

# Infrared Laser Diode

Part No: LD-870-10-50-N-2



## Features

- ※ Wavelength:  $\lambda = 870\text{nm}$  (Type)
- ※ Output optical power: 10mW
- ※ Package: T0-18 ( $\Phi 5.6\text{mm}$ )

## Applications

- ※ Industrial Use

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

Items	Symbols	Values	Unit
Optical Output Power	$P_o$ (CW)	10	mW
	$V_r$ (LD)	2	V
Laser Diode Reverse Voltage	$V_r$ (PD)	30	V
Operating Temperature	$T_{opr}$	$-10 \sim +50$	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	$-40 \sim +85$	$^\circ\text{C}$

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

Items	Symbols	Min	Type	Max.	Unit	Condition
Optical Output Power	$P_o$	-	-	12	mW	CW
Threshold Current	$I_{th}$	15	20	25	mA	CW
Operating Current	$I_{op}$	35	45	50	mA	$P_o=10\text{mW}$
Slope Efficiency	$\eta$	0.5	0.8	1	mW/mA	$P_o=10\text{mW}$
Operating Voltage	$V_{op}$	-	2	2.3	V	$P_o=10\text{mW}$
Monitor Current	$I_m$	-	0.1	-	mA	$P_o=10\text{mW}$
Lasing Wavelength	$\lambda$	860	870	880	nm	$P_o=10\text{mW}$
Beam Divergence	//	-	12	-	$^\circ$	$P_o=10\text{mW}$
	$\perp$	-	35	-	$^\circ$	$P_o=10\text{mW}$
Beam Angle	$\Delta //$	-	-	$\pm 2$	$^\circ$	$P_o=10\text{mW}$
	$\Delta \perp$	-	-	$\pm 2$	$^\circ$	$P_o=10\text{mW}$
Emission Point Accuracy	$\Delta X \Delta Y \Delta Z$	-80	-	80	$\mu\text{m}$	-

- 1) Measurement condition: CW
- 2) Full angle at half maximum.
- 3) All the above values are measured by OPELUS method.

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## Package and Electrical connection

