Typ.)
- High operating temperature : 70 mW (CW) at 60°C

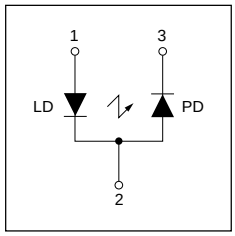
Applications

- Optical disc system (CD-R)

Package Dimensions



Pin Connection



Absolute Maximum Ratings at Tc=25°C

Parameter		Symbol	Ratings	Unit
Light Output	CW	Po (CW)	80	mW
	Pulse 1)	Po (pulse)	85	
Reverse Voltage	Laser	V_R	2	V
	PD		30	
Operating Temperature		Topr	−10 to +60	°C
Storage Temperature		Tstg	−40 to +85	°C

1) Pulse width≤1.0 μs, Duty 50%

Electrical and Optical Characteristics at Tc=25°C

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	CW	-	30	50	mA
Operating Current		Iop	Po=70mW	-	100	140	mA
Operating Voltage		Vop	Po=70mW	-	2.0	2.8	V
Lasing Wavelength		λ p	Po=70mW	775	785	800	nm
Beam Divergence 2)	Perpendicular	θ ⊥	Po=70mW	14	17	20	°
	Parallel	θ //	Po=70mW	6	8	10	°
Off Axis Angle	Perpendicular	Δ θ ⊥	-	-	-	±3	°
	Parallel	Δ θ //	-	-	-	±3	°
Differential Efficiency		dPo/dIop	-	0.6	1.0	1.4	mW/mA
Monitoring Output Current		Im	Po=70mW	0.10	0.25	0.6	mA
Astigmatism		As	Po=70mW	-	-	10	μm

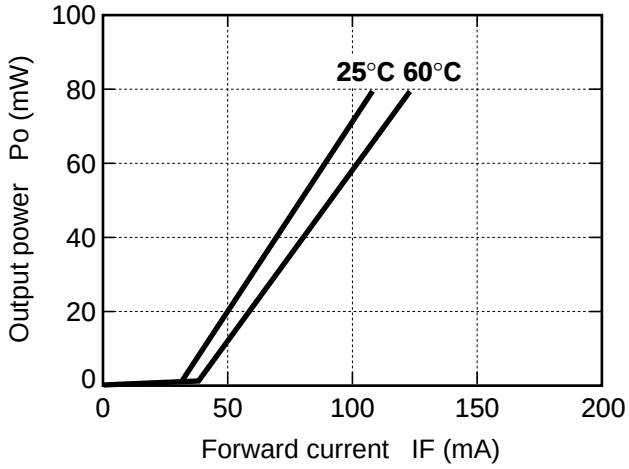
2) Full angle at half maximum

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

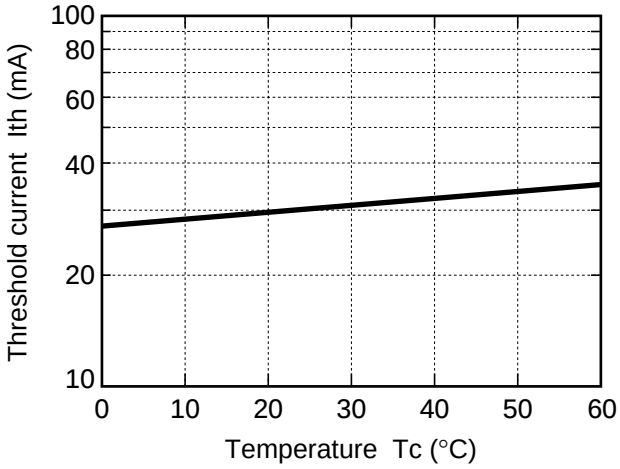
SANYO Electric Co.,Ltd. Semiconductor Company
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Characteristics

