

**DL-6140-201****High Power Laser Diode****Overview**

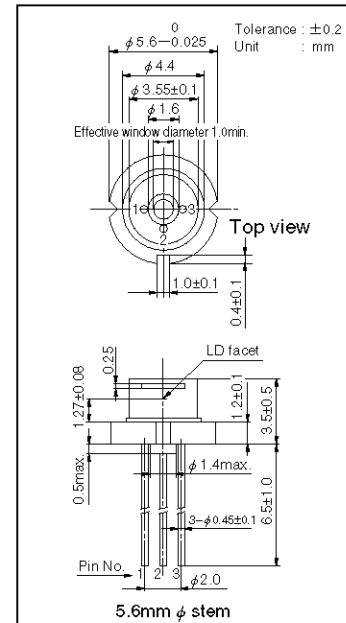
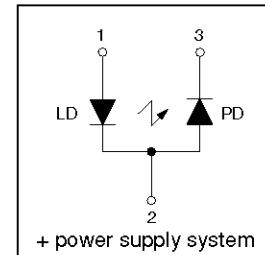
DL-6140-201 is high power (50mW) 785nm laser diode.
DL-6140-201 is suitable for CD-R.

Features

- High power : 50 mW at 60°C
- Index guided type
- Small package : 5.6 mm ϕ
- PIN photodiode built-in for light output monitor

Absolute Maximum Ratings at Tc=25°C

Parameter	Symbol	Ratings	Unit
Light Output	Po	55	mW
Reverse Voltage	Laser	2	V
	PIN	30	
Operating Temperature	Topr	-10 to +60	°C
Storage Temperature	Tstg	-40 to +85	°C

Package Dimensions**Electrical Connection****Electrical and Optical Characteristics at Tc=25°C**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Threshold Current	Ith	CW	20	30	50	mA	
Operating Current	Iop	Po=50mW	-	100	140	mA	
Operating Voltage	Vop	Po=50mW	-	2.0	2.5	V	
Lasing Wavelength	λ_p	Po=50mW	775	785	795	nm	
Beam Divergence ※)	Perpendicular	θ_{\perp}	Po=50mW	18	22	26	deg.
	Parallel	θ_{\parallel}	Po=50mW	7.0	8.5	9.5	deg.
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	-	-	±3	deg.	
	Parallel	$\Delta\theta_{\parallel}$	-	-	±3	deg.	
Differential Efficiency	dPo/dIop	-	0.40	0.70	0.90	mW/mA	
Monitoring Output Current	Im	Po=50mW	0.05	0.20	0.50	mA	
Astigmatism	As	Po=50mW	-	10	-	μm	

※) Full angle at half maximum note : The above product specifications are subject to change without notice.

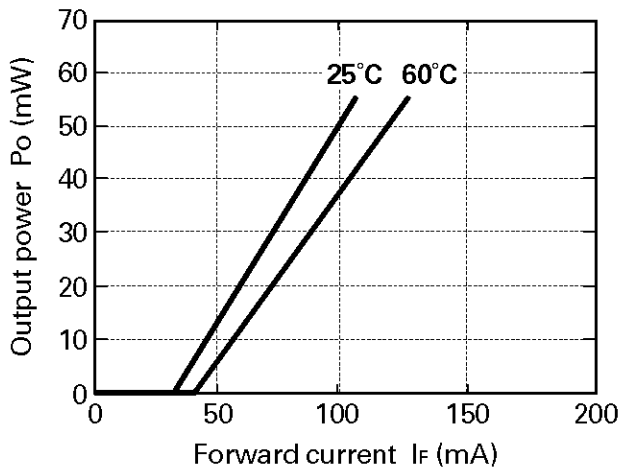
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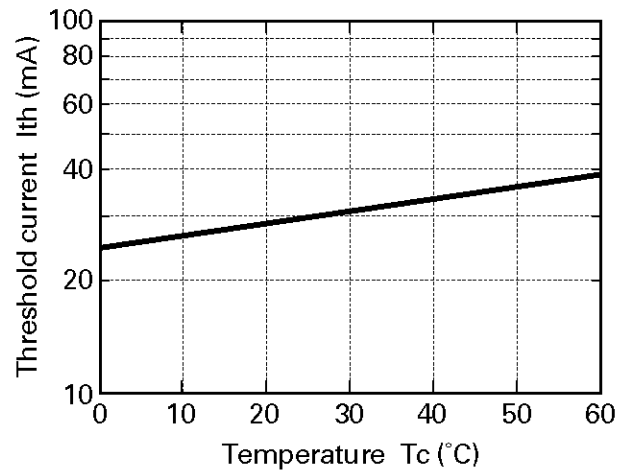
N2897 GI, (IM) No.5872 1/3

