

## Laser Module LC-LMD-650-12

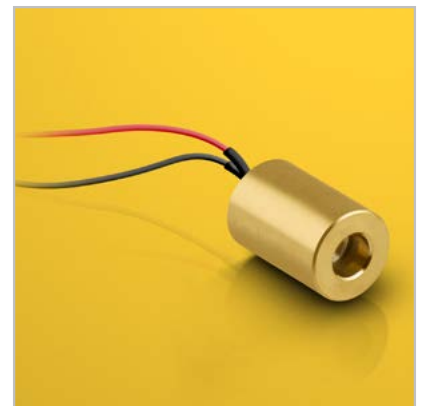
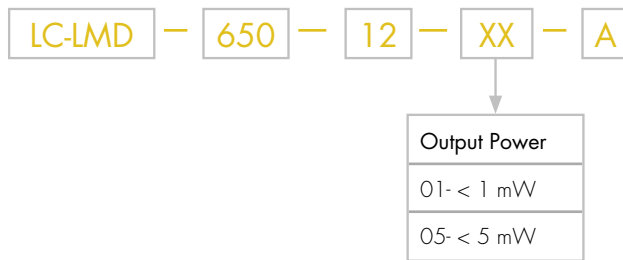
Laser Module Coaxial Aligned Ø 10.5 mm, 650 nm

### Features

1. APC (auto power control) IC inside
2. The output beam is aligned to the centre-line of the module.  
The tolerance of  $\theta / 2$  is  $\pm 0.05^\circ$ . It is a special purpose, reliable visible laser module and features in small size and easy operation.



### Part No. Indications



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



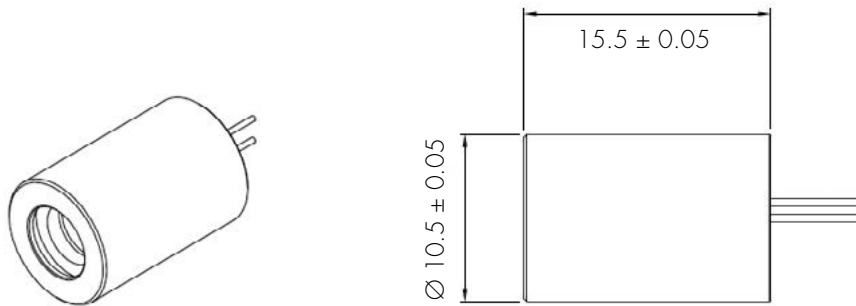
### Absolute Maximum Ratings

Item	Symbol	Rating	Unit
Power supply voltage	$V_{CC}$	3.3	V
Laser module optical output power	$P_o$	01	< 1
		05	< 5
Operation temperature	$T_{opr}$	-5 ~ 40	°C
Storage temperature	$T_{stg}$	-20 ~ 60	°C

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

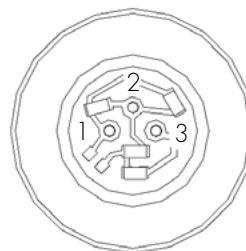
Item	Symbol	Min.	Typ.	Max	Unit	Condition	
Wavelength	$\lambda$	01	-	655	-	nm	$P_o = 1\text{ mW}$
		05					$P_o = 4.5\text{ mW}$
Output power	$P_{out}$	01	0.5	-	0.9	mW	
		05	2	4.5	5		
Operation current	$I_{op}$	01	-	30	40	mA	$P_o = 1\text{ mW } V_{cc} = 3\text{ V}$
		05					$P_o = 4.5\text{ mW } V_{cc} = 3\text{ V}$
Operation voltage	$V_{op}$	2.8	-	3.3	Volt		
Laser beam spot size at 10 m							< 15 mm
Divergence angle							1.2 mrad
Coaxial precision							$\theta < 0.1$ degree
Mean time to failure (MTTF) 4.5 mW 25 °C							>10000 hrs

Outline Dimensions (Units: mm)



Pin Assignment

- Pin 1:  $V_{cc}$
- Pin 2: GND
- Pin 3: NC (no external connection)



A type: Heat sink stand (-)