

20W AC Full Spectrum Flip Chip on Board COB

Specification

■Overview:

This series is a specially designed for led grow lights with high efficiency, High quality, high stability,for saving the costs, it connects with 110VAC or 220VAC directly,

■Product Features:



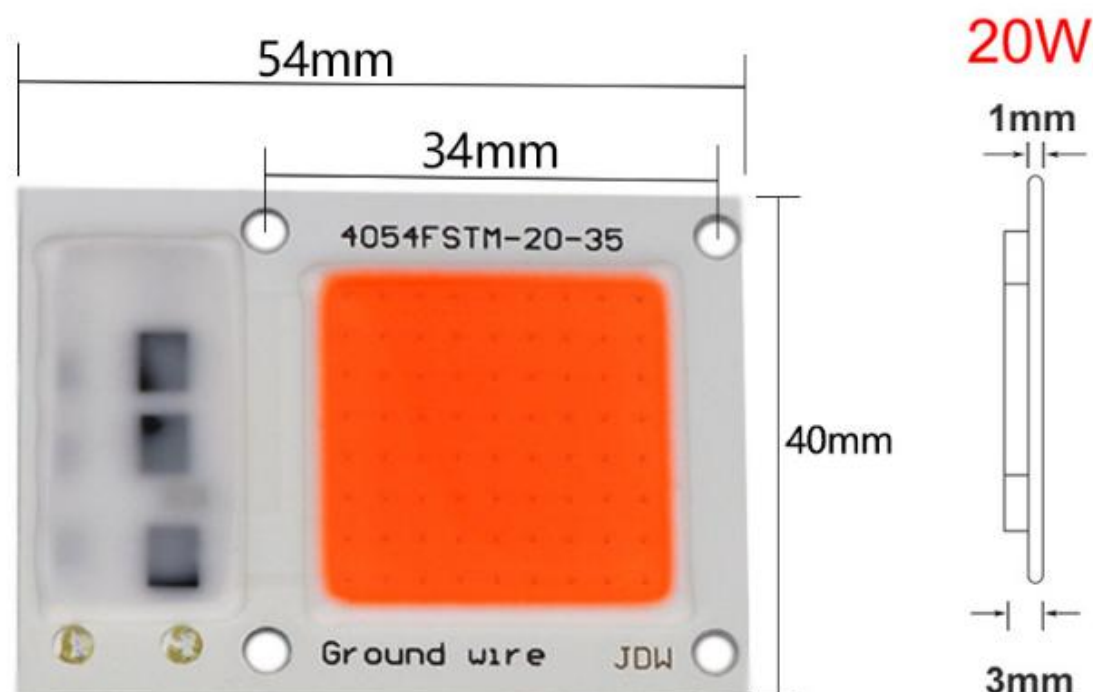
- 1.The color is full cover 380-840nm ,make up the 1w and 3w can not provide the special wavelength (as the Trace elements for human's body indispensable) .
- 2.Full spectrum led could use only,that solve the problem which is previously LED grow lights been unable to act as the sole light source for the indoor garden .
- 3.Suit for plant all stage ,so solve the trouble change different grow lamp at different plant stage .
- 4.The integrated light source ,more evenly ,more intense,more stronger than single light source.
- 5.Support AC190-240V 50/60Hz input directly.
- 6.High Curacy constant current output IC,and over-temperature protection,high efficiency,No EMI issue.
- 7.Simple circuit,Opto. electronics integrated design,save electrolytic capacitor and transformer etc,Power free model.
- 8.Easily assemble,cost-efficiency,OEM & ODM are available.

■Model No. Introduce:

<u>YLTAC-C-20W-(FS)</u> (1) (2) (3) (4)	(1) Company Short Name +Model Series Name (2) C-COB S-SMT (3) Power (4) FS- Full Spectrum Type. WW-Warm White 3000K NW-Neutural White 4500K CW-Cool White 6000K
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■Size(mm):

Note:All dimensions are in mm tolerance is ± 0.2 mm unless otherwise noted.



