

DL3149-057 Red Laser Diode

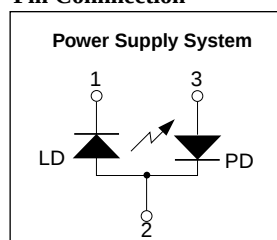
FEATURES

- Short wavelength: 670nm (Typ.)
- Low threshold current: $I_{th} = 25\text{mA}$ (Typ.)
- High operating temperature: 5 mW at 60°C
- Small package: $\varnothing 5.6\text{mm}$

APPLICATIONS

- Laser beam printer
- Bar-code scanner

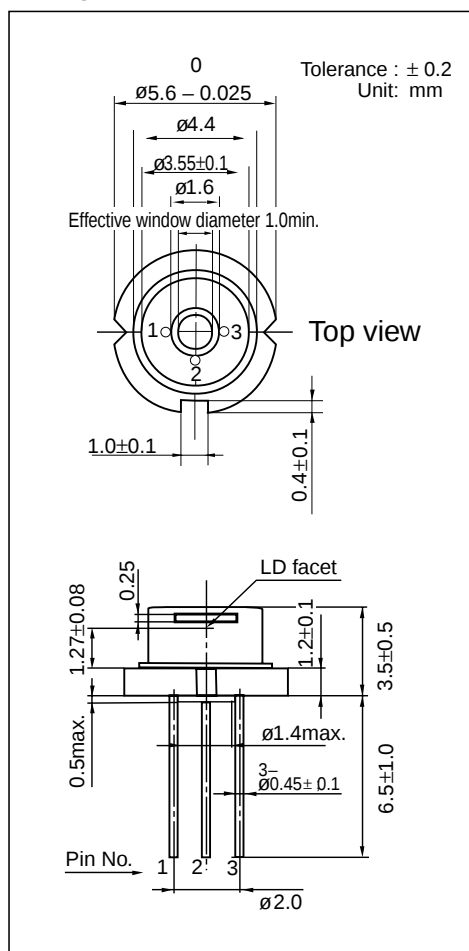
Pin Connection



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

Parameter		Symbol	Ratings	Unit
Light Output	CW	P_o	7	mW
Reverse Voltage	LD	V_R	2	V
	PD		30	
Operating Temperature		T_{opr}	$-10 \sim +60$	$^\circ\text{C}$
Storage Temperature		T_{stg}	$-40 \sim +85$	$^\circ\text{C}$

Package Dimension



Electrical/Optical Characteristics at $T_c = 25^\circ\text{C}$

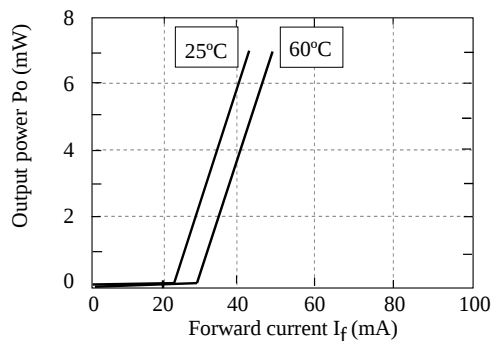
Parameter		Symbol	Condition	Min.	Typ.	Max	Unit
Threshold Current		I_{th}	CW	-	25	35	mA
Operating Current		I_{op}	$P_o = 5\text{mW}$	-	40	45	mA
Operating Voltage		V_{op}	$P_o = 5\text{mW}$	-	2.3	2.6	V
Lasing Wavelength		λ_p	$P_o = 5\text{mW}$	660	670	678	nm
Beam 1) Divergence	Perpendicular	$\theta_{\perp}$	$P_o = 5\text{mW}$	25	30	35	$^\circ$
	Parallel	$\theta_{//}$	$P_o = 5\text{mW}$	6.5	8	10	$^\circ$
Off Axis Angle	Perpendicular	$\Delta\theta_{\perp}$	-	-	-	± 3	$^\circ$
	Parallel	$\Delta\theta_{//}$	-	-	-	± 3	$^\circ$
Differential Efficiency		dP_o/dI_{op}	-	0.2	0.4	0.6	mW/mA
Monitoring Output Current		I_m	$P_o = 5\text{mW}$	0.5	1.5	2.0	mA
Astigmatism		A_s	$P_o = 5\text{mW}$	-	8	-	μm

1) Full angle at half maximum Note: The above product specification are subject to change without notice.

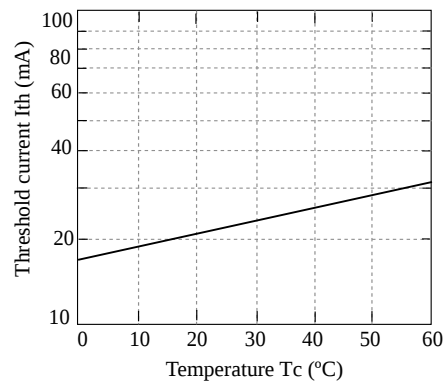
DL3149-057

CHARACTERISTICS

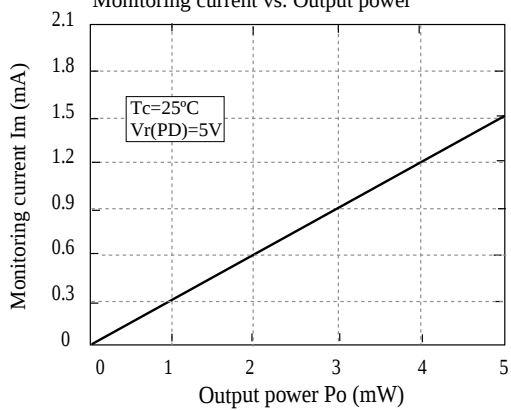
Output power vs. Forward current



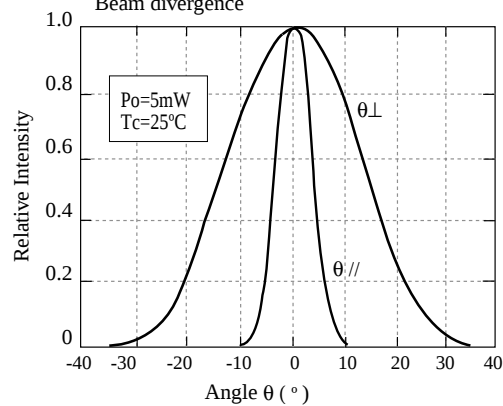
Threshold current vs. Temperature



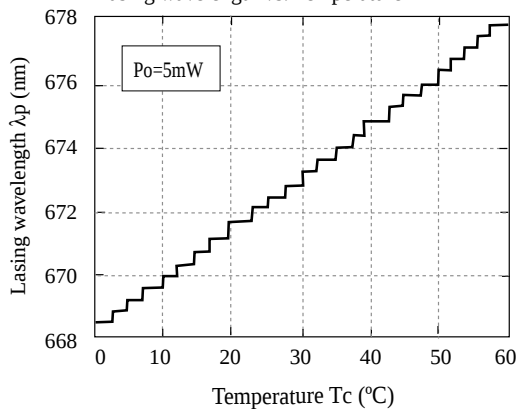
Monitoring current vs. Output power



Beam divergence



Lasing wavelength vs. Temperature



Lasing wavelength vs. Output power

