

**DL-4140-001S****Infrared Laser Diode****Features**

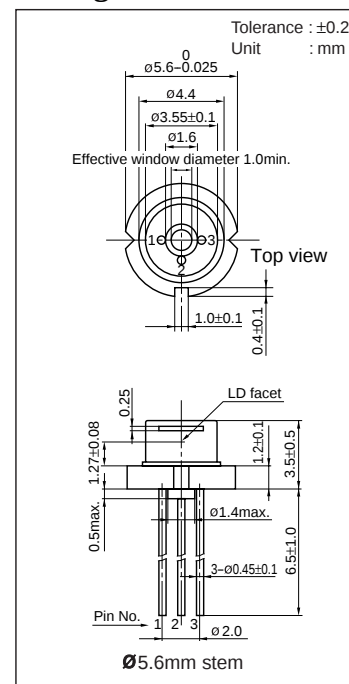
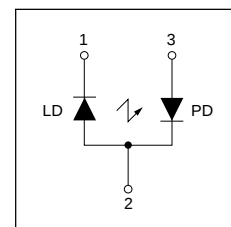
- Wavelength : 785 nm (Typ.)
- Low threshold current : $I_{th} = 30$ mA (Typ.)
- Small package : $\phi 5.6$ mm

Applications

- Laser beam printer

Absolute Maximum Ratings at $T_c=25^\circ\text{C}$

Parameter		Symbol	Ratings	Unit
Light Output	CW	P_o	25	mW
Reverse Voltage	Laser	V_R	2	V
	PIN		30	
Operating Temperature		T_{opr}	-10 to +60	$^\circ\text{C}$
Storage Temperature		T_{stg}	-20 to +85	$^\circ\text{C}$

Package Dimensions**Pin Connection****Electrical and Optical Characteristics 2) 3) 4) 6) at $T_c=25^\circ\text{C}$**

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		I_{th}	CW	-	30	50	mA
Operating Current		I_{op}	$P_o=20\text{mW}$	-	65	90	mA
Lasing Wavelength		λ_p	$P_o=20\text{mW}$	776	785	800	nm
Beam Divergence	1) Perpendicular	$\theta_\perp$	$P_o=20\text{mW}$	15	25	35	$^\circ$
	Parallel	$\theta_\parallel$	$P_o=20\text{mW}$	7	9	12	$^\circ$
Off Axis Angle	Perpendicular	$\Delta\theta_\perp$	$P_o=20\text{mW}$	-	-	± 3	$^\circ$
	Parallel	$\Delta\theta_\parallel$	$P_o=20\text{mW}$	-	-	± 2	$^\circ$
Differential Efficiency		dP_o/dI_{op}	-	0.3	0.6	0.8	mW/mA
Monitoring Output Current		I_m	$P_o=20\text{mW}$	0.3	0.8	1.5	mA
Astigmatism		A_s	$P_o=20\text{mW}$	-	-	10	μm
Droop		Δp	$P_o=20\text{mW}$	-	-	10	%

1) Full angle at half maximum

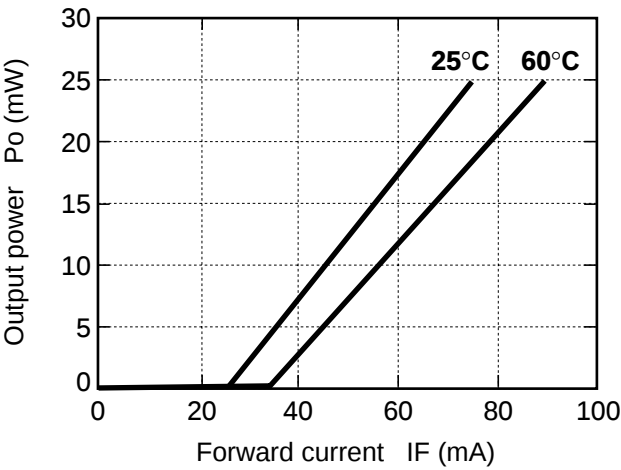
Note : The above product specification are subject to change without notice.