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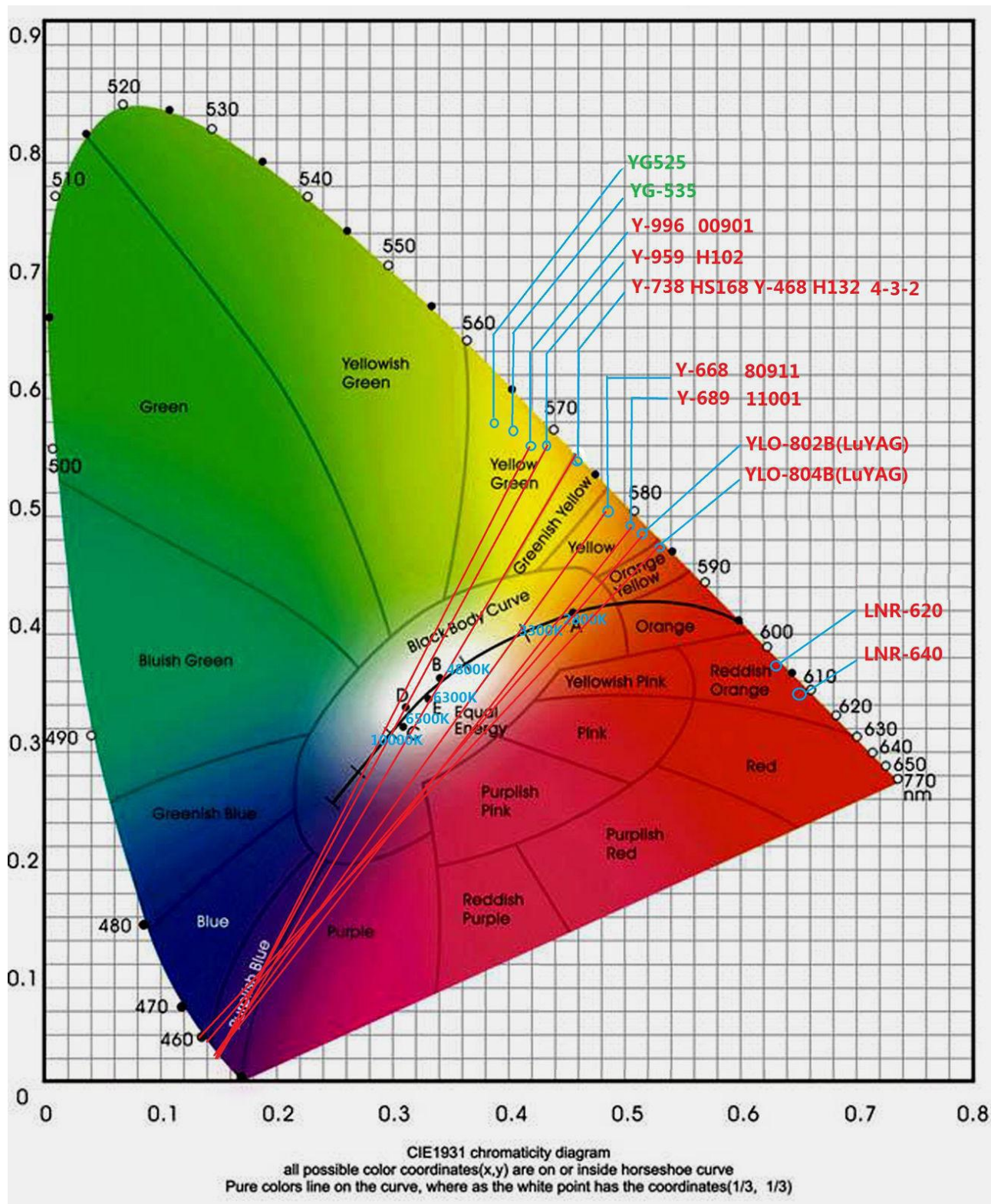
■Electrical/Optical Characteristics (At TA=25°C±5°C Vin=220VAC):

Parameter	Symbol	Conditions	Min.	Avg.	Max.	Units
Forward Voltage	VF	IF=150mA	190	220	240	VAC
CCT.	TC/WD	IF=150mA	380		840	nm
Luminous Efficacy	η	IF=150mA	--	--		LM
CRI	a	IF=150mA	68	70	72	%
Beam Angle	2Θ1/2	IF=150mA	--	120	--	Deg.

