

3.3 mm Laser Module Specification

Utilizes APC Diode

www.LASER66.com

Model No.

LMAPCD-650-07-C3-A

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	Sales Dept.	QA Dept.	Engineering Dept.
Customer	www.LASER66.com		

1 Scope:

LMAPCD-650-07-C3-A is a general purpose, reliable visible laser module. It features are: extremely small size and easy operation.

2 General Specifications:

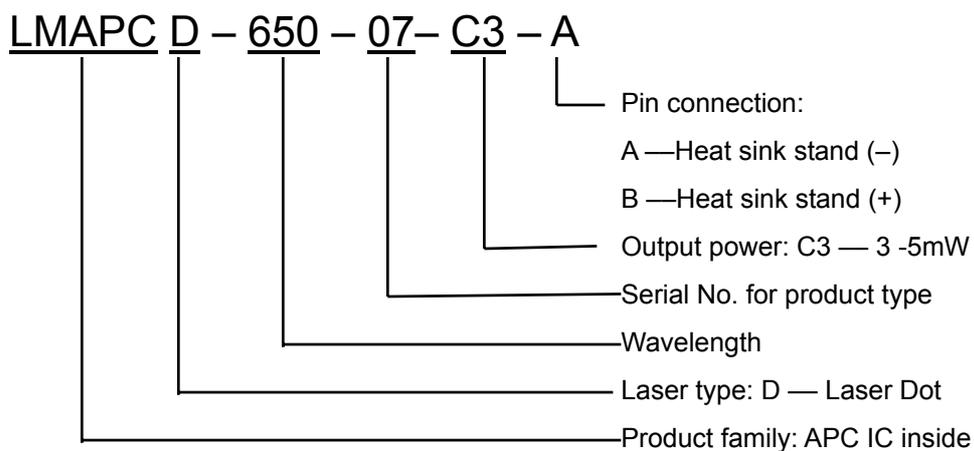
2.1 Absolute maximum rating

Item	Symbol	Rating	Unit
Power supply voltage	V_{cc}	3	V
Laser Module optical output power	P_o	~3mW	mW
Operation temperature	T_{opr}	0~40	°C
Storage temperature	T_{stg}	0~60	°C

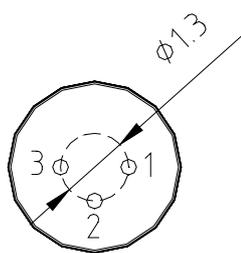
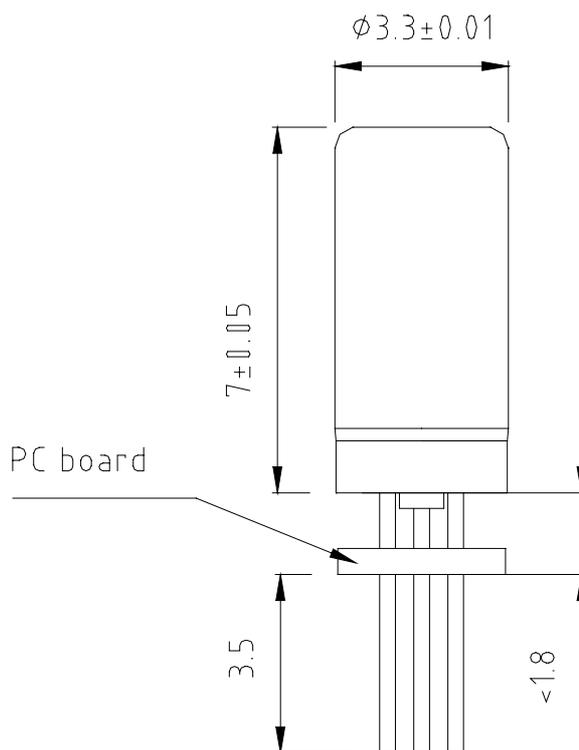
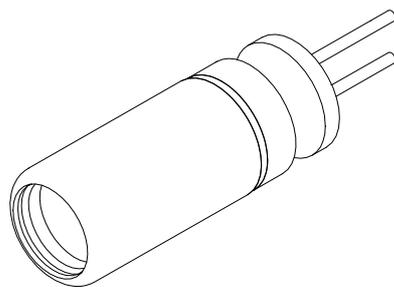
2.2 Electrical and optical characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Min.	Typ.	Max	Unit	Condition
Wavelength	λ	650	655	660	nm	$P_o < 1\text{mW}$
Output power	P_{out}	3	3	4	mW	$V_{cc}=3\text{V}$
Operation current	I_{op}	-	15	25	mA	$P_o=0.9\text{mW}$ $V_{cc}=3\text{V}$
Operation voltage	V_{op}	2.5	-	3	Volt	
Laser Beam spot size at 10m		<12mm				
Divergence angle		1.1 mrad				
Mean time to failure (MTTF) 1mW 25°C		>10000 hrs				

3 Indication:



4 Dimensions:



Unit : mm

Pin 1 : Vcc

Pin 2 : GND

Pin 3 : NC (no external connection)

5 Quality Inspections:

5.1 Acceptance Criteria :

5.1.1 Appearances Inspection: General Inspection Standards II

5.1.1.1 Criteria Defective : AQL 0.065

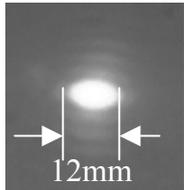
5.1.1.2 Major Defective : AQL 0.65

Minor Defective : AQL 1

5.1.1.3 O/E Testing: General Inspection Standards I AQL 0.065

5.2 Specifications :

5.2.1 Appearances Inspection :

Visual Inspection, No microscope needed		
Items	Rejection Criteria	AQL
Laser beam spot size < 12mm at 10m 	NG if spot size is > 12mm	0.65

5.2.2 O/E Testing :

Based on Item 2.2

6 Reliability Target / $T_c=25^\circ\text{C}$:

Estimated MTTF > 10,000hr (QAT sample size ≥ 20)

(Extrapolated I_{op} increases 20%)

7 Packing Method :

7.1 Packing material :

Material	Size (mm)	Quantity
Vinyl Bag	--	1
Tray Cover	--	1
Shipping Tray	119X85X15.8	4
Inner Box	128X103X100	10
Outside Carton	560X276X114	2
Shipping Carton	580X292X265	1

7.2 Packing Method:

- 7.2.1 Put 100 pieces laser module in a shipping tray. Labeling product type on side of shipping tray and place a cover on shipping tray.
- 7.2.2 The shipping tray is packed in a vinyl bag and sealed by vacuum machine.
- 7.2.3 4 shipping trays in an inner box.
- 7.2.4 10 inner boxes in a outside carton.
- 7.2.5 2 outside cartons in a shipping carton.

8 Labeling :

Type	:	LMAPCD-650-07-C3-A
P/N	:	
Qty	:	
P/O No	:	
Date	:	_____

9 Disposition of Defect

If any defect that listed on section 5.2 is found, the customer shall inform Creative Technology Lasers. The replacement would be sent after mutual agreement.

10 Precautions:

- 10.1 Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device.
- 10.2 Do not look into the laser beam directly by bare eyes. The laser beam may cause severe damage to human eyes.
- 10.3 Optical Lens is made of plastic or glass . Do not contaminate lens by dirt, oil or chemical

11 Revision History:

Date	Rev.	Revision Items		Note
		Before	After	
2006/9/18	0		First issue	