

# Admit specification

CUSTOMER

Shoptronica sl

DESCRIPTION

10W, 20W, 30W, 50W, 100W  
IR(850nm)

DATE

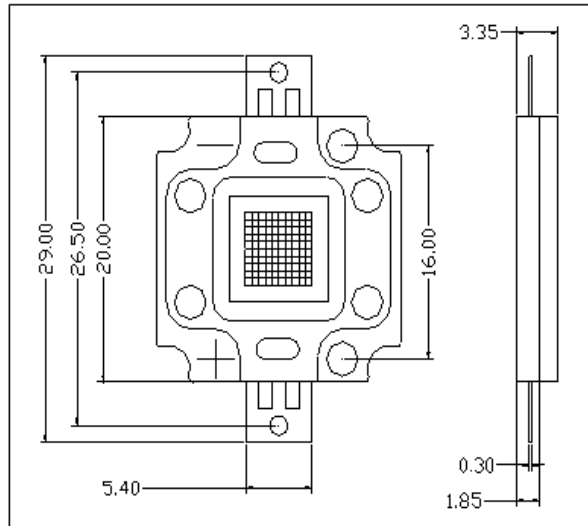
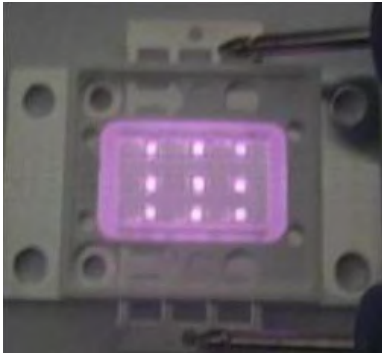
01/25/13



■Notes	1. All dimensions are in millimeters. 2. Tolerance is ±0.25 unless otherwise noted	
● Feature		~ Applications
● High Power LED		~ General Linghting
● Package : SMT Package		~ Advertisement )
●Half Angle (2Θ1/2):140°		~Architectural Lighting
●Lens Color:Water Clear		~ Street Lamps

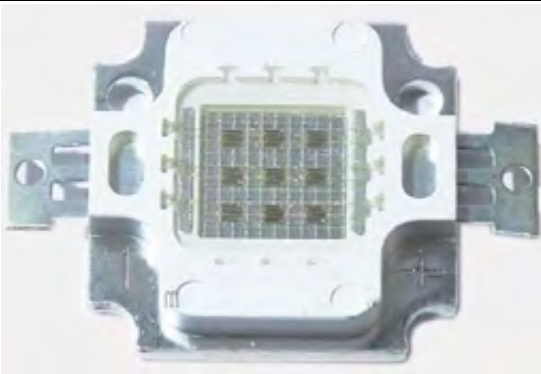
P20AIR032Y KT\*: 72po

■ Package Dimensions

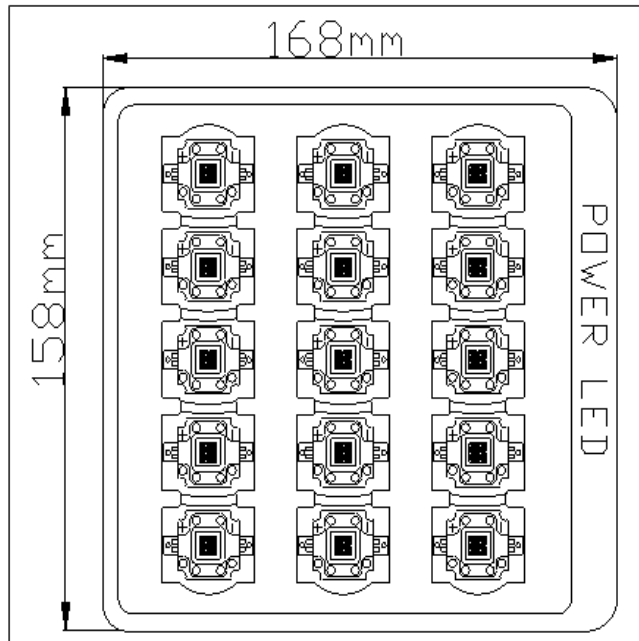


■ Product pictures

■ Current direction 10S1P



■ packing interior



P20AIR32Y 'KT\*: 72po +  
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■ Photoelectric parameters;(At TA=25°C)

Parameter	Symbol	Conditions	Min.	Avg.	Max.	Units
Luminous Intensity	$\Phi$	IF=600mA	~	~	~	lm
Color rendering index	CRI		~	~	~	RA
Color Temperature	CCT		~	~	~	K
Spectral Line Half-Width	$\Delta\lambda$		~	850	~	nm
Forward Voltage	VF		15,00	~	17,00	V
Thermal Resistance Junction To Board	$R\Theta_{J-B}$		--	12	~	°C/W
Temperature coefficient	$\Delta VF/\Delta T$		~	-2	~	mV/°C
Viewing Angle [1]	2 $\Theta$ 1/2		~	140	~	Deg
Reverse Current	IR	VR=50V	~	~	10	$\mu$ A

Notes :

1. Luminous flux is measured with an accuracy of  $\pm 10\%$
2. CCT is measured with an accuracy of  $\pm 100K$
3. wavelength is measured with an accuracy of  $\pm 1nm$
4. The forward voltage is measured with an accuracy of  $\pm 0.1V$

■ Absolute Maximum Rating;(At TA=25°C)