■Absolute Maximum Rating(At TA=25°C±5°C Vin=220VAC):

Parameter	Symbol	Ratings	Units
Continuous Forward Current	If	150	mA
Continuous Forward Voltage	Vf	190-240	VAC
Power Dissipation	Pd	20	W
Power Factor	PF	0.95	--
Efficiency	η	90	%
LED Junction	Tj	85	°C
Operating Temp. Range	Topr.	-30°C To +65°C	
Storage Temp. Range	Tstg.	-40°C To +70°C	
ESD Sensitivity	ESD	2000V HBM	

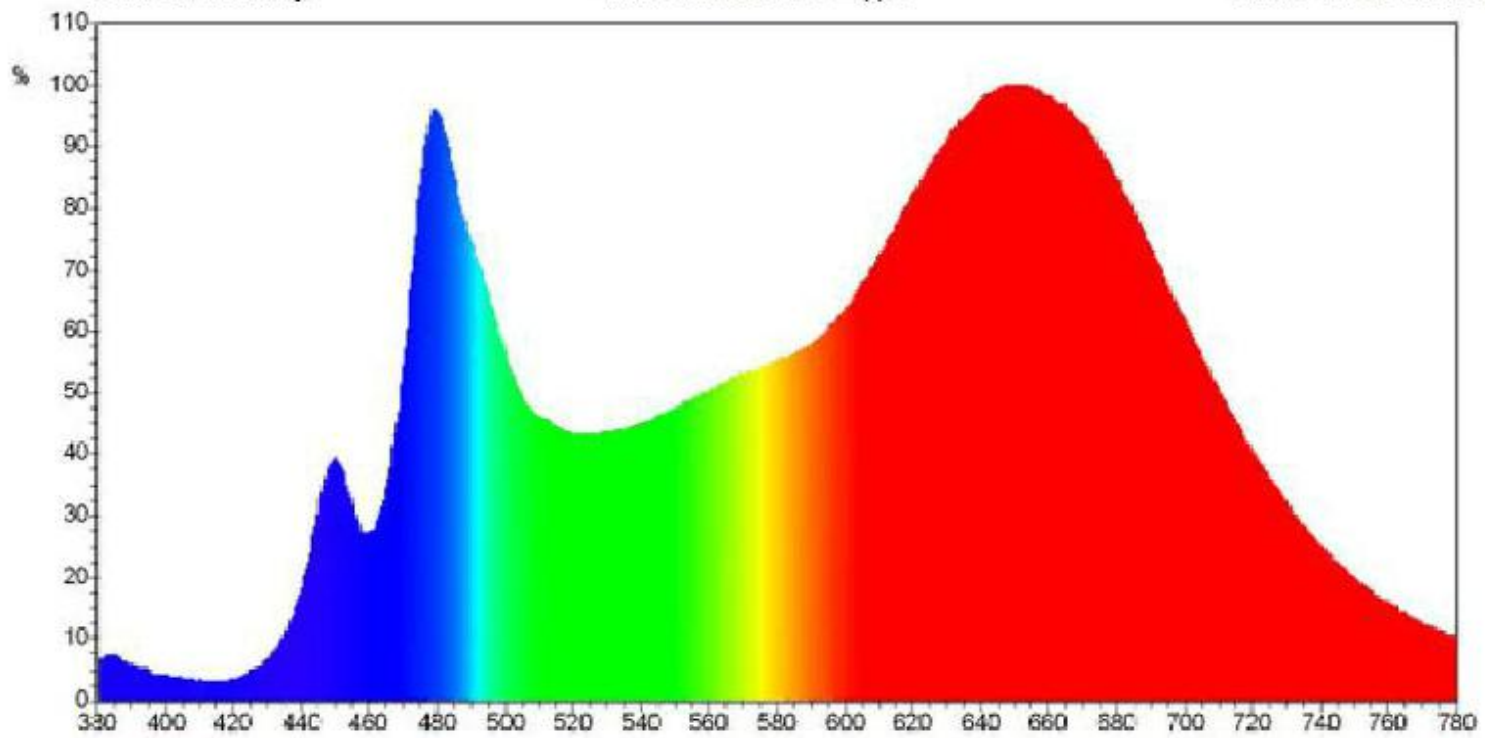
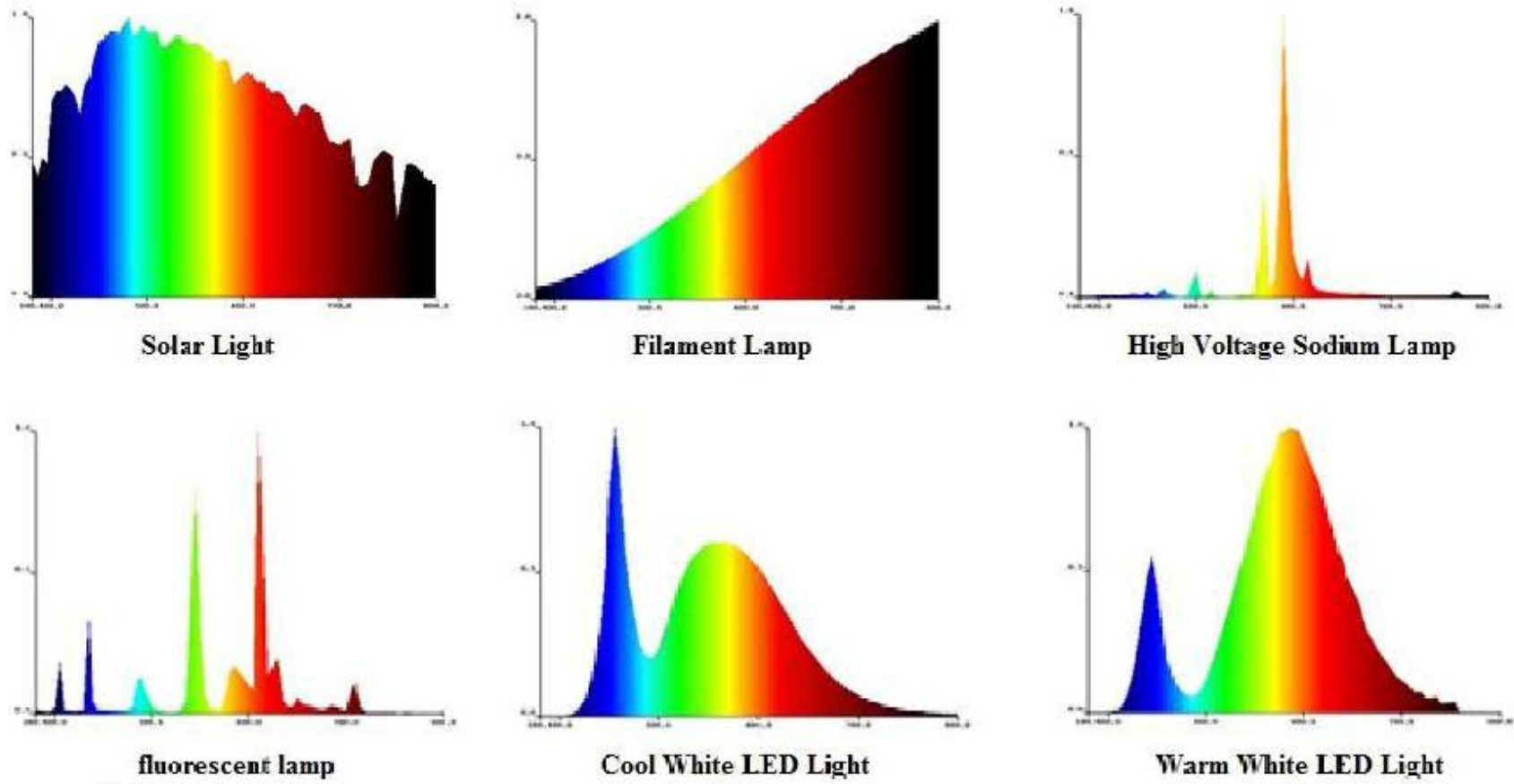
■Chromaticity Coordinate:



