



Laser Diode ZBD-LD-455-5000M-FS

ZBD-LD-455-5000M-FS is a multimode laser diode with 5.0W CW output power at 455nm. 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 (Tc=25°C)	I _f	3.5	A
Reverse Current (Tc=25°C)	I _r (LD)	85	mA
Storage Temperature	T _{stg}	-40~85	°C
Operating Case Temperature	T _c	0~70	°C

■ Initial Electrical/Optical Characteristics (Tc=25°C)

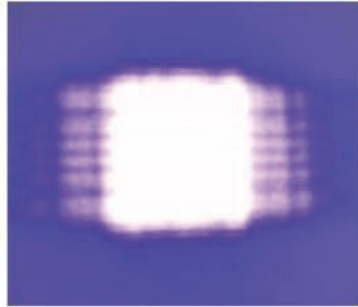
Parameter	Symbol	Condition	Min	Typ.	Max	Unit	
Optical Output Power	P _o	I _f = 3.0A	-	(5.0)	-	W	
Dominant Wavelength	λ _d	I _f = 3.0A	448	(455)	462	nm	
Threshold Current	I _{th}	CW	220	-	420	mA	
Slope Efficiency	η	CW	-	(1.8)	-	W/A	
Operating Voltage	V _{op}	I _f = 3.0A	3.6	-	4.8	V	
Beam Divergence*	Parallel	θ _{//}	I _f = 3.0A	5	(14)	25	°
	Perpendicular	θ _⊥	I _f = 3.0A	5	(14)	25	°

() are reference figures.

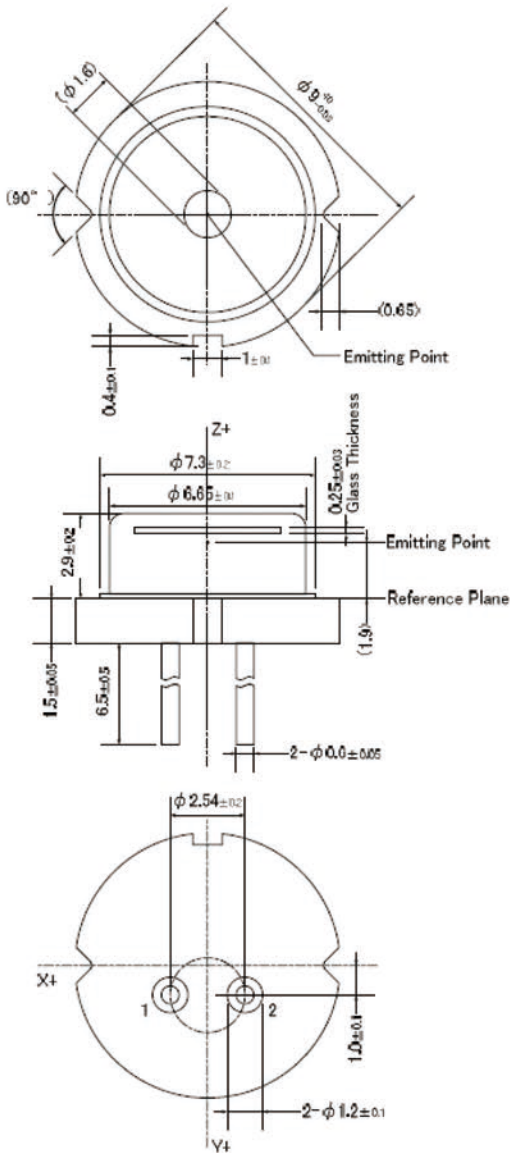
* Full angle at 1/e² from peak intensity



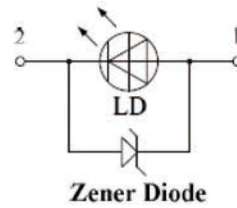
■ Beam Pattern



■ 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