THORLABS INC
435 Route 206 • P.O. Box 366
Newton, NJ 07860-0366

SALES 973-579-7227
FAX 973-300-3600

DL3147-060
Red Laser Diode

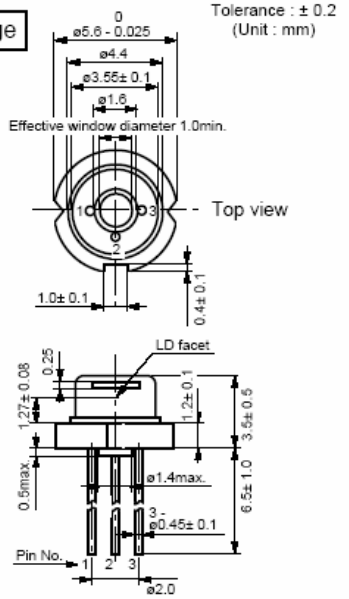
Features

- Wavelength : 650 nm (Typ.)
- Low threshold current : Ith = 20mA (Typ.)
- High operating temperature : 5 mW at 70°C
- TE mode

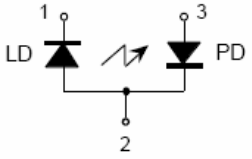
Applications

DVD-ROM/PLAYER
Laser module
industrial instrument

Package



Pin Connection



Absolute Maximum Ratings

(Tc=25°C)

Parameter		Symbol	Ratings	Unit
Light Output	CW	Po	7	mW
Reverse Voltage	Laser	VR	2	V
	PD		30	
Operating Temperature		Topr	-10 to +70	°C
Storage Temperature		Tstg	-40 to +85	°C

Electrical and Optical Characteristics [1) 2)]

(Tc=25°C)

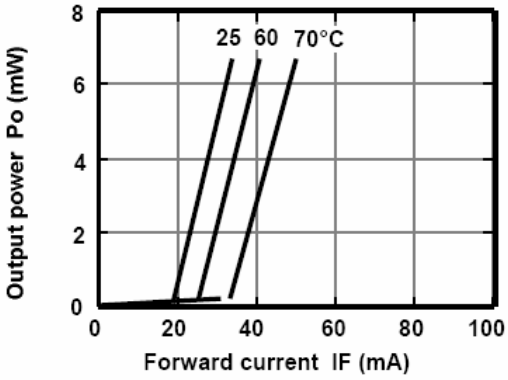
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold Current		Ith	CW	-	20	35	mA
Operating Current		Iop	Po=5mW	-	30	45	mA
Operating Voltage		Vop	Po=5mW	-	2.3	2.6	V
Lasing Wavelength		Lp	Po=5mW	645	650	660	nm
Beam Divergence [3)]	Perpendicular	Qv	Po=5mW	25	30	35	°
	Parallel	Qh	Po=5mW	7.0	8.0	10	°
Off Axis Angle	Perpendicular	dQv	-	-	-	± 3	°
	Parallel	dQh	-	-	-	± 2	°
Differential Efficiency		dPo/dIop	-	0.3	0.5	0.8	mW/mA
Monitoring Output Current		Im	Po=5mW	0.08	0.2	0.4	mA
Astigmatism		As	Po=5mW	-	8	-	µm

1) Initial values 2) All the above values are evaluated with Tottori Sanyo's measuring apparatus
3) Full angle at half maximum

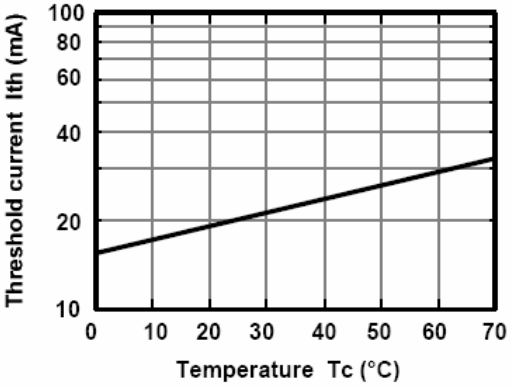
Note : The above product specification are subject to change without notice.

Characteristics

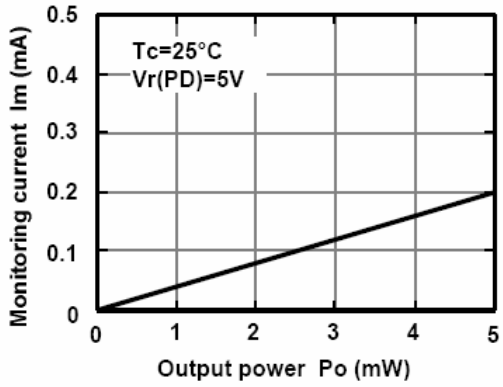
Output power vs. Forward current



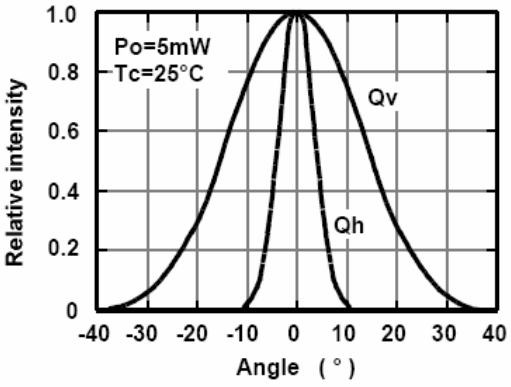
Threshold current vs. Temperature



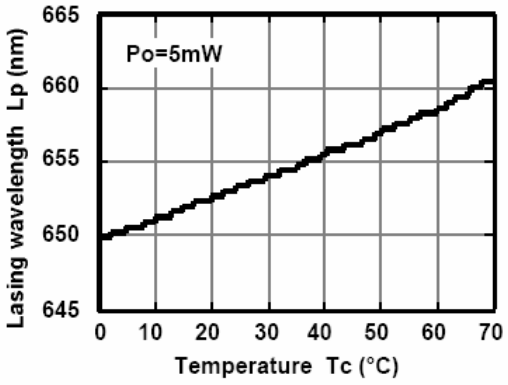
Monitoring current vs. Output power



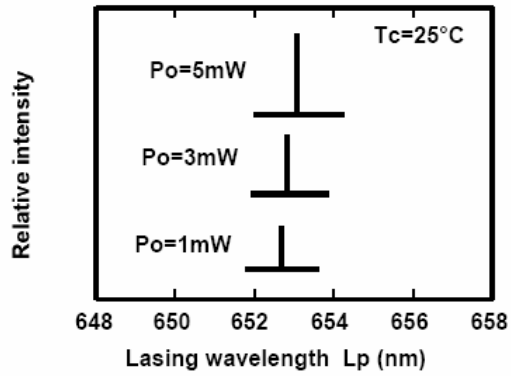
Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power



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

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Thorlabs, Inc. Life Support and Military Use Application Policy is stated below:

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2. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system or to affect its safety or effectiveness.
3. The Thorlabs products described in this document are not intended nor warranted for usage in Military Applications.

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