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■ Typical Optical/Electrical Characteristics Curves:

Spectrogram



Full Spectrum (380-840nm)

■ Reliability Analysis:

Test Items	Ref. Standard	Test Condition	Time	Quantity	Ac/Re
Re-flow Soldering	JESD22-B106	Temp.:260°C Max 10s	3 Times	10pcs	All
Temp, Cycle	JESD22-A104	-40°C— 110°C 30min ~ 30min The cut is not more than 1 min	100 Cycles	10pcs	All
High Temp. Storage	JESD22-A103	Temp.:100°C ±5°C	1000hrs	10pcs	All
Low Temp. Storage	JESD22-A119	Temp.: -40°C ±5°C	1000hrs	10pcs	All
Life Test	JESD22-A108	Ta=25°C ±5°C IF=200mA	1000hrs	10pcs	All
High Temp. High Humidity Life Test	JESD22-A101	85°C ±5°C/85%RH IF=200mA	1000hrs	10pcs	All
Criteria For Judging Damage:U.S.L.: Upper Standard Level L.S.L.:Lower Standard Level					
Test Items	Symbol	Test Condition	Criteria For Judgement		
			Min.	Typ.	Max.
Forward Voltage	VF	IF=200mA	/	/	U.S.L.*1.1
Reverse Current	IR	VR=220V	/	/	U.S.L.*2.0
Lumious Flux	lm	IF=200mA	L.S.L*0.7	/	/

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■Notes:

■Moisture Proof Packaging

1 LEDs need to package in moisture proof bag. When moisture is absorbed into the SMT package it may vaporize and expand during soldering. There is a possibility that this can cause exfoliation of the contacts and damage to the optical characteristics of the LEDs. For this reason, the moisture proof bag is used to keep moisture to a minimum in the bag.

2 Moisture proof function is inactive. The moisture proof bag is made of an aluminum moisture proof bag. A package of a moisture absorbent material (silica gel) is inserted into the aluminum moisture proof bag. The silica gel turns the smashing from the transparent circular spherical pellet.

■Storage Method

1 Before opening the bag: The LEDs should be used within a year and kept at 30°C or less and 70%RH or less. The moisture proof bag with absorbent material is needed when storing the LEDs.

2. After opening the bag: The LEDs should be soldered within 72 hours after opening the package. If unused LEDs remain, they should be stored in moisture proof bags with moisture absorbent material. If the LEDs have exceeded the storage time or the moisture absorbent material has faded away. Baking process should be performed by using more than 24hours baking at 60±5°C before using LEDs. It recommended that the user use the LEDs as soon as possible.