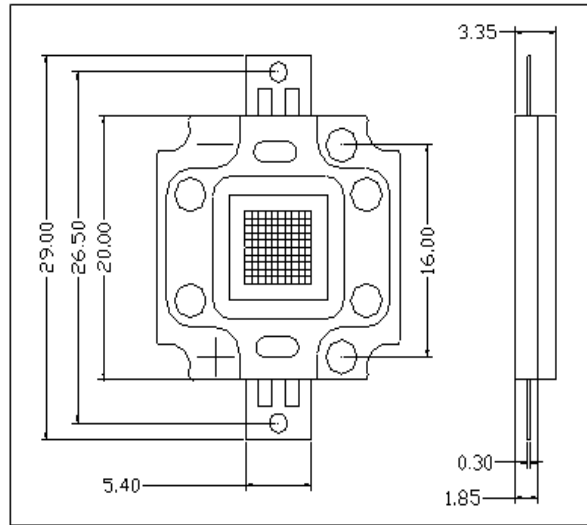
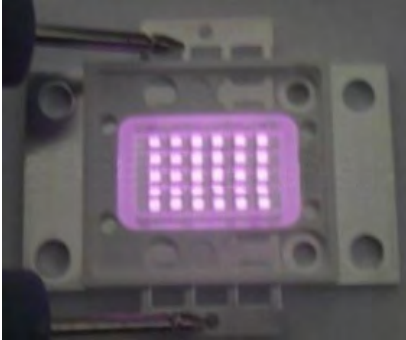
Parameter	Symbol	Ratings	Units
Power Dissipation	PD	9.65	W
Continuous Forward Current	IF	600	mA
Peak Forward Current [2]	IF(Peak)	1500	mA
LED Junction Temperature	TJ	120	°C
Reverse Voltage	VR	50	V
Operating Temperature Range	TOPR	-35°C To +60°C	
Storage Temperature Range(	TSTG	-40°C To +100°C	
Manual Soldering Temperature	TSOL	350°C $\pm$ 20°C For 3 Seconds	
ESD Sensitivity	ESD	3000V HBM	

Notes:

- [1]. Tolerance  $\Theta$ :10%
- [2].1/10 Duty Cycle 0.1ms Pulse Width.

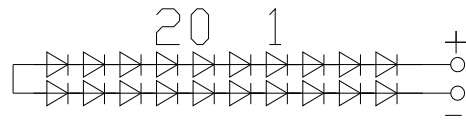
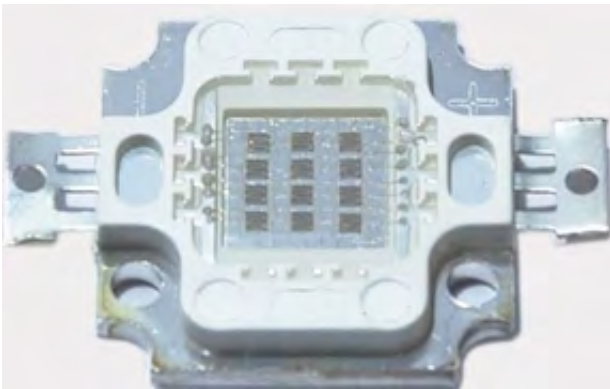
P20AIR42Y 'K'\*: 72po +'  
"

■ Package Dimensions

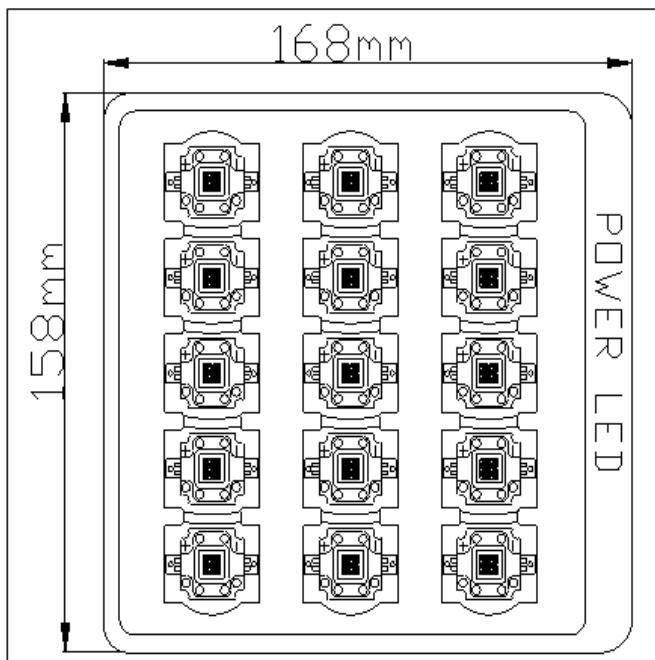


■ Product pictures

■ Current direction 20S1P



■ packing interior



P20AIR42Y 'K'\*: 72po +  
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■ Photoelectric parameters;(At TA=25°C)

Parameter	Symbol	Conditions	Min.	Avg.	Max.	Units
Luminous Intensity	$\Phi$	IF=600mA	~	~	~	lm
Color rendering index	CRI		~	~	~	RA
Color Temperature	CCT		~	~	~	K
Spectral Line Half-Width	$\Delta\lambda$		~	850	~	nm
Forward Voltage	VF		30,00	~	34,00	V
Thermal Resistance Junction To Board	$R\theta_{J-B}$		--	12	~	°C/W
Temperature coefficient	$\Delta VF/\Delta T$		~	-2	~	mV/°C
Viewing Angle [1]	2 $\Theta$ 1/2		~	140	~	Deg
Reverse Current	IR	VR=100V	~	~	10	$\mu$ A

Notes :

1. Luminous flux is measured with an accuracy of  $\pm 10\%$
2. CCT is measured with an accuracy of  $\pm 100K$
3. wavelength is measured with an accuracy of  $\pm 1nm$
4. The forward voltage is measured with an accuracy of  $\pm 0.1V$

■ Absolute Maximum Rating;(At TA=25°C)

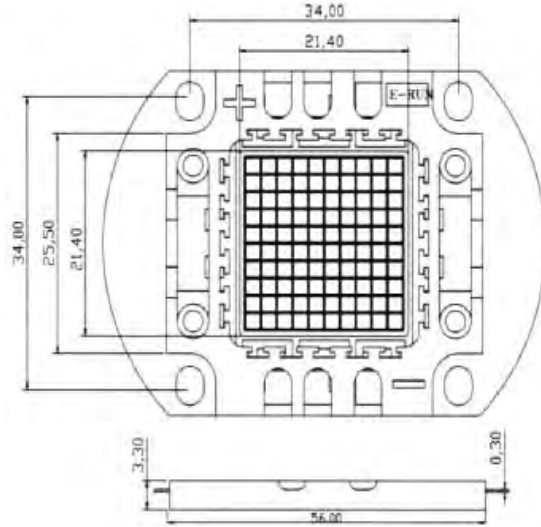
Parameter	Symbol	Ratings	Units
Power Dissipation	PD	19.28	W
Continuous Forward Current	IF	600	mA
Peak Forward Current [2]	IF(Peak)	1500	mA
LED Junction Temperature	TJ	120	°C
Reverse Voltage	VR	100	V
Operating Temperature Range	TOPR	-35°C To +60°C	
Storage Temperature Range(	TSTG	-40°C To +100°C	
Manual Soldering Temperature	TSOL	350°C $\pm$ 20°C For 3 Seconds	
ESD Sensitivity	ESD	3000V HBM	

Notes:

- [1]. Tolerance  $\Theta$ :10%
- [2].1/10 Duty Cycle 0.1ms Pulse Width.

