



Laser Diode ZBD-LD-450-1600M-FS

ZBD-LD-450-1600M-FS is a multimode laser diode with 1.6 W CW output power at 450nm. Its beam pattern is square with $14^\circ \times 14^\circ$ ($\theta_{//} \cdot \theta_{\perp}$). It is supplied in a 9mm floating mounted TO-CAN with Zener Diode. The laser diode is suitable for opto-electronic applications.

■ Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current($T_c=25^\circ\text{C}$)	I_f	1.7	A
Allowable Reverse Current($T_c=25^\circ\text{C}$)	$I_r(\text{LD})$	85	mA
Storage Temperature	T_{stg}	-40~85	$^\circ\text{C}$
Operating Case Temperature	T_c	0~50	$^\circ\text{C}$

■ Initial Electrical/Optical Characteristics ($T_c=25^\circ\text{C}$)

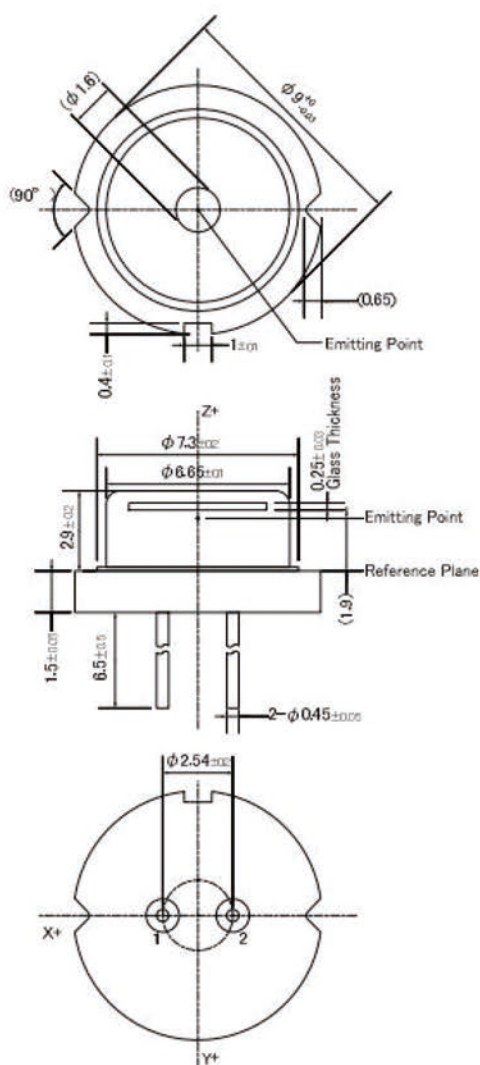
Item	Symbol	Test Condition	Min	Typ	Max	Unit	
Optical Output Power	P_o	$I_f=1.2\text{A}$	1.1	(1.6)	—	W	
Dominant Wavelength	λ_d	$I_f=1.2\text{A}$	440	(450)	455	nm	
Threshold Current	I_{th}	CW Operation	80	—	220	mA	
Slope Efficiency	η	CW Operation	1.0	—	2.0	W/A	
Operating Voltage	V_{op}	$I_f=1.2\text{A}$	3.7	—	5.5	V	
Beam Divergence Full Angle ($1/e^2$)	$\theta_{//}$	$I_f=1.2\text{A}$	5	(14)	25	$^\circ$	
	θ_{\perp}	$I_f=1.2\text{A}$	5	(14)	25	$^\circ$	
Beam Pointing Accuracy	Angle	$\Delta\theta_{\perp}$	$I_f=1.2\text{A}$	-5.0	—	5.0	$^\circ$

()are reference figures.

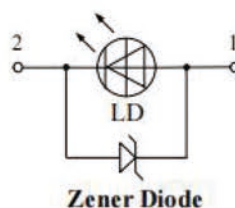
*Full angle at $1/e^2$ from peak intensity



■ Outline Dimension (Unit: mm)



Connection



Zener Diode

- 1. LD Anode
- 2. LD Cathode

Figures in () are reference purpose only.

Parts	Materials
Stem	Cu + Fe + Ni plating + Au plating
Lead	Ni-Fe-Co alloys + Ni plating + Au plating
Cap	Ni-Fe alloys + Ni plating
Glass	Borosilicate glass
Chip	Gallium nitride
Sub mount	Aluminum nitride
Zener Diode	Silicon