



Laser Diode ZBD-LD-455-5500M-F141-O

ZBD-LD-455-5500M-F141-O is a multimode laser diode with 5.5 W CW output power at 455nm. Its beam pattern is linear with $14^\circ \times 1^\circ$ ($\theta_{//} \cdot \theta_{\perp}$). 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	3.8	A
Revers Current($T_c=25^\circ\text{C}$)	$I_r(\text{LD})$	20	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	Test Condition	Min	Typ	Max	Unit	
Optical Output Power	P_o	$I_f=3.3\text{A}$	-	(5.5)	-	W	
Dominant Wavelength	λ_d	$I_f=3.3\text{A}$	447	(455)	463	nm	
Threshold Current	I_{th}	CW	320	-	450	mA	
Operating Voltage	V_{op}	$I_f=3.3\text{A}$	4.1	-	4.8	V	
Operating Current	I_{th}	CW	-	3.3	3.5	A	
Beam Divergence*	Parallel	$\Theta_{//}$	$I_f=3.3\text{A}$	6	(14)	13	$^\circ$
	Perpendicular	θ_{\perp}	$I_f=3.3\text{A}$	0.8	(1)	1.2	$^\circ$

()are reference figures.

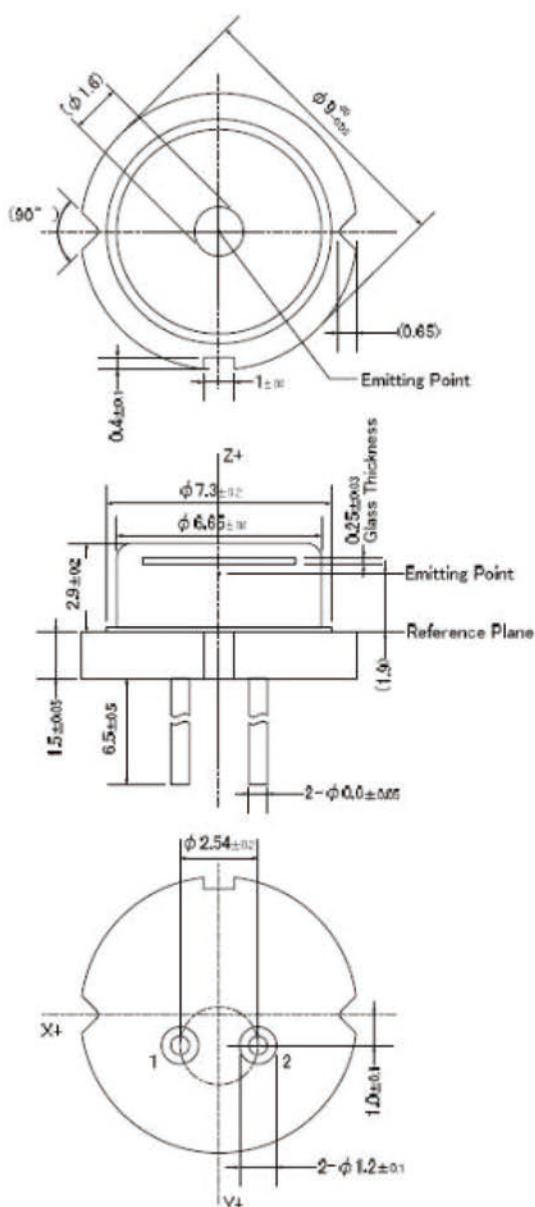
*Full angle at $1/e^2$ from peak intensity



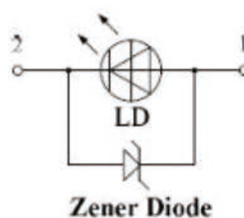
■ Beam Pattern



■ 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