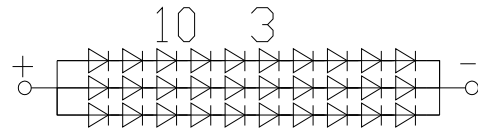
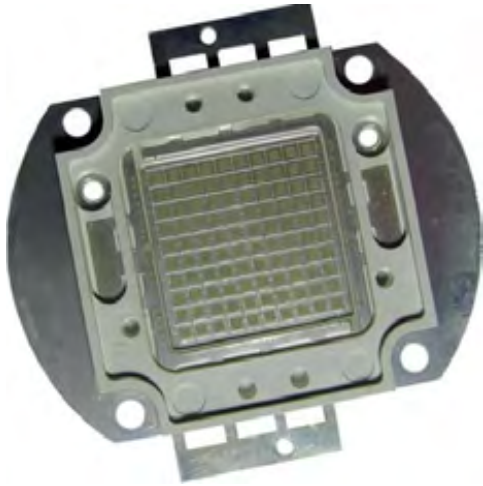
P100AIR52Y K\*: 72po +  
"

■ Package Dimensions

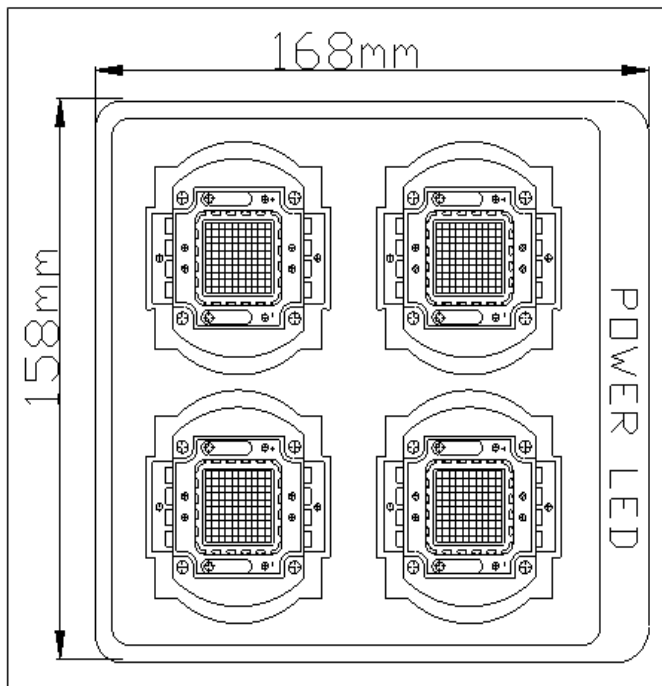


■ Product pictures

■ Current direction 10S3P



■ packing interior



P100AIR30WIR(850nm)

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■ Photoelectric parameters;(At TA=25°C)

Parameter	Symbol	Conditions	Min.	Avg.	Max.	Units
Luminous Intensity	$\Phi$	IF=1800mA	~	~	~	lm
Color rendering index	CRI		~	~	~	RA
Color Temperature	CCT		~	~	~	K
Spectral Line Half-Width	$\Delta\lambda$		~	850	~	nm
Forward Voltage	VF		15,00	~	17,00	V
Thermal Resistance Junction To Board	$R\Theta_{J-B}$		--	12	~	°C/W
Temperature coefficient	$\Delta VF/\Delta T$		~	-2	~	mV/°C
Viewing Angle [1]	2 $\Theta$ 1/2		~	140	~	Deg
Reverse Current	IR	VR=50V	~	~	10	μA

Notes :

1. Luminous flux is measured with an accuracy of ±10%
2. CCT is measured with an accuracy of ± 100K
3. wavelength is measured with an accuracy of ±1nm
4. The forward voltage is measured with an accuracy of ±0.1V|

■ Absolute Maximum Rating;(At TA=25°C)

Parameter	Symbol	Ratings	Units
Power Dissipation	PD	29.81	W
Continuous Forward Current	IF	1800	mA
Peak Forward Current [2]	IF(Peak)	4500	mA
LED Junction Temperature	TJ	120	°C
Reverse Voltage	VR	50	V
Operating Temperature Range	TOPR	-35°C To +60°C	
Storage Temperature Range(	TSTG	-40°C To +100°C	
Manual Soldering Temperature	TSOL	350°C± 20°C For 3 Seconds	
ESD Sensitivity	ESD	3000V HBM	

■Notes

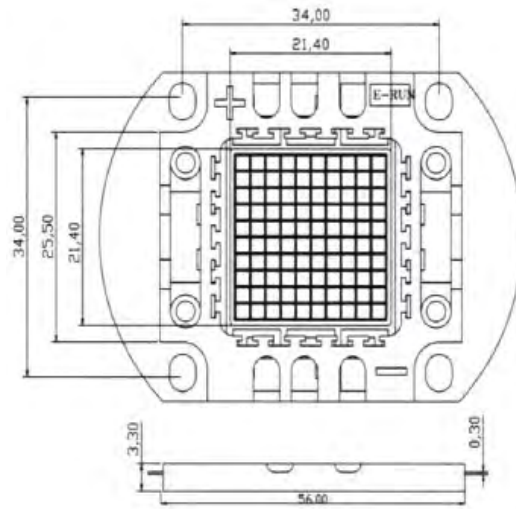
1. All dimensions are in millimeters.
2. Tolerance is ±0.25 unless otherwise noted

Notes:

- [1]. Tolerance  $\Theta$ :10%
- [2].1/10 Duty Cycle 0.1ms Pulse Width.

