Laser Diode Delivery Specification

Customer
伊烙亞

LD Model No.
ADL-63104GL

Contents:

	Sales Dept.	QA Dept.	Engineering Dept.
Customer	Arima Lasers Corp.		

1 Scope:

ADL-63104GL is a 635nm, 10mW Laser Diode, and high visible laser light source. It features in high bonding accuracy, high reliability and low cost.

2 General Specifications:

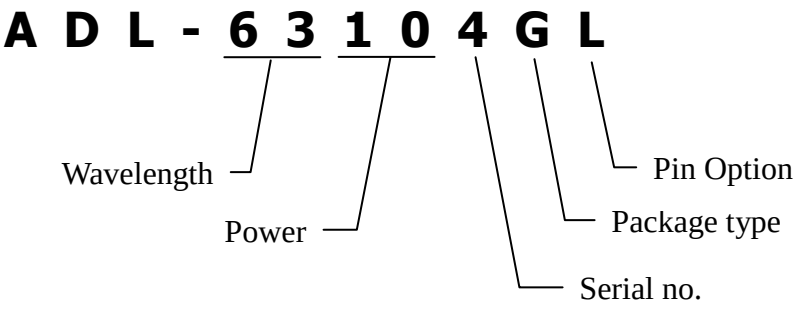
2.1 Absolute maximum rating

Parameter	Symbol	Condition	Rating	Unit
Light output power	P_O	CW	12	mW
Reverse voltage (LD)	V_{RL}	-	2	V
Reverse voltage (PD)	V_{RD}	-	30	V
Forward current (PD)	I_{FD}	-	10	mA
Operation case temperature	T_C	-	-10~+50	°C
Storage temperature	T_S	-	-40~+85	°C

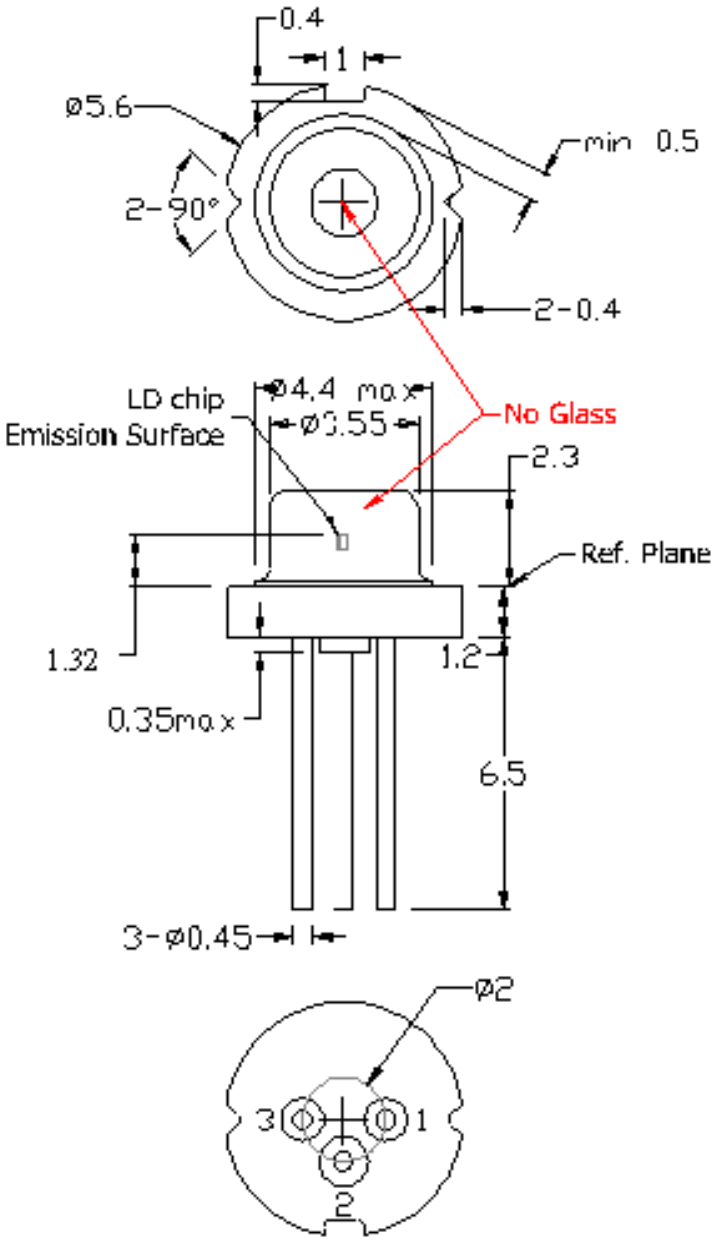
2.2 Electrical and optical characteristics (T_c=25 °C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Peak wavelength	λ	630	637	642	nm	P_o=10mW
Threshold current	I_{th}	-	35	45	mA	
Operating current	I_{op}	-	55	65	mA	P_o=10mW
Operating voltage	V_{op}	2	2.2	2.5	V	P_o=10mW
Differential efficiency	η	0.25	0.5	0.85	mW/mA	P_o=5-10mW
Monitor current	I_m	0.05	0.12	0.5	mA	P_o=10mW, V_{RD}=5V
Parallel divergence angle	$\theta_{//}$	6	7.5	11	deg	P_o=10mW
Perpendicular divergence angle	$\theta_{\perp}$	30	33	38	deg	
Parallel FFP deviation angle	$\Delta\theta_{//}$	-2	0	+2	deg	
Perpendicular FFP deviation angle	$\Delta\theta_{\perp}$	-2	0	+2	deg	
Emission point accuracy	$\Delta x \Delta y \Delta z$	-80	0	+80	um	

