



Laser Diode LT-LD-638-500M-FS

LT-LD-638-500M-FS is a multimode laser diode with 0.5W CW output power at 638nm. Its beam pattern is square with $7.5^{\circ} \times 7.5^{\circ}$ ($// \cdot \perp$). 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 ($T_c=25^{\circ}\text{C}$)	Vr (LD)		2	V
Storage Temperature	T _{stg}		-40~+100	$^{\circ}\text{C}$
Operating Case Temperature	T _c		-5~+40	$^{\circ}\text{C}$

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

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

() are reference figures.

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

■ **Beam Pattern**



■ **Outline Dimension**