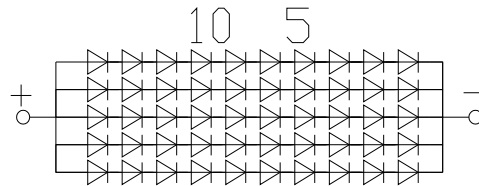
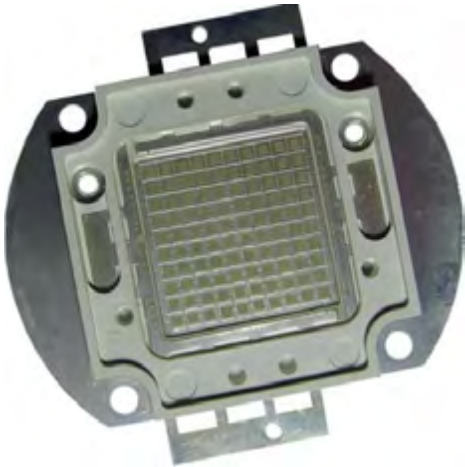
P100AIR50W IR(850nm)

■ Package Dimensions

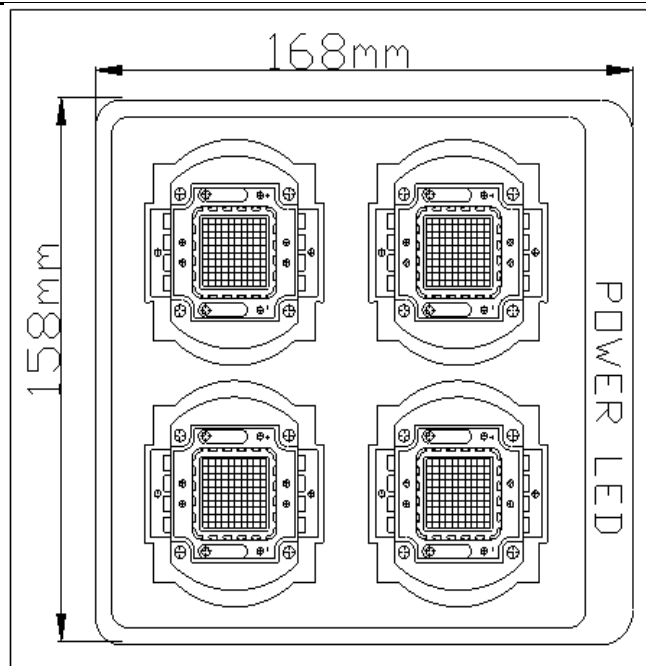


■ Product pictures

■ Current direction 10S5P



■ packing interior





P100AIR50W IR(850nm)

■ Photoelectric parameters;(At TA=25°C)

Parameter	Symbol	Conditions	Min.	Avg.	Max.	Units
Luminous Intensity	$\Phi$	IF=3000mA IF=1600mA	~	~	~	lm
Color rendering index	CRI		~	~	~	RA
Color Temperature	CCT		~	~	~	K
Spectral Line Half-Width	$\Delta\lambda$		~	850	~	nm
Forward Voltage	VF		15,00	~	17,00	V
Thermal Resistance Junction To Board	$R\Theta_{J-B}$		--	12	~	°C/W
Temperature coefficient	$\Delta VF/\Delta T$		~	-2	~	mV/°C
Viewing Angle [1]	2 $\Theta$ 1/2		~	140	~	Deg
Reverse Current	IR	VR=50V	~	~	10	$\mu$ A

Notes :

1. Luminous flux is measured with an accuracy of  $\pm 10\%$
2. CCT is measured with an accuracy of  $\pm 100K$
3. wavelength is measured with an accuracy of  $\pm 1nm$
4. The forward voltage is measured with an accuracy of  $\pm 0.1V$

■ Absolute Maximum Rating

Parameter	Symbol	Ratings	Units
Power Dissipation	PD	49.17	W
Continuous Forward Current	IF	3000-1600	mA
Peak Forward Current [2]	IF(Peak)	7500	mA
LED Junction Temperature	TJ	120	°C
Reverse Voltage	VR	50	V
Operating Temperature Range	TOPR	-35°C To +60°C	
Storage Temperature Range(	TSTG	-40°C To +100°C	
Manual Soldering Temperature	TSOL	350°C $\pm$ 20°C For 3 Seconds	
ESD Sensitivity	ESD	3000V HBM	

Notes:

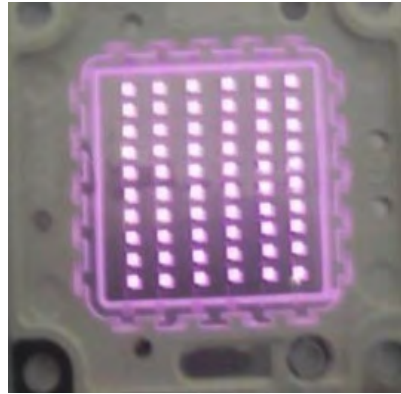
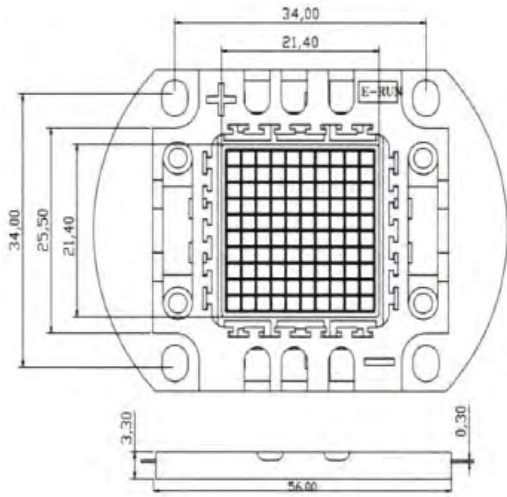
- [1]. Tolerance  $\Theta$ :10%
- [2].1/10 Duty Cycle 0.1ms Pulse Width.

