



## Laser Diode ZBD-LD-455-6000M-FS

ZBD-LD-455-6000M-FS is a multimode laser diode with 6 W CW output power at 455 nm. Its beam pattern is square with  $10^\circ \times 10^\circ$  ( $\theta_{//} \cdot \theta_{\perp}$ ). 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( $T_c=25^\circ\text{C}$ )	$I_f$	3.5	A
Revers Current( $T_c=25^\circ\text{C}$ )	$I_r(\text{LD})$	85	mA
Storage Temperature	$T_{\text{stg}}$	-40~85	$^\circ\text{C}$
Operating Case Temperature	$T_c$	0~70	$^\circ\text{C}$

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

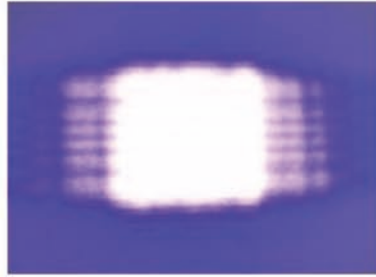
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Optical Output Power	$P_o$	$I_r=3.3\text{A}$	5.5	(6.0)	-	W	
Dominant Wavelength	$\lambda_d$	$I_r=3.3\text{A}$	448	(455)	462	nm	
Threshold Current	$I_{th}$	CW	220	-	420	mA	
Operating Voltage	$V_{op}$	$I_r=3.3\text{A}$	3.7	-	4.2	V	
Slope Efficiency	$\eta$	CW	-	(2.1)	-	W/A	
Beam Divergence*	Parallel	$\Theta_{//}$	$I_r=3.3\text{A}$	5	(10)	25	$^\circ$
	Perpendicular	$\theta_{\perp}$	$I_r=3.3\text{A}$	5	(10)	25	$^\circ$

( )are reference figures.

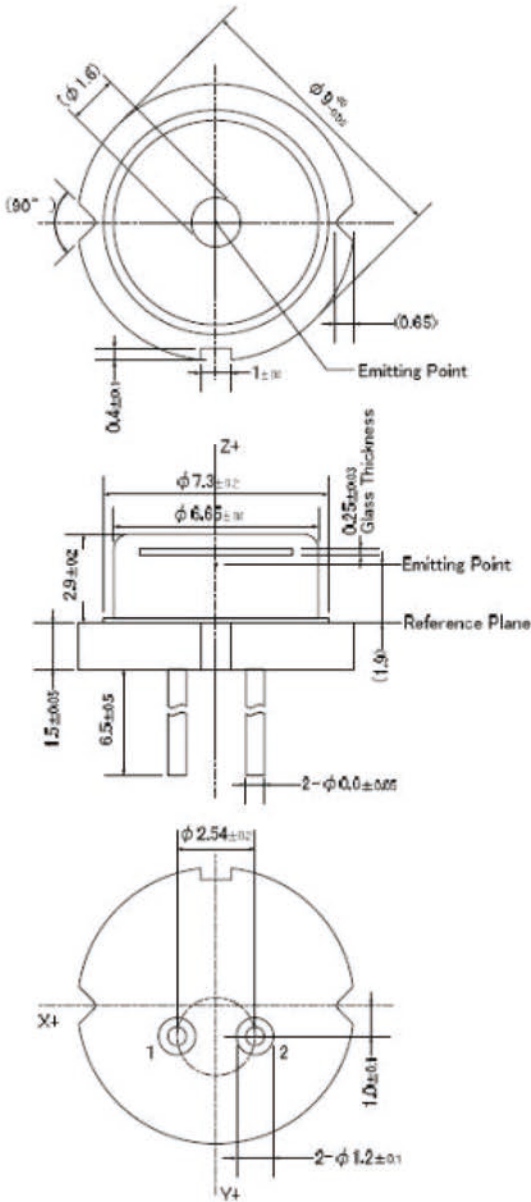
\*Full angle at  $1/e^2$  from peak intensity



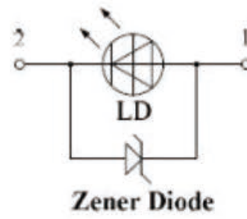
■ Beam Pattern



■ Outline Dimension (Unit: mm)



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