

# Laser Module LC-LMD-650-05

Ø 10.5 mm 650 nm Laser Module

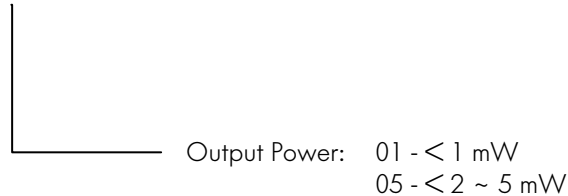
## FEATURES

1. APC (auto power control) IC inside
2. Low current consumption of the APC circuit
3. Surge current protection
4. High quality glass lens for output beam
5. Adjustable focus



## PART NO. INDICATIONS

LC-LMD - 650 - 05 - XX - A



## ABSOLUTE MAXIMUM RATINGS

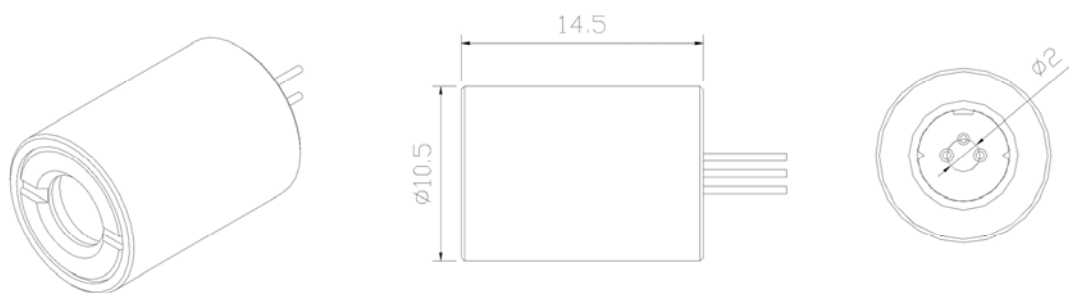
Item	Symbol	Rating	Unit
Power supply voltage	$V_{CC}$	3.3	V
Laser Module optical output power	$P_o$	<4.5 mW	mW
Operation temperature	$T_{opr}$	-5 ~ 50	°C
Storage temperature	$T_{stg}$	-20 ~ 75	°C

## ELECTRICAL AND OPTICAL CHARACTERISTICS ( $T_c = 25^\circ\text{C}$ )

Item	Symbol	Min.	Typ.	Max	Unit	Condition	
Wavelength	$\lambda$	645	655	660	nm	$P_o = < 3 \text{ mW}$	
Output power	$P_{out}$	01	-	0.6	0.9	mW	$V_{cc} = 3 \text{ V}$
		05	-	3	4.5	mW	$V_{cc} = 3 \text{ V}$
Operation current	$I_{op}$	-	15	25	mA	$P_o = 3 \text{ mW}$ $V_{cc} = 3 \text{ V}$	
Operation voltage	$V_{op}$	2.5	-	3.3	Volt		
Laser Beam spot size at 10 m				<8	mm		
Divergence angle				0.9	mrad		
Mean time to failure (MTTF) 3 mW 25°C				>10000	hrs		



### OUTLINE DIMENSIONS (UNITS: mm)



### PIN ASSIGNMENT:



**A type:** Heat sink stand (-)

- Pin 1:  $V_{cc}$
- Pin 2: GND
- Pin 3: NC

07/09 / V3 / HW / divers-opto/module/ lc-lmd-650-05.doc