■Notes

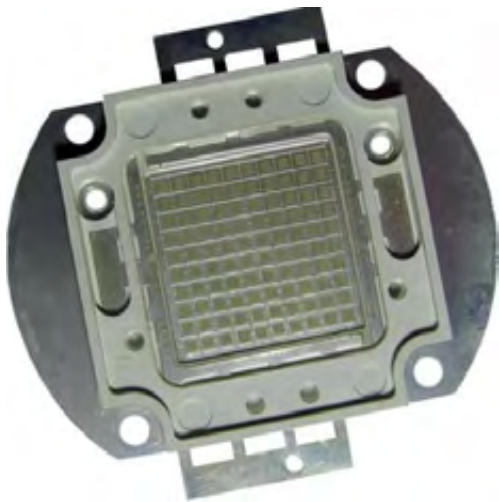
1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.25$  unless otherwise noted

IR4100B100  
100W(850nm)

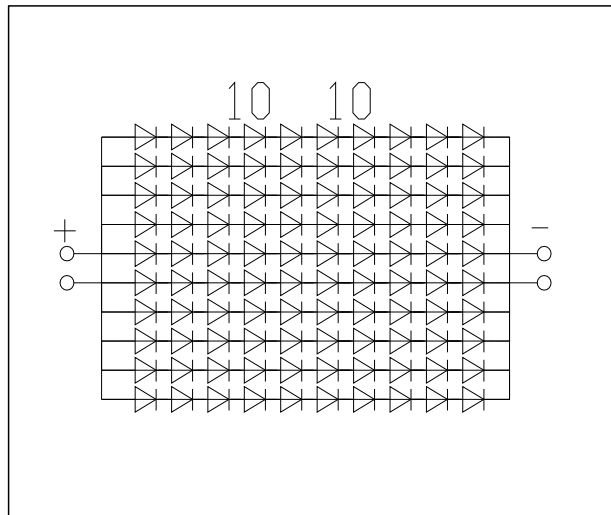
■ Package Dimensions



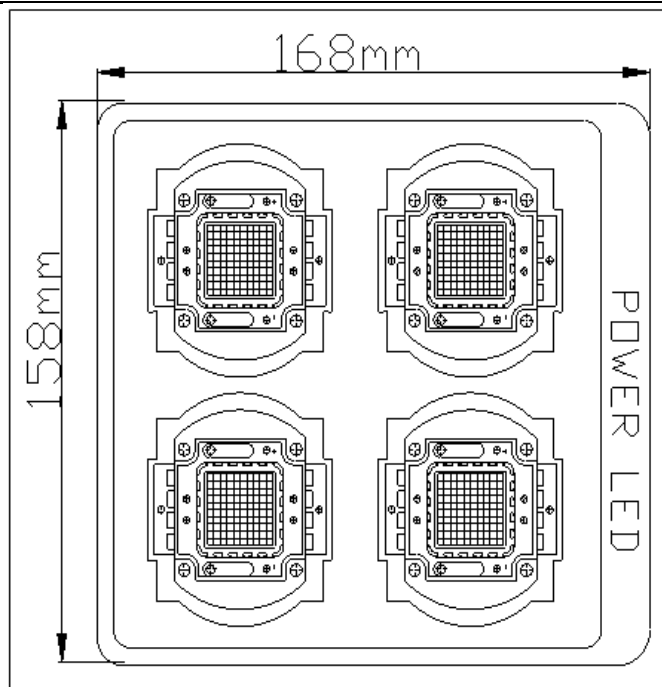
■ Product pictures



■ Current direction 10S10P



■ packing interior



IR4100B100  
100W(850nm)

■ Photoelectric parameters;(At TA=25°C)

Parameter	Symbol	Conditions	Min.	Avg.	Max.	Units
Luminous Intensity	Φ	IF=6000mA	~	~	~	lm
Color rendering index	CRI		~	~	~	RA
Color Temperature	CCT		~	~	~	K
Spectral Line Half-Width	Δλ		850	~	940	nm
Forward Voltage	VF		15,00	~	17,00	V
Thermal Resistance Junction To Board	RΘ <sub>J-B</sub>		--	12	~	°C/W
Temperature coefficient	ΔVF/ΔT		~	-2	~	mV/°C
Viewing Angle [1]	2Θ <sub>1/2</sub>		~	140	~	Deg
Reverse Current	IR		VR=50V	~	~	10

Notes :

1. Luminous flux is measured with an accuracy of ±10%
2. CCT is measured with an accuracy of ± 100K
3. wavelength is measured with an accuracy of ±1nm
4. The forward voltage is measured with an accuracy of ±0.1V|

■ Absolute Maximum Rating;(At TA=25°C)

Parameter	Symbol	Ratings	Units
Power Dissipation	PD	96.72	W
Continuous Forward Current	IF	6000	mA
Peak Forward Current [2]	IF(Peak)	15000	mA
LED Junction Temperature	TJ	120	°C
Reverse Voltage	VR	50	V
Operating Temperature Range	TOPR	-35°C To +60°C	
Storage Temperature Range(	TSTG	-40°C To +100°C	
Manual Soldering Temperature	TSOL	350°C± 20°C For 3 Seconds	
ESD Sensitivity	ESD	3000V HBM	

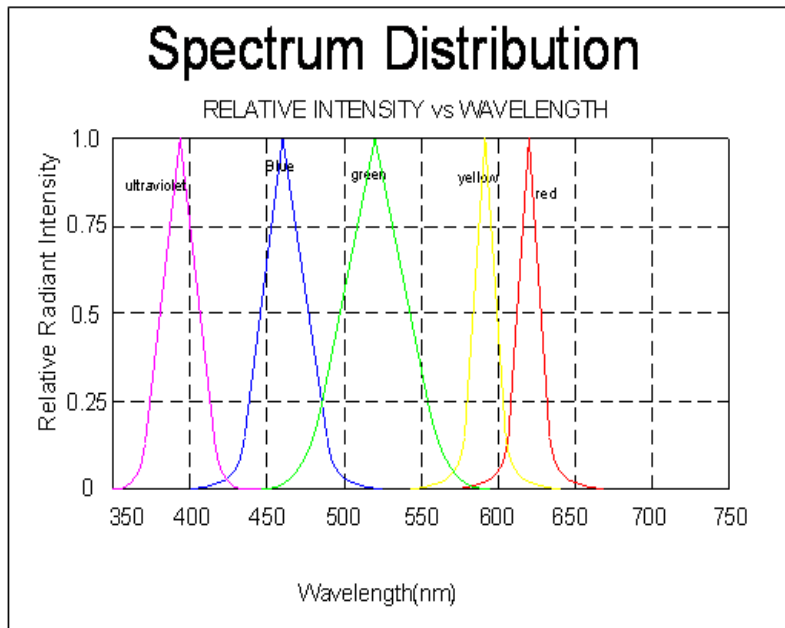
Notes:

- [1]. Tolerance Θ:10%
- [2].1/10 Duty Cycle 0.1ms Pulse Width.

