



ARL-1210UBC-240mcd (3528)



Features

- PLCC-2 Package.
- Extremely wide viewing angle
- Suitable for all SMT assembly and solder process
- Available on tape and reel
- Moisture sensitivity level: Level 4
- Package: 2000pcs/reel
- RoHS compliant

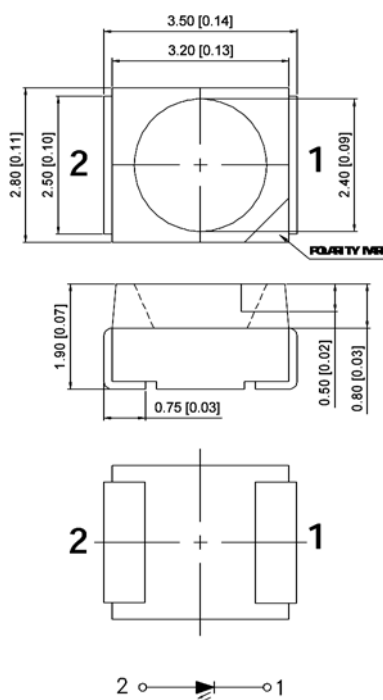
Description

- The Blue source color devices are made with InGaN on
- Substrate Light Emitting Diode

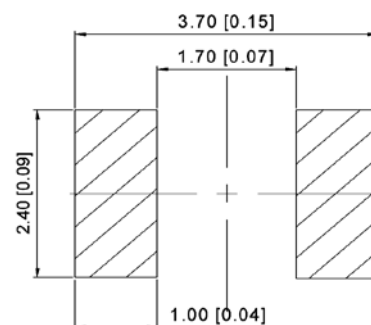
Application

- Optical indicator
- Indoor display
- Backlighting in dashboard and switch
- Flat backlighting for LCD, symbol and display
- General use

Package Dimensions



Recommended Soldering Pattern



1. All dimension units are millimeters.
2. All dimension tolerance is $\pm 0.15\text{mm}$ unless otherwise noted.

Part No.	Dice	Lens Type	Luminous intensity(mcd) @ 20mA*3			Viewing Angle
			Rank	Min.	Max.	
ARL-1210UDC-240mcd (3528)	Blue (InGaN)	Water Clear	J	125	160	120°
			L	160	210	
			M	210	276	
			N	276	355	

Notes

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. The above luminous intensity measurement allowance tolerance $\pm 10\%$.

Electrical / Optical Characteristics at Ta= 25 °C

Parameter	Symbol	Min.	Typ.	Max	Units	Test Conditions
Forward Voltage	VF	3.0	3.2	--	V	IF=20mA
Reverse Current	IR	--	--	10	uA	VR = 5V
Dominate Wavelength	λ_d	470	475	--	nm	IF=20mA

Absolute Maximum Rating at Ta= 25 °C

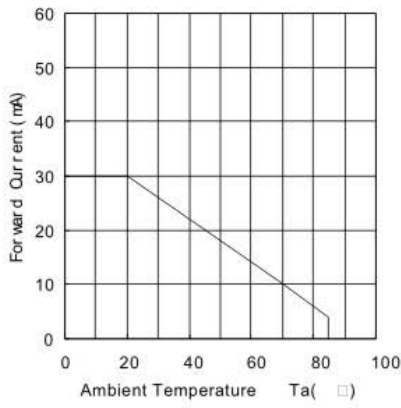
Parameter	Symbol	Value	Units
Power dissipation	Pd	105	mW
DC Forward Current	IF	30	mA
Peak Forward Current [1]	IFP	100	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	1000	V
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C

Note:

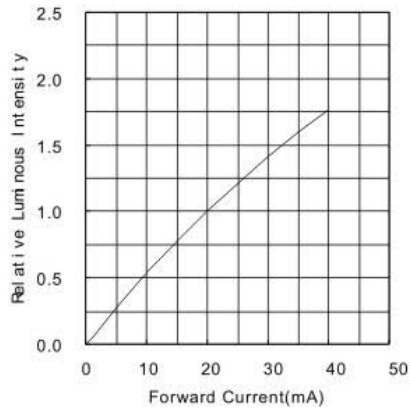
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