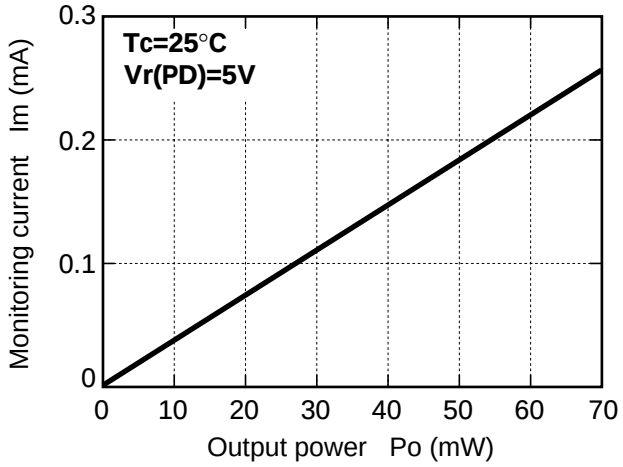
Output power vs. Forward current



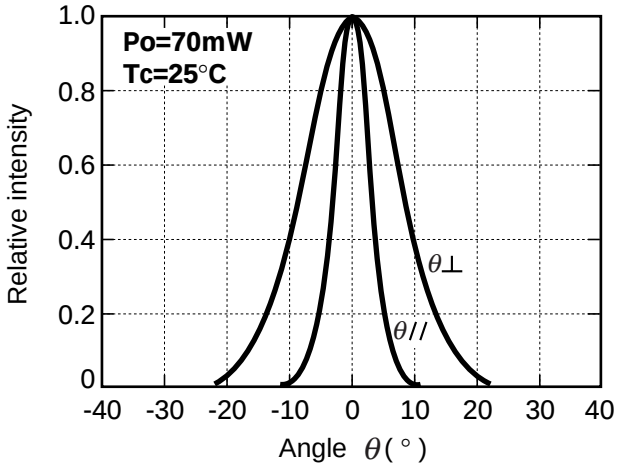
Threshold current vs. Temperature



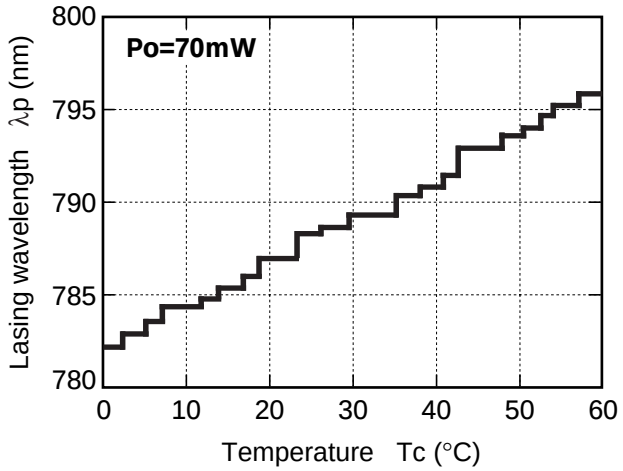
Monitoring current vs. Output power



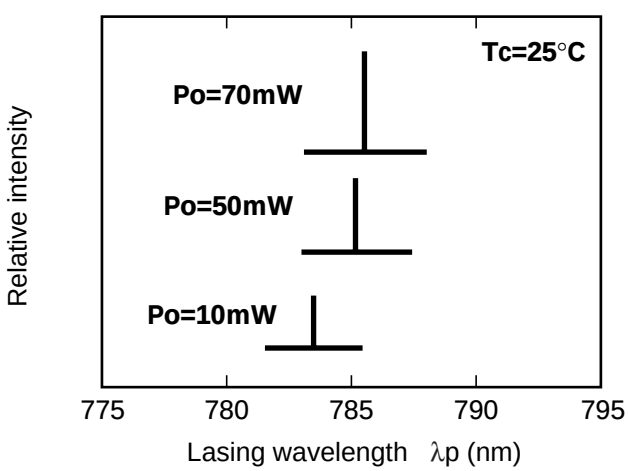
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



⚠ CAUTION

1. No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster / crime-prevention equipment or the like, and the failure of which may directly or indirectly cause injury, death or property loss.

2. Anyone purchasing any products described or contained herein for an above-mentioned use shall:
   1) Accept full responsibility and indemnify and defend SANYO ELECTRIC CO.,LTD., it's affiliates, subsidiaries and distributors or any of their officers and employees, jointly and severally, against any and all claims and litigation and all damages, costs and expenses associated with such use.
   2) Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., it's affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.

3. Information (including circuit diagrams and circuit parameters) disclosed herein is for example only; it is not guaranteed for mass production, SANYO believes the information disclosed herein is accurate and reliable, but no guarantees are made or implied regarding it's use or any infringements of intellectual property rights or other rights of third parties.

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