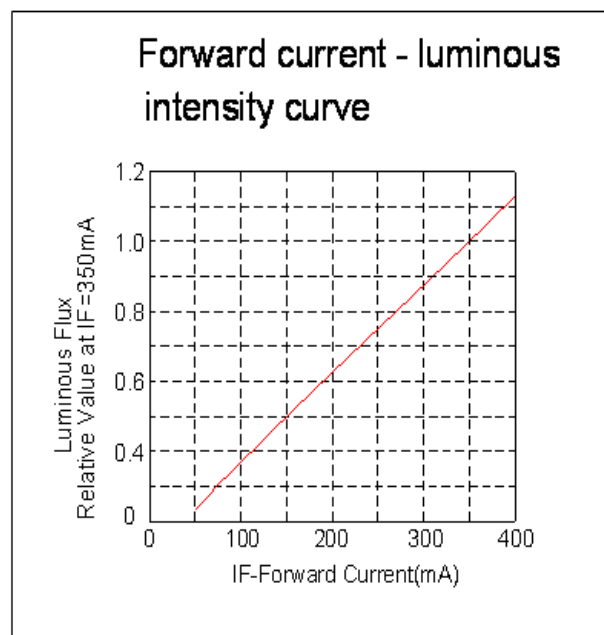
■Notes

1. All dimensions are in millimeters.
2. Tolerance is ±0.25 unless otherwise noted

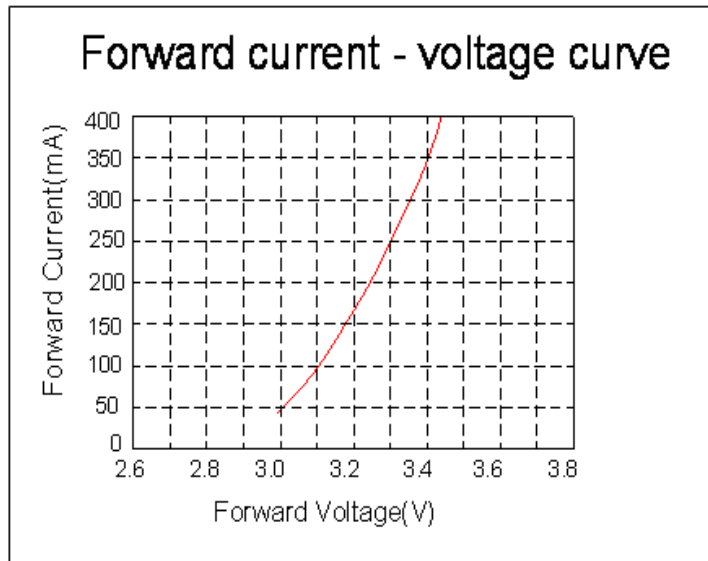
## ■ Spectrum Distribution



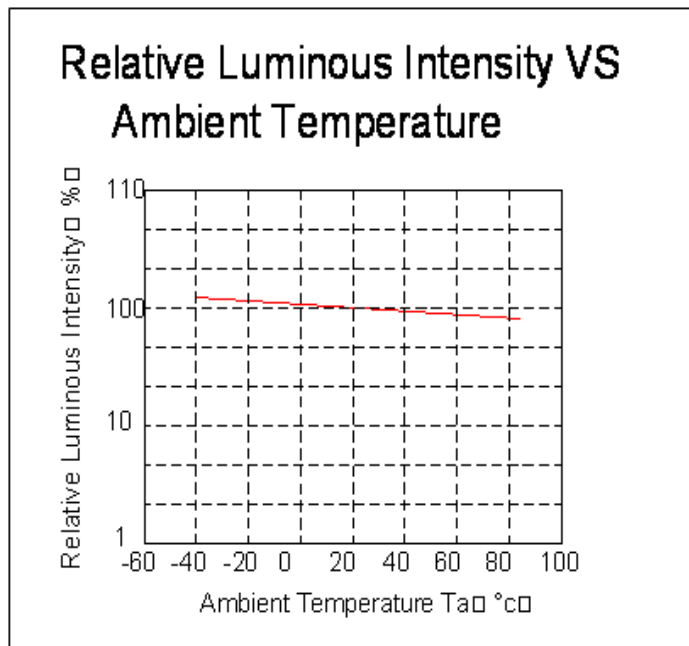
## ■ Forward current - luminous intensity curve