SANYO Electric Co.,Ltd. Semiconductor Company

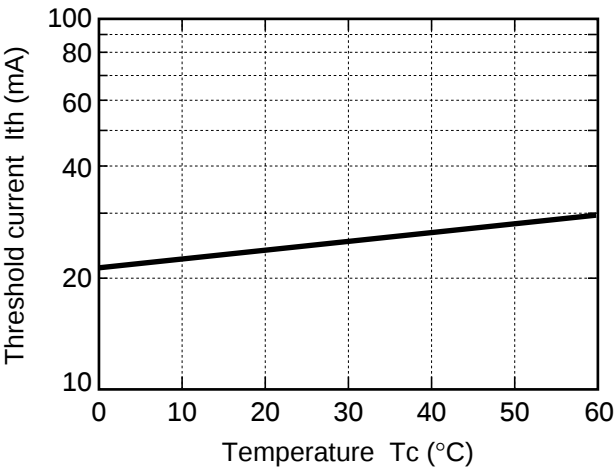
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Characteristics

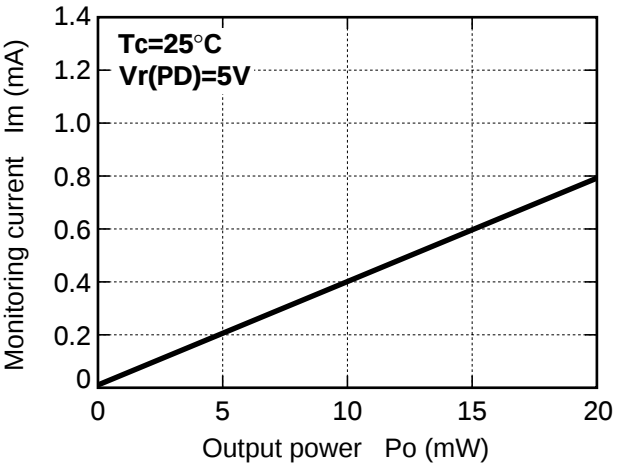
Output power vs. Forward current



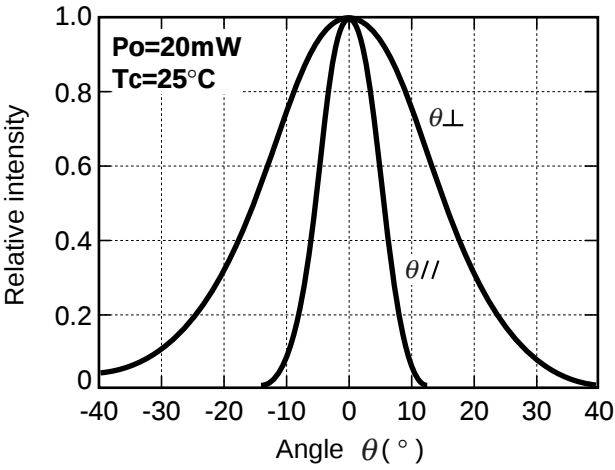
Threshold current vs. Temperature



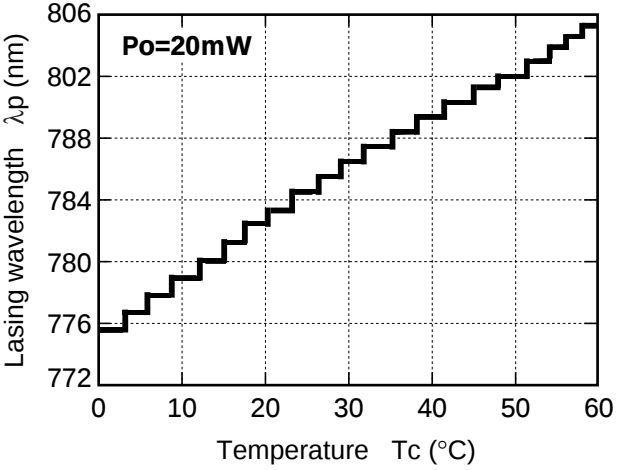
Monitoring current vs. Output power



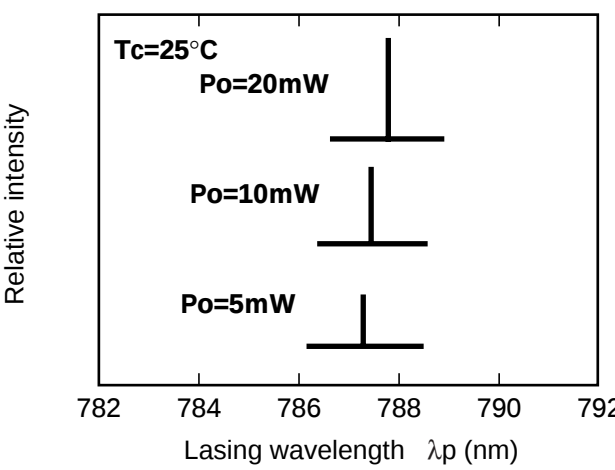
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power





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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.

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