

ARPL-100W White

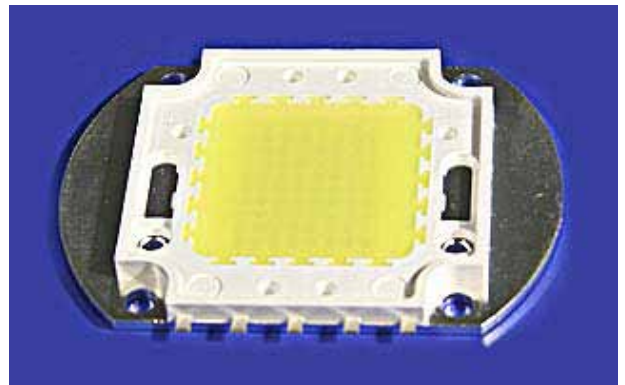
ARPL-100W WarmWhite

Features

- Substrate: Aluminum Plate
- Chip size: 45mil x 45mil
- High intensity, Long life-span

Usage Notes:

- Surge will damage the LED
- When using LED, it must use a protective resistor in series with DC current



Applications

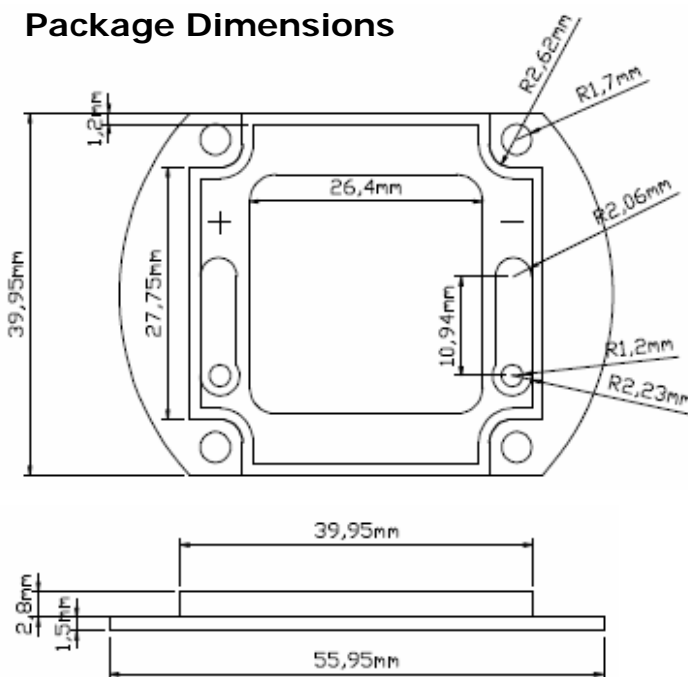
- Decoration lights
- Architectural lighting
- Beacon light
- Up-lights and Down-lights
- LCD Backlights
- General lighting
- Ceiling lights
- Garden lighting

Device Selection Guide

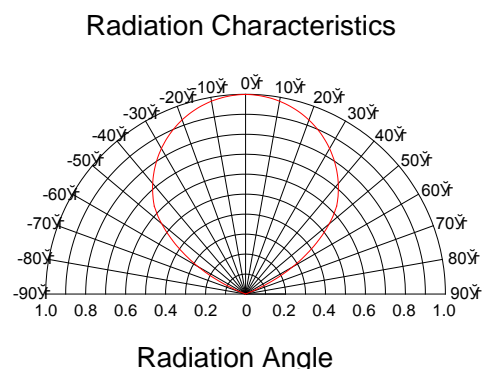
LED Part No.	Emitted Color	Lens Color
ARPL-100W White	White	Water clear
ARPL-100W WarmWhite	Warm White	Water clear

Our PCB is usual use for installation and connection during application, but the ability of heat dissipation is not enough. If lighted, our high power stars will need better another type heat dissipation equipment. So we recommend the working time is not over 5-10 seconds without any heat dissipation equipment. When using, the temperature of heat dissipation equipment had better be low at 60°C. Thermal grease should be evenly speeded with a thickness <100um. When assembling on metal-core printed circuit boards (MCPCB) or heat sink carrier.

