

Specifications of 850nm 50mW Laser Diode

Model No. LD-850-50A

Features

- Wavelength 850 nm (Typ.)
- 50mW CW Operation at -10 to +50 °C
- Low Threshold Current 15mA (Typ.)
- Standard package: TO-18 (Æ 5.6mm package)
- Cost effective

Applications

- Laser printer
- Bar-code scanner
- Military

Absolute Maximum Ratings

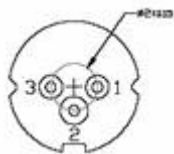
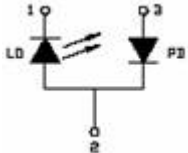
PARAMETER	SYMBOL	RATING
Optical Output Power	P_0	50 mW
LD Reverse Voltage	V_{RL}	3.5V
PD Reverse Voltage	V_{RP}	30 V
PD Forward current	I_{RP}	10mA
Operation Temperature	T_o	-10 to +50 °C
Storage Temperature	T_{STG}	-40 to +85°C

Electrical – Optical Characteristics

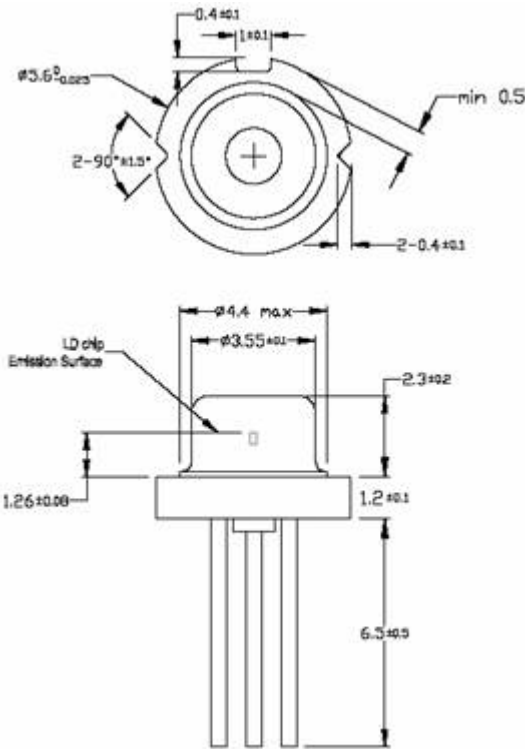
PARAMETER	SYMBOL	MIN.	TYP	MAX.	UNITS	TEST CONDITION
Lasing Wavelength	λ_p	830	845	850	nm	$P_0=50mW$
Threshold Current	I_{th}	-	15	25	mA	$P_0=50mW$
Operation Current	I_{op}	-	75	95	mA	$P_0=50mW$
Operation Voltage	V_{op}	-	1.8	2.4	V	$P_0=50mW$
Monitor Current	I_m	0.15	0.5	1	mA	$P_0=50mW, V_{RP} = 0V$
Slope Efficiency	η	0.7	0.8	1	mW/mA	$P_0=50mW$
Beam Divergence	$q_{//}$	9	12	15	deg	$P_0=50mW$ (parallel)
Beam Divergence	q^{\wedge}	26	30	35	deg	$P_0=50mW$ (perpendicular)
Parallel FFP deviation angle	$Dq_{//}$	-	-	± 3	deg	$P_0=50mW$
Perpendicular FFP deviation angle	Dq^{\wedge}	-	-	± 3	deg	$P_0=50mW$
Emission point accuracy	$DxDy$	-	-	± 80	um	$P_0=50mW$
	Dz	-	-	± 40	um	$P_0=50mW$

Pin Configuration

Common Anode Pinout



Bottom view



Note: The specifications are subject to change without notice.