

# Red Laser

## EL635-10D Laser Module

### Description

The EL635-10D is laser subassembly with collimated beam. The maximum laser output power is 4.5 mW at 635 nm.

### Features

- Wavelength: 635 nm
- High brightness, optical output power: > 4.0 mW
- Low operating current: < 40 mA (Long battery lifetime)
- Low operating voltage: 2.5VDC minimum
- Class IIIa laser, CDRH/ROHS compatible
- Static, Surge, and Reverse Polarity Protected
- Circuit control: Auto Power Control (APC)
- Operating Temperature: -10 to 50°C
- Storage Temperature: -40 to 85°C

### Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Optical Output Power	$P_0$	4.2	mW
Operating Temperature	$T_{opr}$	-10 to +50	°C
Storage Temperature	$T_{stg}$	-40 to +80	°C
Operating Humidity (none condensing)	$RH_{opr}$	90	%

### Optical and Electrical Characteristics

Parameter	Spec.	Test Conditions
Wavelength	635 nm	$T_c = 25^\circ\text{C}$
Output Power	4.0 ~ 4.5mw	$T_c = 25^\circ\text{C}$
Laser Modes	CW	
Output Aperture	$\varnothing 2.5$ mm	Factory fixed
Beam Size	20x40 mm	Factory fixed @ 50m
	30x60 mm	Factory fixed @ 100m
Divergence	0.2 mrad	$T_c = 25 \pm 3^\circ\text{C}$
Optics	Glass lens	
Operating Current	< 40 mA	$T_c = 25 \pm 3^\circ\text{C}$
Operating Voltage	2.5-5 V DC	By 3pcs AG3 1.5V batteries
CDRH Class	Class IIIa	
MTTF	10000 Hrs.	$T_c = 25 \pm 3^\circ\text{C}$
Dimensions	10(d) x 21(l)mm	

### Mechanical Characteristics

Parameter	Specification
Case Material	Black anodized aluminum
Vibration	DIN EN 60068-2-6 Standard
Shock	DIN EN 60068-2-29 Standard