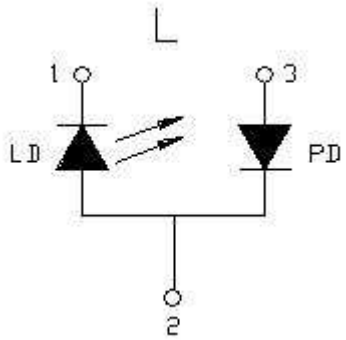
3 Indication:



4 Dimensions:



5 Pin Connections:



6 Quality Inspections:

6.1 Acceptance Criteria：

6.1.1 Appearances Inspection: General Inspection Standards II

6.1.1.1Seriously Defective：AQL 0.065

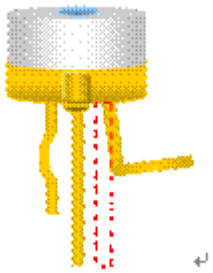
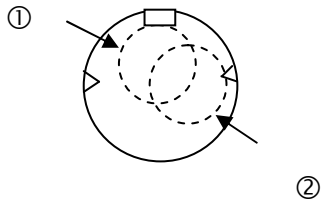
6.1.1.2 Defective：AQL 0.65

6.1.2 O/E Testing Inspection Standards:

Shipment (pcs)	Sample size	Ac / Re
1~80	ALL	0 / 1
81~10000	80	0 / 1
10001~35000	125	0 / 1

6.2 Specifications：

6.2.1 Appearances Inspection：

Visual Inspection, No microscope needed		
Items	Rejection Criteria	AQL
Lead bent 	NG if the outer lead bends exceeding the edge of the lead.	0. 65
Cap displaced 	NG if Cap is placed outside the tolerance: -Cap on index-guide ① -Cap on V-ditch ②	0. 65

6.2.2 O/E Testing：

Based on Item 2.2

6.2.3 Periphery Specification：ϕ5.575 ~ 5.6 mm。

7 Reliability Target :

◆ Estimated MTTF > 1,500hr @ Tc=50℃, Po=10mW.
(Extrapolated I_{op} increases 20%)
(QAT sample size ≥ 20)

8 Packing Method :

8.1 Packing material:

Material	Size (mm)	Capacity (If applicable)
Vinyl Bag	--	For one set of cover and tray
Tray Cover	--	For one tray
Shipping Tray	119X85X15.8	100 LDs
Inner Box	128X103X100	500 LDs
Outside Carton	560X276X114	5,000 LDs
Shipping Carton	580X292X265	10,000 LDs

8.2 Packing Method:

8.2.1 Put 100 pieces laser diode in a shipping tray. Labeling product type on side of shipping tray and place a cover on shipping tray.

8.2.2 The shipping tray is packed in a vinyl bag and sealed by vacuum machine.

8.2.3 5 shipping trays in an inner box.

8.2.4 10 inner boxes in a outside carton (For larger shipping quantity).

8.2.5 2 outside cartons in a shipping carton (For larger shipping quantity).

8.2.6 Reference photos:





For larger shipping quantity:



9 Labeling :

Arima LASERS 華信光電科技股份有限公司

Type :
P/N :
LOT No :
Qty :
P/O No :
Date :

Arima LASERS

10 Disposition of Defect

If any defect that listed on section 6.2 is found, the customer shall inform Arima Lasers Corp.. The replacement would be sent after mutual agreement.

11 Precautions:

11.1 Do not operate the device above the maximum rating condition, even momentarily. It may cause unexpected permanent damage to the device.

11.2 Semiconductor laser device is very sensitive to electrostatic discharge. High voltage spike current may change the characteristics of the device, or malfunction at any time during its service period. Therefore, proper measures for preventing electrostatic discharge are strongly recommended.

11.3 Effective heat sink can help the device operates under a more relax condition; as a result, a more stable characteristics and better reliability can be achieved. So it is recommended that always apply proper heat sink before the device is operating.

11.4 Do not look into the laser beam directly by bare eyes. The laser beam may cause severe damage to human eyes.

12 Revision History:

Date	Rev.	Revision Items		Note
		Before	After	
2013/05/15	0		First issue	
2013/09/26	1		波長上限由 645nm 變更 642nm	