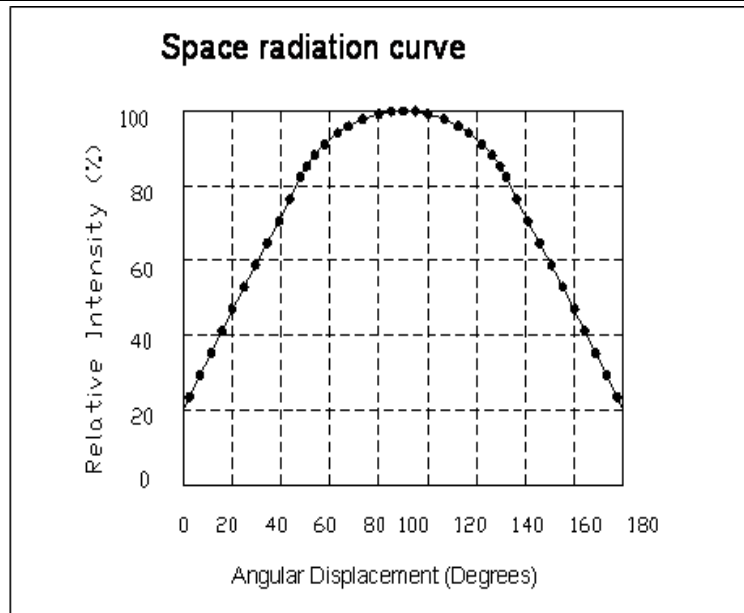
### ■ Forward current - voltage curve



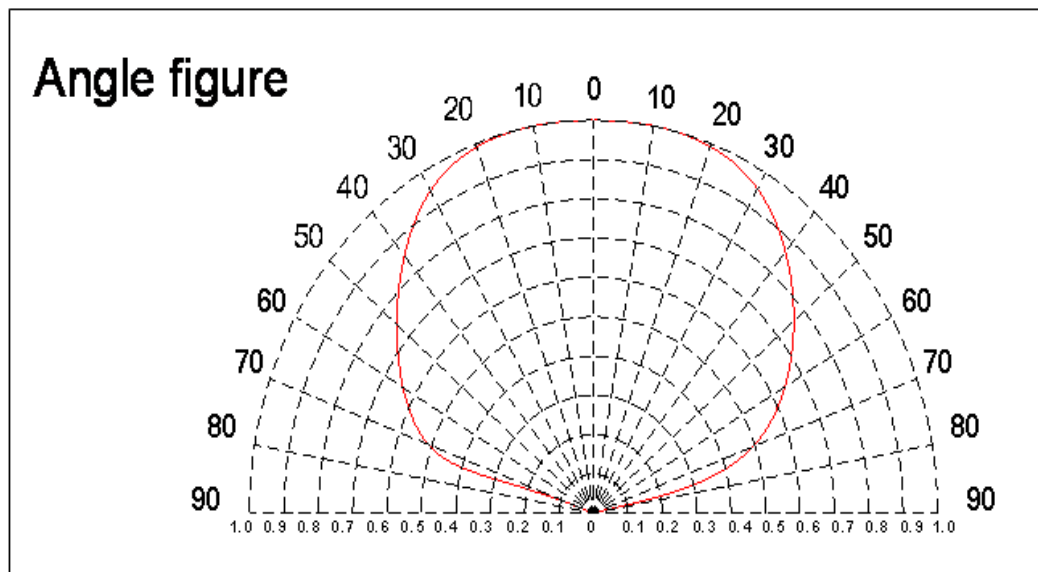
### ■ Luminous Intensity - Ambient Temperature curve