Typical optical characteristics curves

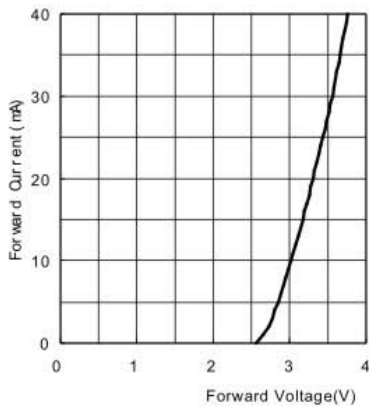
Ambient Temperature VS. Forward Current



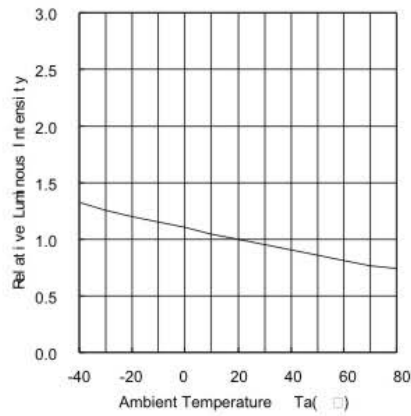
Forward Current VS. Relative Intensity



Forward Voltage VS. Forward Current



Ambient Temperature VS. Relative Intensity



Relative spectral emission

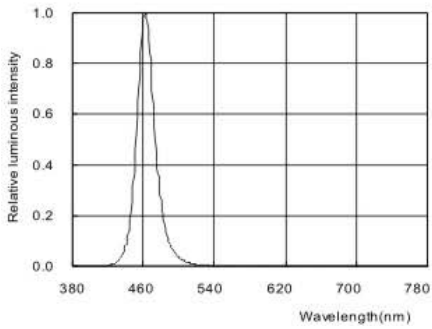
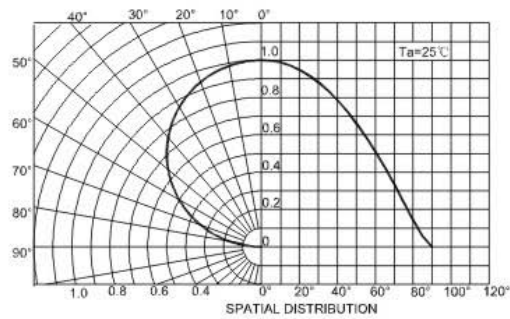
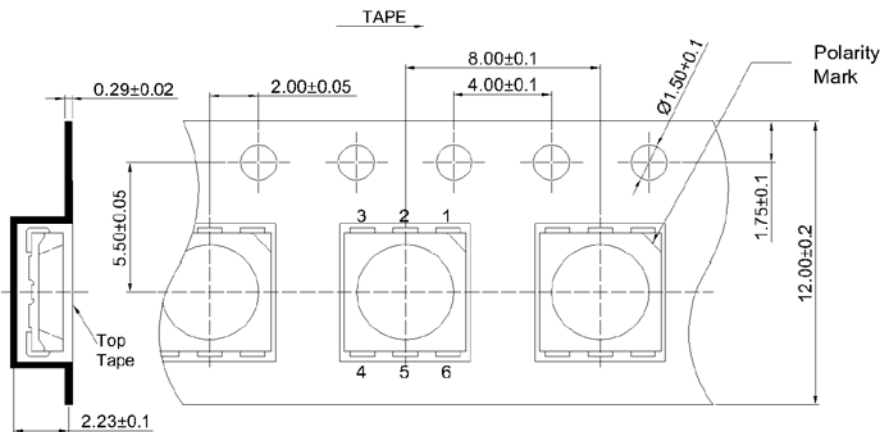


Diagram characteristics of radiation



Tape Specifications (Units : mm)



Reliability Test Items And Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level :90%

LTPD :10%

No.	Items	Ref.Standard	Test Condition	Test Hours/ Cycles	Sample Size	Ac/ Re
1	Reflow	JESD22-B106	Temp:260°C max T=10 sec	3 times.	22Pcs.	0/1
2	Temperature Cycle	JESD22-A104	100°C ±5°C 30 min. 5 min -40°C ±5°C 30 min.	100 Cycles	22Pcs.	0/1
3	Thermal Shock	JESD22-A106	100°C ±5°C 5 min. -40°C ±5°C 5 min.	100 Cycles	22Pcs.	0/1
4	High Temperature Storage	JESD22-A103	Temp:100°C ±5°C	1000Hrs.	22Pcs.	0/1
5	Low Temperature Storage	JESD22-A119	Temp:-40°C ±5°C	1000Hrs.	22Pcs.	0/1
6	DC Operating Life	JESD22-A108	Ta=25°C ±5°C IF=20mA	1000Hrs.	22Pcs.	0/1
7	High Temperature High Humidity	JESD22-A101	85°C ±5°C / 85%RH IF=5mA	1000Hrs.	22Pcs.	0/1

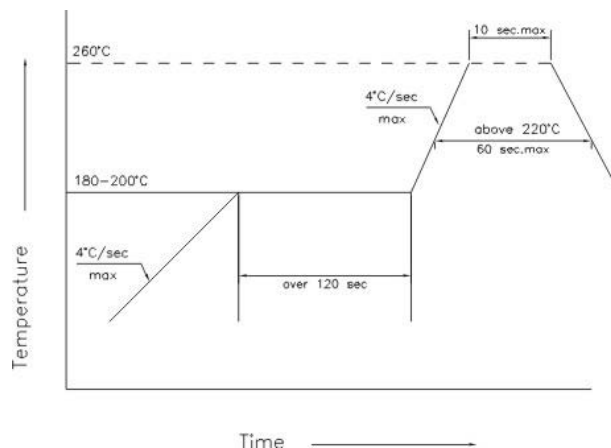
*The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

SMT Reflow Soldering Instructions

- 1.Reflow soldering should not be done more than two times
- 2.When soldering , do not put stress on the LEDs during heating

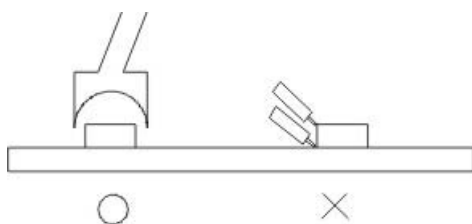
Soldering iron

- 1.When hand soldering, the temperature of the iron must less than 300°C for 3 seconds
- 2.The hand solder should be done only one times

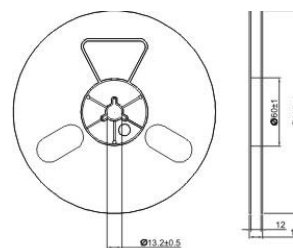


Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of LEDs will or will not be damaged by repairing.



Moisture Resistant Packaging



Reel Dimensions

