



Laser Diode ZBD-LD-450-5000M-F141

ZBD-LD-450-5000M-F141 is a multimode laser diode with 5 W CW output power at 450nm. 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	4	A
Revers Current($T_c=25^\circ\text{C}$)	$I_r(\text{LD})$	20	mA
Storage Temperature	T_{stg}	-40~120	$^\circ\text{C}$
Operating Case Temperature	T_c	-20~90	$^\circ\text{C}$
Lead soldering temperature (10 sec.)	T_{stg}	260	$^\circ\text{C}$

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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Optical Output Power	P_o	$I_f = 3.0\text{A}$	4.5	(5.0)	-	W	
Dominant Wavelength	λ_d	$I_f = 3.0\text{A}$	440	(450)	455	nm	
Threshold Current	I_{th}	CW	290	-	450	mA	
Operating Voltage	V_{op}	$I_f = 3.0\text{A}$	4.3	-	5	V	
Beam Divergence*	Parallel	$\Theta_{//}$	$I_f = 3.0\text{A}$	6	(14)	9	$^\circ$
	Perpendicular	θ_{\perp}	$I_f = 3.0\text{A}$	0.8	(1)	1.2	$^\circ$

()are reference figures.

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



■ Beam Pattern



■ Outline Dimension (Unit: mm)