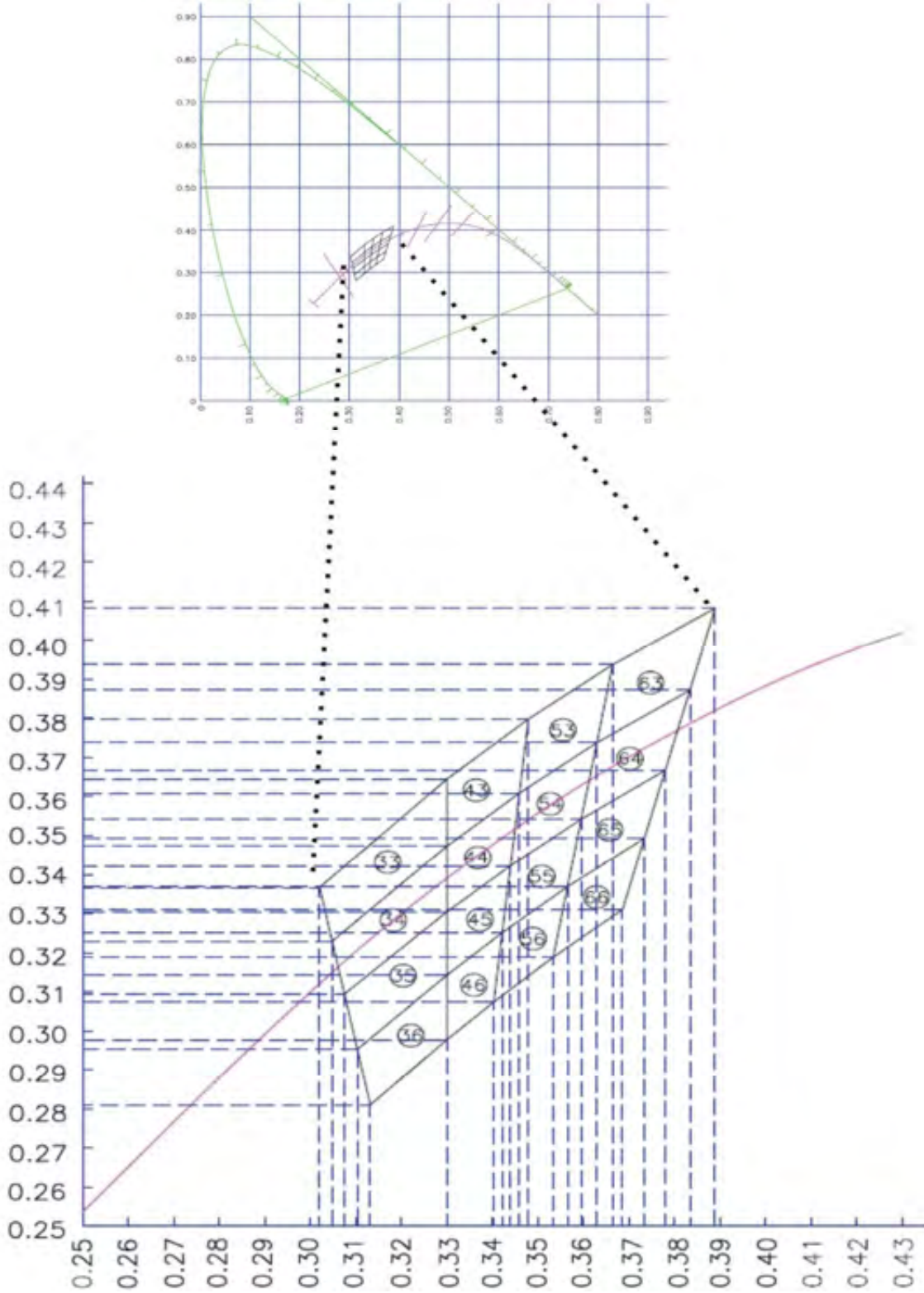
## ■ Space radiation curve



## ■ Angle figure



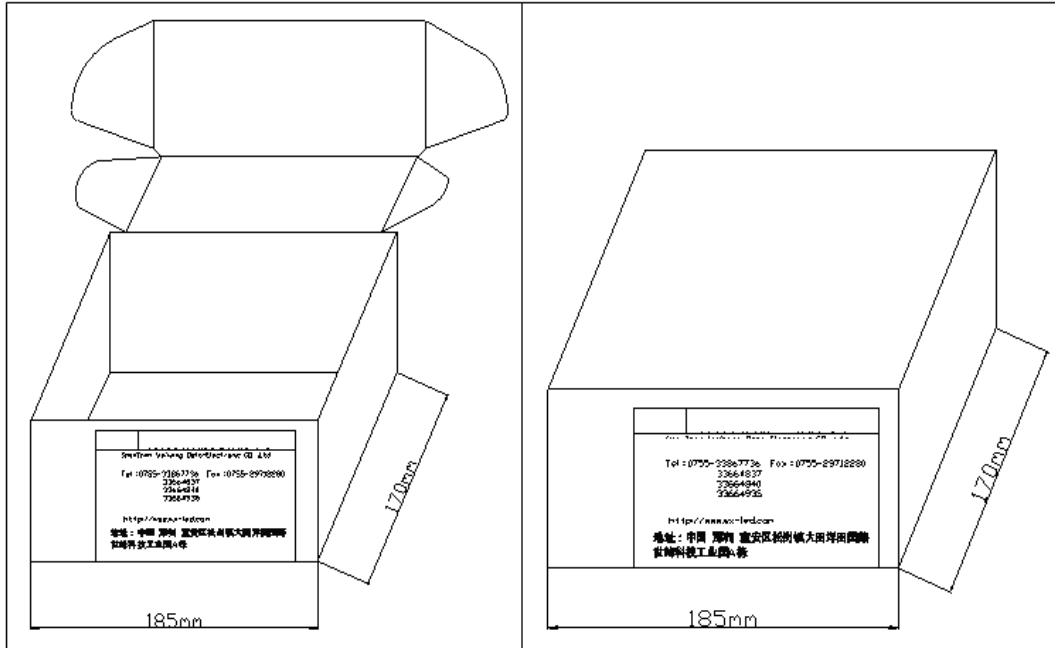
## ■ Chromaticity Coordinate



2500 3000 3500 4000 4500 5000 5500 6000 6500 7000 7500 8000 8500 9000 9500 10000 10500 11000 11500 12000

COLOR TEMPERATURE

## ■packing exterior



Reflow <input type="checkbox"/>		Manual welding <input checked="" type="checkbox"/>	
Preheat Each heating time Peak temperature Welding time conditions	Lead solder	Lead-free solder	Temperature Welding time
	120~150~ 120Sec Max	180~200~ 120 Sec Max	
240~ Max 10 Sec Max	260~ Max 10 Sec Max		

Recommend the use of environmentally friendly Lead-free Solder

Note: The light-emitting diode is a combination of blue light special phosphors to achieve the optical device, the LED current change may interfere with a light color, so due consideration should be used.

(1). Proof packaging: When the moisture absorbed into the SMT package, the evaporation and expansion of the role of welding. This may result in damage to the optical properties of the light-emitting diode.

For this reason, Moisture-proof packaging is used to suppress the external moisture.

(2) Storage Storage Conditions

Kaifeng before packaging: The light emitting diodes should be kept at 30 ° C or below and a relative humidity of 60% or less of state.

Light emitting diodes should be used within one year.

The absorbent material (silica gel) in compliance with the moisture-proof packaging.

After opening the packaging: The light emitting diodes should be kept at 30 ° C or below and a relative humidity of 50% or less of state.

The light-emitting diode welding after opening the moisture-proof packaging 168H (7 days) to complete.

If you have not finished using light-emitting diodes, are stored in a moisture-proof packaging, not used up is recommended in accordance with the recommendations of the proof packaging absorbent material (silica gel).

Light-emitting diode body, re-package in moisture-proof bags.

When the storage of light-emitting diode (LED) has more than a reasonable amount of storage time, the following criteria should be used to carry out the drying process.

Baking treatment: more than 48 hours at 60 ± 5 / 4H ~ 10H (in accordance with the different environmental humidity).

The heat generated by the (3).

Final thermal design applications is essential.

The heat generated in the system design consideration to the LED when the input electric power,

The increase of the temperature coefficient, thermal conduction circuit device settings and other components.

These are very necessary.

The decision of the operating current, the LEDs can withstand the maximum ambient temperature should also be guaranteed.

(4) Cleaning: Proposed the use of a low concentration of ethyl alcohol as the cleaning solvent of the LED when using other solvents, it should be confirmed beforehand, whether interested in the package structure and silica harm.

In accordance with the rules and regulations around the world, Freon solvent can not be used to clean the LED.

(5). Electrostatic: Static electricity or surge voltage can result in fatal injuries to the LED.

Wear an anti-static wrist strap or antistatic gloves recommended the use and handling of light emitting diodes.

All equipment and machinery must be properly grounded.

This measure applies to all equipment installed LED, fully taking into account the assembly of the final product.

In the assembling process of the LED, it is recommended to check whether there is the light-emitting diode device caused by electrostatic damage people can easily find electrostatic causing damage to the device.

(Recommended: at low <20mA) of the current environment damage the LED will display some unusual features, such as the increase in the value of the leakage current have to note that the forward voltage becomes lower, or LED die lights.(6) Other Must be noted that the use of LED-matrix drive, to ensure that the reverse voltage does not exceed the maximum ratings, LED light output is strong enough to make people's eye discomfort.

Precautions must be taken to protect no more than a few seconds to look directly into the LED.

The light-emitting diode specifications described in the book devices are used for ordinary electronic equipment (lights, tunnel lights, flashlight bulbs, miner, etc.)

Run at the maximum ambient temperature, consideration should be given to the appropriate operating current.

User may not reverse engineering of LED light-emitting diode, anatomy and analysis. Defect is found, you should inform the user.

The appearance and specifications of the products can be rehabilitated, without notice.