



Laser Diode ZBD-LD-470-4100M-FS

ZBD-LD-470-4100M-FS is a multimode laser diode with 4.1W CW output power at 470nm. 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

Parameter	Symbol	Value	Unit
Forward Current ($T_c=25^\circ\text{C}$)	I_f	3.5	A
Reverse Current ($T_c=25^\circ\text{C}$)	I_r (LD)	85	mA
Storage Temperature	T_{stg}	-40~85	$^\circ\text{C}$
Operating Case Temperature	T_c	0~70	$^\circ\text{C}$

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

Parameter	Symbol	Condition	Min	Typ.	Max	Unit	
Optical Output Power	P_o	$I_f = 3.0\text{A}$	-	(4.1)	-	W	
Dominant Wavelength	λ_d	$I_f = 3.0\text{A}$	468	(470)	472	nm	
Threshold Current	I_{th}	CW	300	-	550	mA	
Slope Efficiency	η	CW	-	(1.6)	-	W/A	
Operating Voltage	V_{op}	$I_f = 3.0\text{A}$	3.6	-	4.8	V	
Beam Divergence*	Parallel	$\theta_{//}$	$I_f = 3.0\text{A}$	5	(14)	25	$^\circ$
	Perpendicular	θ_{\perp}	$I_f = 3.0\text{A}$	5	(14)	25	$^\circ$

() are reference figures.

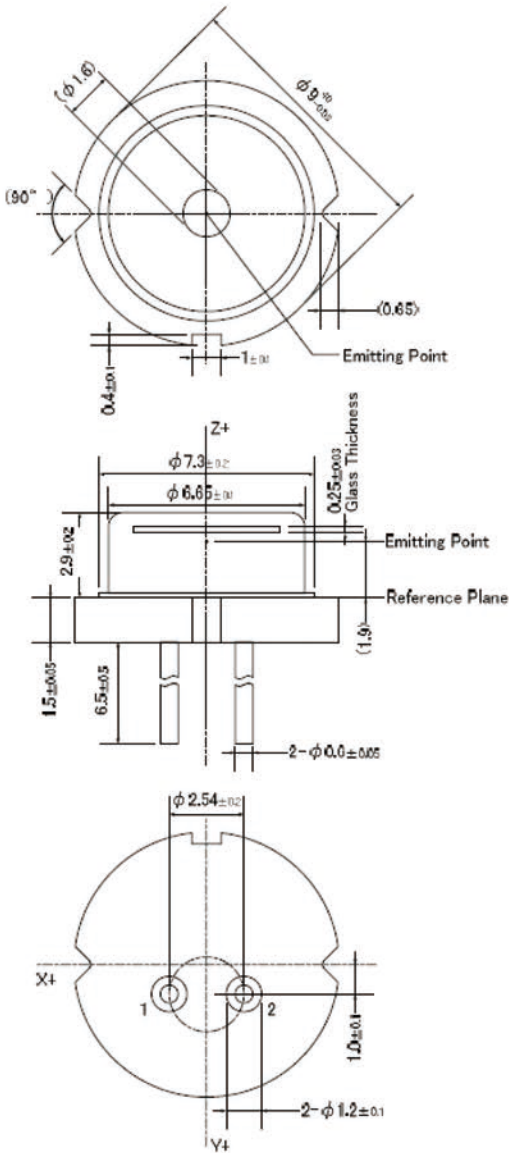
* Full angle at $1/e^2$ from peak intensity



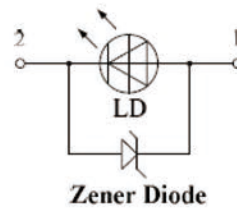
■ Beam Pattern



■ Outline Dimension



Connection



- 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	Silicon carbide
Zener Diode	Silicon