Characteristics

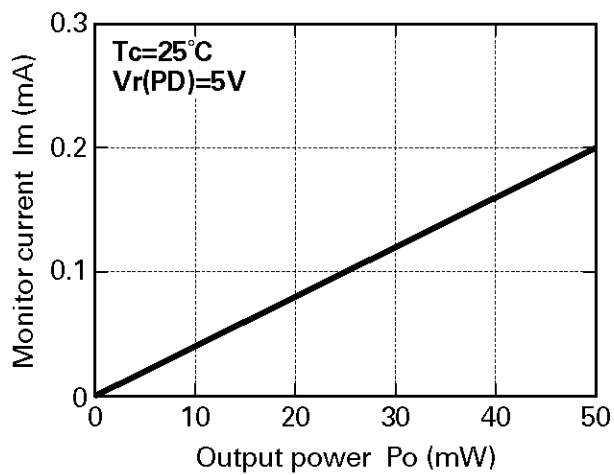
Output power vs. Forward current



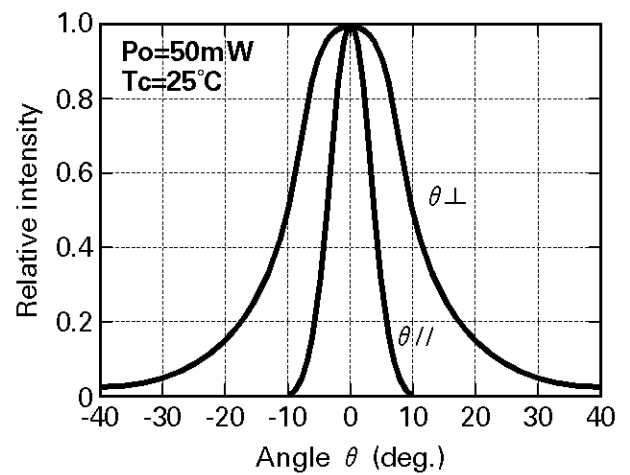
Threshold current vs. Temperature



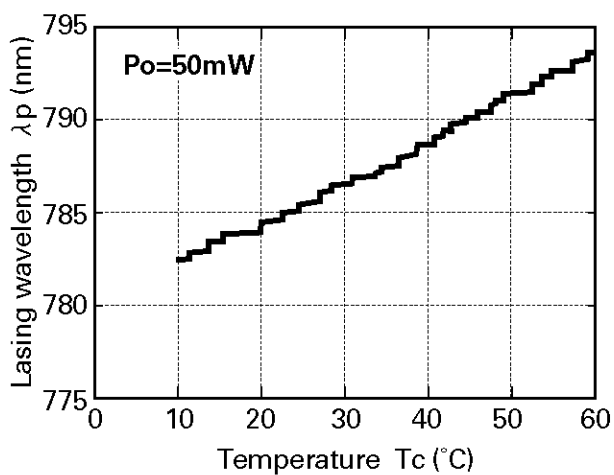
Monitor current vs. Output power



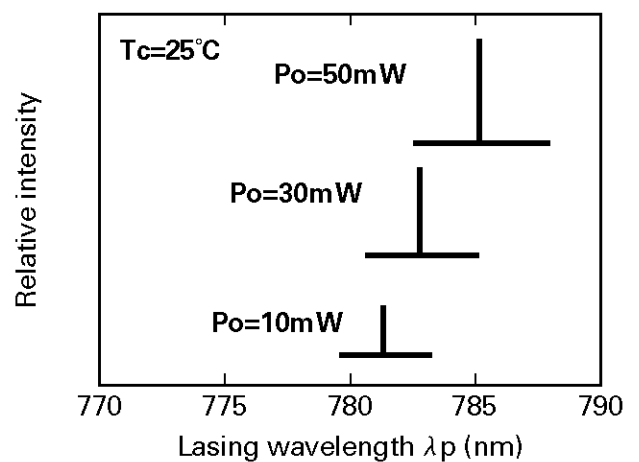
Beam divergence



Lasing wavelength vs. Temperature



Output power vs. Lasing wavelength



CAUTION

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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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