

## ARPL-5W Cool White 10000K (13x13mm)

### Features

- Dimension 13.5mmx13mmx1.5mm
- Single color.
- Emitting Color: White
- Easy Installation with screws.
- High efficiency.
- Low power consumption
- Long operating lifespan.
- High heat dissipation efficiency.
- RoHS Compliant.



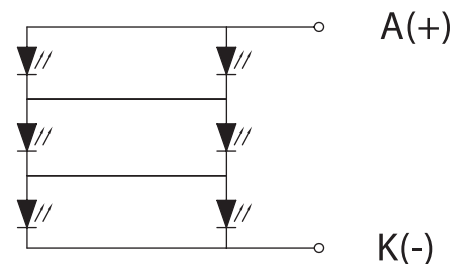
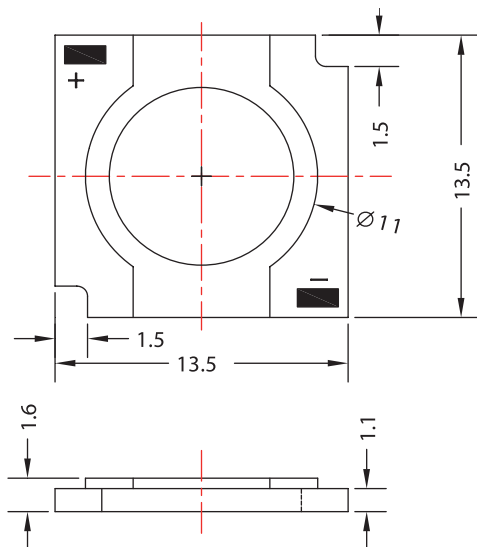
### Applications

- Read lamp.
- Street lamp.
- Energy saving lamp
- Decorative and Entertainment lighting
- Indoor and Outdoor Commercial lighting

### Description

- The White source color devices are made with InGaN on Sapphire Blue Light Emitting Diode.

### Package Dimensions



#### Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is  $\pm 0.2\text{mm}$  unless otherwise noted.

Part No.	Chip		Lens Color
	Material	Emitting Color	
ARPL-5W Cool White	InGaN	White	Yellow Diffused

## Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Min.	Typ.	Max.	Units	Test Conditions
ΦV	Luminous Flux	White	240	280		lm	IF=500mA
VF	Forward Voltage [1]	White	8.5	9	—	V	IF=500mA
2θ1/2	Viewing Angle[2]	White	—	120	—	deg	IF=500mA
TC	Color temperature	White	9000		10000	K	IF=500mA
IR	Reverse Current	White	—	—	10	uA	VR = 5V
C	Capacitance	White	—	50	—	pF	VF=0V;f=1MHz

Note:

- 1.For each die.
- 2.θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- 3.The value only for reference.

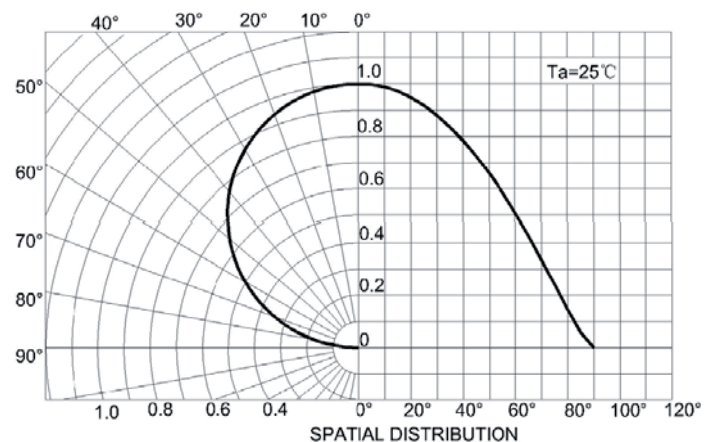
## Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	White	Units
Power dissipation[1]	Pd	5	W
DC Forward Current[1]	IF	500	mA
Peak Forward Current (Duty 1/10@1KHZ ) [1]	IFP	1000	mA
Reverse Voltage[1]	VR	5	V
Operating Temperature Range	Topr	-40°C To +85°C	
Storage Temperature Range	Tstg	-40°C To +100°C	

Note:

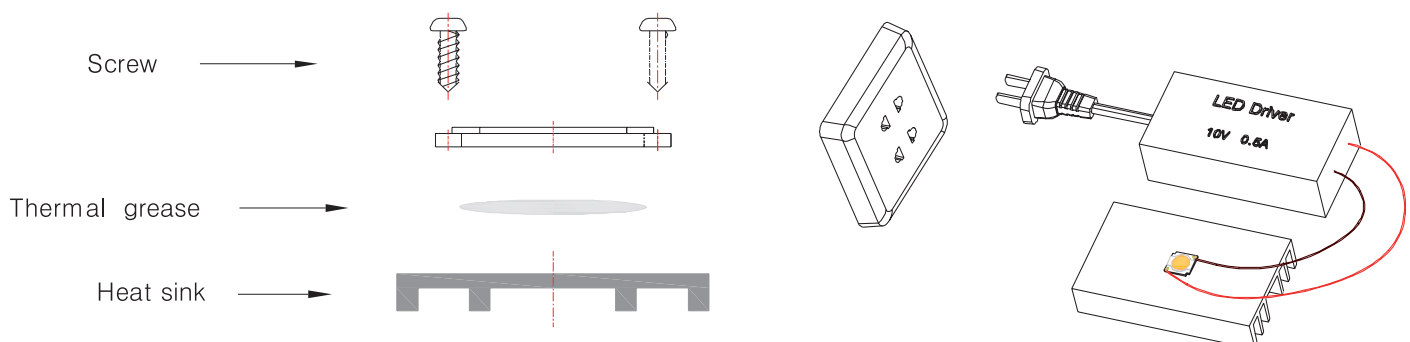
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. The temperature of Aluminum PCB dose not exceed 55°C