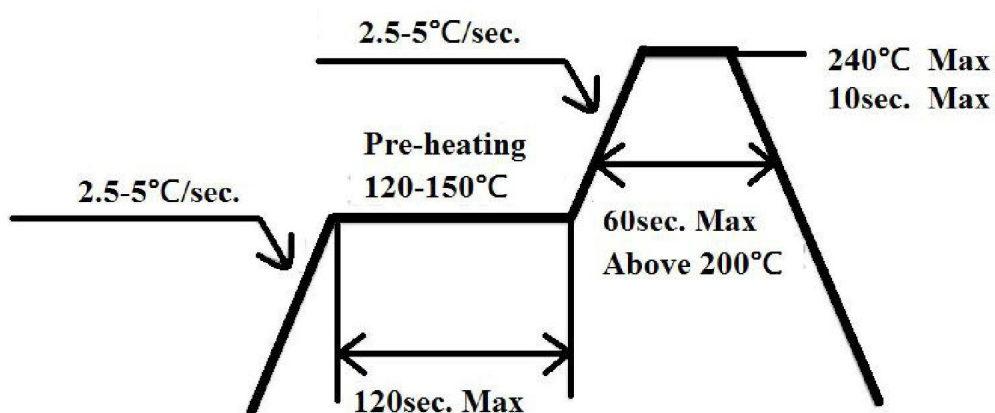
■Heat Generation

Thermal design of the end applications are of paramount importance. Please consider the heat generation of the LED when making the system design. It is necessary to avoid intense heat generation and operate within the maximum ratings given in this specification.

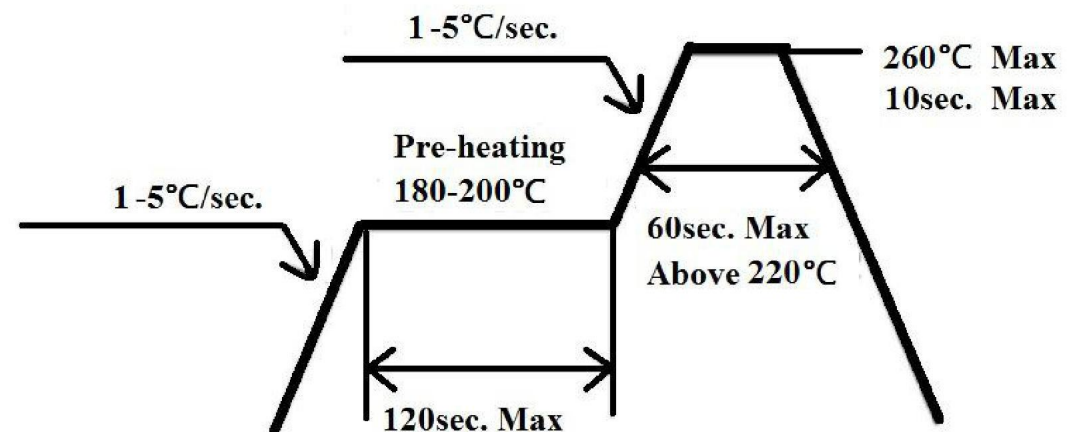
■Soldering

Reflow Soldering			Hand Soldering	
	Lead Solder	Lead-Free Solder	Temperature	300°C Max;
Pre-heat	120-150°C	180-200°C	Soldering Time	5 sec. max;
Pre-heat Time	120sec. Max	120sec. Max		
Peak Temperature	240°C Max	260°C Max		
Soldering Time	10sec. Max	10sec. Max		
Conditions	See Pictures Below	See Pictures Below		

Lead Solder



Lead – Free Solder



Hand Soldering (Not Recommended) :Soldering iron: 300°C max; 5 seconds max; one time only.

Cleaning

It is recommended that isopropyl alcohol be used as a solvent for cleaning the LEDs. It should be confirmed beforehand whether the solvents will dissolve the package the resin or not when using other solvents. Please do not clean the LEDs by the ultrasonic. If it is absolutely necessary, the influence of ultrasonic cleaning on the LEDs depends on ultrasonic power and the assembled condition. Before cleaning, a pre-test should be done to confirm whether any damage to the LEDs will occur.

Static Electricity

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs. All devices, equipment and machinery must be properly grounded. It is recommended that precautions be taken against surge voltage to the equipment that mounts the LEDs.

Others

The LED light output is strong enough to injure human eyes. Precautions must be taken to prevent looking directly at the LEDs with unaided eyes for more than a few seconds.