

# Laser Module

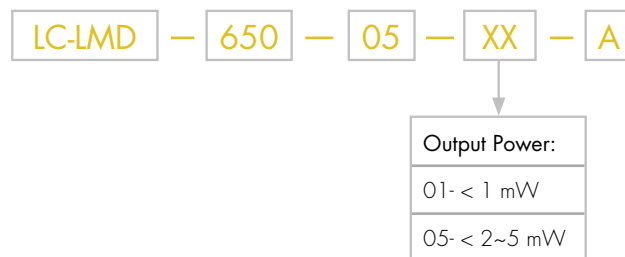
## LC-LMD-650-05

Ø 10.5 mm, 650 nm Laser Module

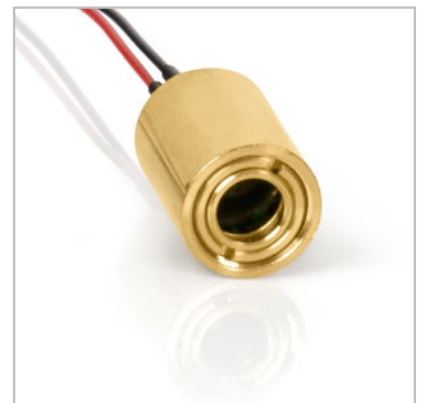
### Features

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

### Part No. Indications



### Part No. with 100 mm Flying Leads (1 mW Version only)



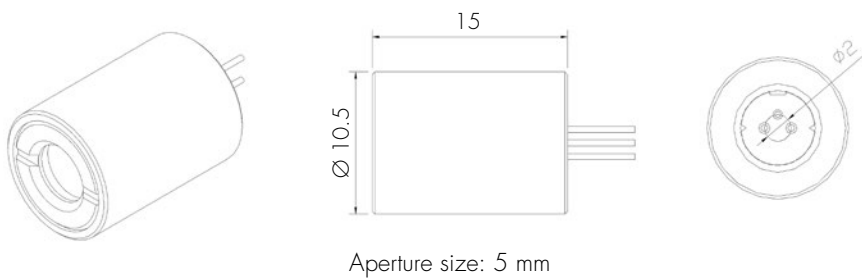
### Absolute Maximum Ratings

Item	Symbol	Rating	Unit
Power supply voltage	$V_{CC}$	3.3	V
Laser Module optical output power	$P_o$	< 4.5	mW
Operation temperature	$T_{opr}$	-5 ~ 50	°C
Storage temperature	$T_{stg}$	-20 ~ 70	°C

### Electrical and Optical Characteristics ( $T_c = 25\text{ }^\circ\text{C}$ )

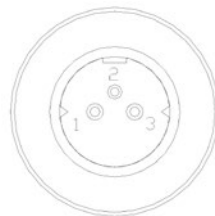
Item	Symbol	Min.	Typ.	Max	Unit	Condition
Wavelength	$\lambda$	645	655	660	nm	$P_o = < 3\text{ mW}$
Output power	$P_{out}$	01	0.6	0.9	mW	$V_{cc} = 3\text{ V}$
		05	-	3	4.5	mW
Operation current	$I_{op}$	-	15	30	mA	$P_o = 3\text{ mW}$
Operation voltage	$V_{op}$	2.5	-	3.3	Volt	
Laser Beam spot size at 10 m		$< 8\text{ mm}$				
Divergence angle		$0.9\text{ mrad}$				
Mean time to failure (MTTF) 3 mW 25 °C		$> 10000\text{ hrs}$				

### Outline Dimensions (Units: mm)



### Pin Assignment

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



A type: Heat sink stand (-)