



## Laser Diode ZBD-LD-638-500M-FS

ZBD-LD-638-500M-FS is a multimode laser diode with 0.5W CW output power at 638nm. Its beam pattern is square with  $7.5^{\circ} \times 7.5^{\circ} (\theta_{//} \cdot \theta_{\perp})$ . It is supplied in a 5.6mm floating mounted TO-CAN package. The laser diode is suitable for opto-electronic applications.

### ■ Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Unit
Output Optical Power	Po	CW	0.5	W
		Pulse Duty $\leq 33\%$ , Frequency $\geq 50\text{Hz}$	1.0	W
Reverse Voltage (Tc=25°C)	Vr (LD)		2	V
Storage Temperature	T <sub>stg</sub>		-40~+100	°C
Operating Case Temperature	T <sub>c</sub>		-5~+40	°C

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

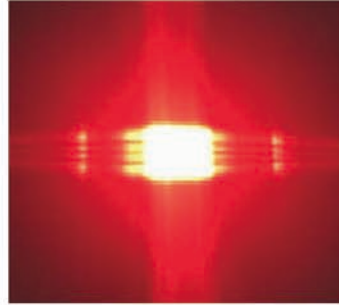
Parameter	Symbol	Condition	Min	Typ.	Max	Unit	
Threshold Current	I <sub>th</sub>	CW	90	170	210	mA	
Operating Current	I <sub>op</sub>	CW, P = 0.5W	500	650	800	mA	
Operating Voltage	V <sub>op</sub>	CW, P = 0.5W	1.9	2.2	2.6	V	
Slope Efficiency	$\eta$	CW, P = 0.5W	0.8	1.0	1.4	mW/mA	
Peak Wavelength	$\lambda_p$	CW, P = 0.5W	632	638	644	nm	
Beam Divergence*	Parallel	$\theta_{//}$	CW, P = 0.5W	1	7.5	15	°
	Perpendicular	$\theta_{\perp}$	CW, P = 0.5W	1	7.5	15	°

( ) are reference figures.

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



■ Beam Pattern



■ Outline Dimension

