

Visible APC Laser Module

APCD-650-02-XX-A/B

6-2D-LM65-006 Rev.02

Φ6.2mm 650nm Laser Module

Features

APC (auto power control) IC inside
Low current consumption of the APC circuit
Surge current protection
High quality lens for output beam



Absolute maximum ratings

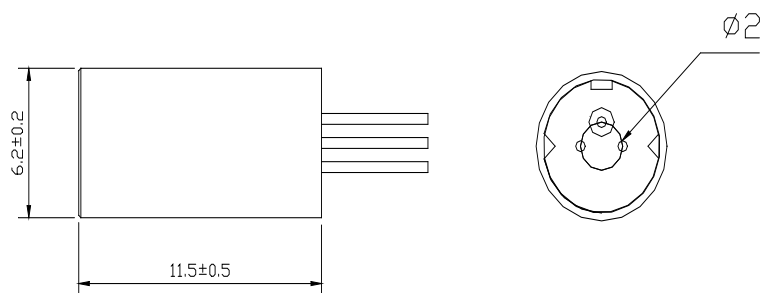
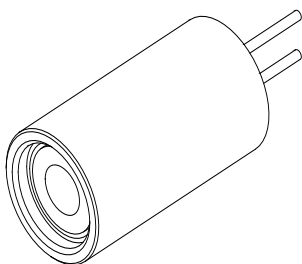
Parameter	Symbol	Rating	Unit
Power supply voltage	V _{cc}	3.3	V
Laser Module optical output power	P _o	<3	mW
Operation temperature	T _{opr}	0~40	°C
Storage temperature	T _{stg}	0~60	°C

Electrical and optical characteristics (T_c=25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Wavelength	λ	-	655	-	nm	P _o = 3mW
Operation current	I _{op}	-	-	35	mA	P _o = 3mW ; V _{cc} =3V
Operation voltage	V _{op}	2.5	-	3.3	Volt	
Laser Beam spot size at 10m				<10mm		
Divergence angle				1.1 mrad		

* Sufficient heat dissipation is required for CW operation.

Outline dimensions (Units: mm)



Aperture Size : 2.4mm

ARIMA LASERS CORP.

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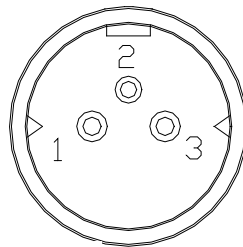
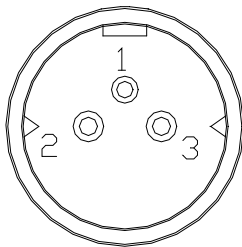
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Φ6.2mm 650nm Laser Module

PIN Assignment:

A type : Heat sink stand (-)

B type :Heat sink stand (+)

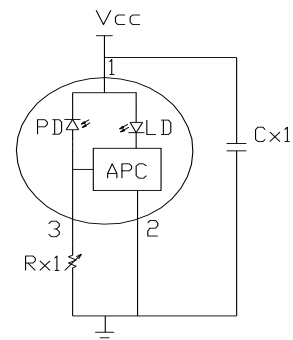


- Pin 1 : Vcc
- Pin 2 : GND
- Pin 3 : PD

Laser power Adjustment Procedure

1. Connect 1 uF capacitor (Cx1) between Pin1 and Pin2.
2. Connect 20~50K ohm variable resistor (Rx1) between Pin2 and Pin3.
3. Set Vcc to the designed value.
4. Adjust Rx1 to obtain the desired output power.
5. Laser Safety Precautions

- (1) Do not increase Vcc value when the laser module is working near the maximum power . That is to protect laser from overdriving condition and make sure power is under 3 mW.
- (2) Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device

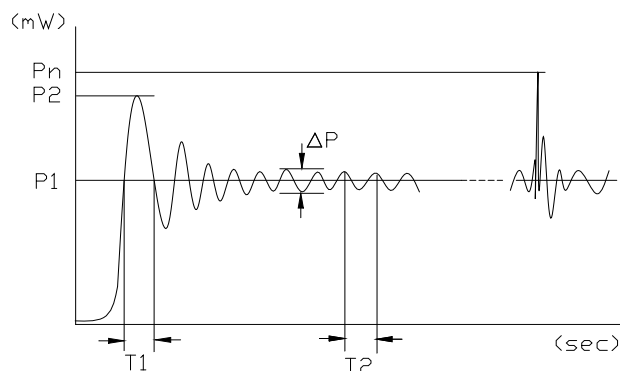


Laser power stability

- P1 : 2.5mW
- P2 : < 3mW
- Pn : <3mW
- ΔP : < 0.5mW
- T1 : < 0.1us
- f2=(1/T2) : 3MHz

NOTE:

- P1 : Mean power
- P2 : Max power from turning on power
- Pn : Max power from Vcc noise
- ΔP : Power Amplitude of vibration
- T1 : Time between trigger and convergence



• Precautions

- * Do not operate the device above maximum ratings. Doing so may cause unexpected and permanent damage to the device.
- * Take precautions to avoid electrostatic discharge and/or momentary power spikes. A change in the characteristics of the laser or premature failure may result.
- * Proper heat sinking of the device assures stability and lifetime. Always ensure that maximum operating temperatures are not exceeded.
- * Observing visible or invisible laser beams with the human eye directly, or indirectly, can cause permanent damage. Use a camera to observe the laser.
- * No laser device should be used in any application or situation where life or property is at risk in event of device fail* Specifications are subject to change without notice. Ensure that you have the latest specification by contacting us prior to purchase or use of the product.

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