## Spatial Distribution Graph



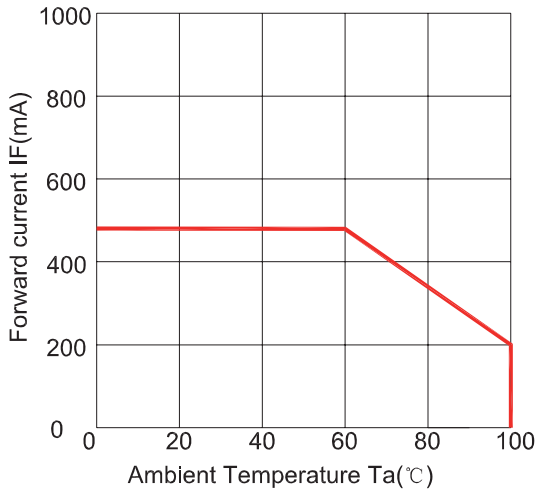
## Product Thermal Application Information

When assembling on PCB or heatsink carrier, thermal grease should be evenly speeded with a thickness <100um.

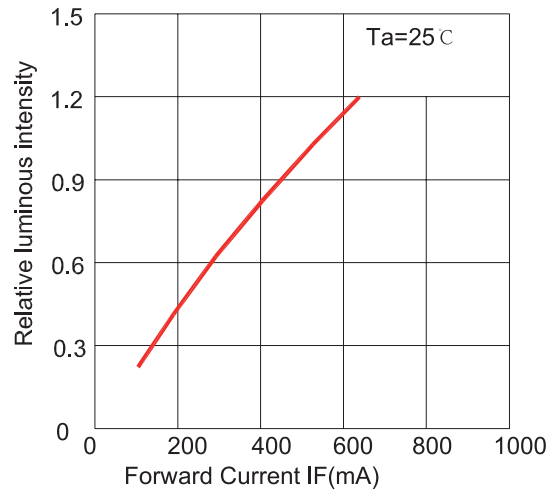


# Spatial Distribution Graph

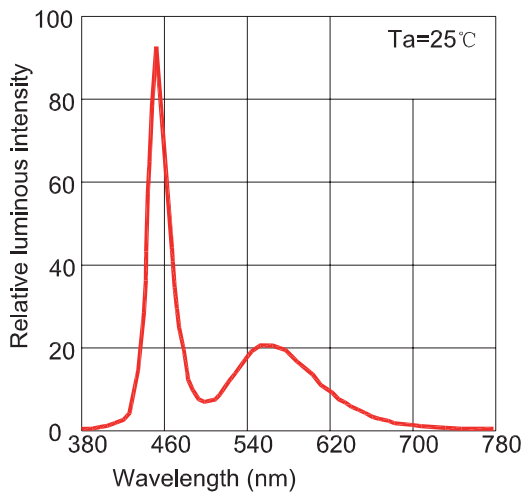
Forward Current vs. Ambient Temperature



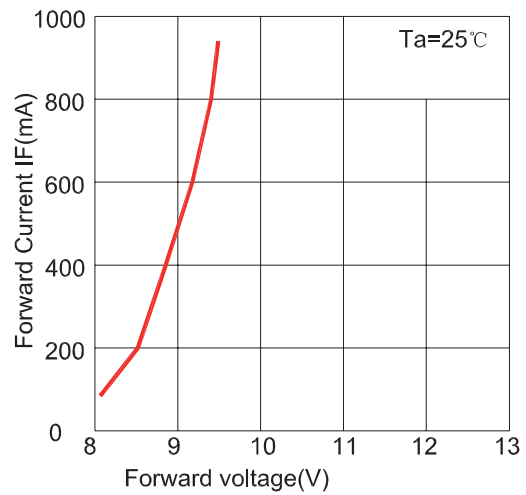
Forward Current vs. Luminous Intensity



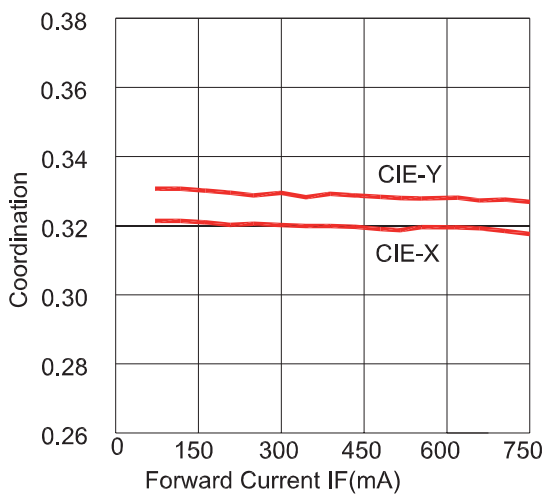
Wavelength characteristics



Forward Voltage vs. Forward Current



Forward Current vs. chromaticity coordinate



Ambient Temperature vs. Forward Voltage