Package Dimensions



Spatial Distribution



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.
3. Protruded resin under flange is 1.0mm (.04") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.
6. This data-sheet only valid for six months.

Absolute Maximum Rating

Parameter	Symbol	White	Unit
Reverse Voltage	VR	40	V
Forward Current	IF	3500	mA
Power Dissipation	PD	100	W
Peak Forward Current	PD	30	W
(Duty 1/10 @ 1KHz)	IFP	6000	mA
ESD Sensitivity		2000	V
Operating Temperature	Topr	-40~ +55	°C
Storage Temperature	Tstg	-40~ +85	°C
Soldering Temperature	Tsol	260 (for 5 second)	°C

Electrical / Optical Characteristics at TA=25°C

Parameter	Color	Symbol	Min.	Max.	Unit
Luminous Intensity	White	FLux	8000	9000	lm
	Warm White		7000	8000	
Viewing Angle	White	2θ1/2	110	120	Deg
	Warm White				
Peak Emission Wavelength	White	λp	6000-7000K	nm	4000
	Warm White		2700-3300K		
Forward Voltage	White		30	36	V
	Warm White				

Reliability test items and conditions:

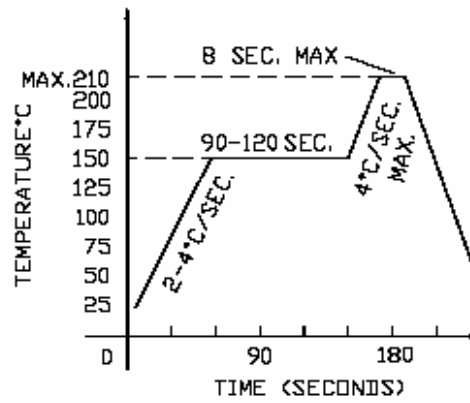
NO	ITEM	Test Conditions	Test hours/ cycle	Sample Q'ty	Ac/Re
1	Solder Heat	High Temperature High Humidity	5 sec	30 pcs	0/1
2	Temperature Cycle	-40°C 30min	100 cycle	30 pcs	0/1
		-25°C 5min			
		-105°C 30min			
		-25°C 5min			
3	Thermal Shock	-40°C 5min	20 cycles	30 pcs	0/1
		-105°C 5min			
4	High Temperature Storage	Temp 85°C	1000 hrs	30 pcs	0/1
5	Low Temperature Storage	Temp -35°C	1000 hrs	30 pcs	0/1
6	DC Operating Life	IF=350mA	1000 hrs	30 pcs	0/1
7	High Temperature High Humidity	Ta=60°C R.H 90%	1000 hrs	30 pcs	0/1

Application Notes

• soldering

- Manual soldering by soldering iron The use of a soldering iron of less than 25w recommended and the
- Reflow soldering
 - The temperature profile as shown in Fig.3 is recommended for soldering SMD LED by the re flow furnace.
 - Care must be taken that the products be handled after their temperature has dropped down to the normal room temperature after soldering.

Recommended Reflow Soldering Profile.



3. Post solder cleaning. When cleaning after soldering is needed the following conditions must be adhered to.

- 1.) Cleaning solvents Freon TF or equivalent or alcohol.
- 2.) Temperature 50°C Max. for 30 second or 260°C Max. for 5 minutes.
- 3.) Ultrasonic 300 W Max.

4. Others

- a. Care must be taken not to cause stress to the epoxy resin portion of power LEDs while it is exposed to the high temperature.
- b. Care must be taken not to rub the epoxy resin portion of Power LEDs with a hard or sharp edged article such as the sand blast and the metal hook as the epoxy resin is rather soft and liable to be damaged.