

**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES

## 2.Features

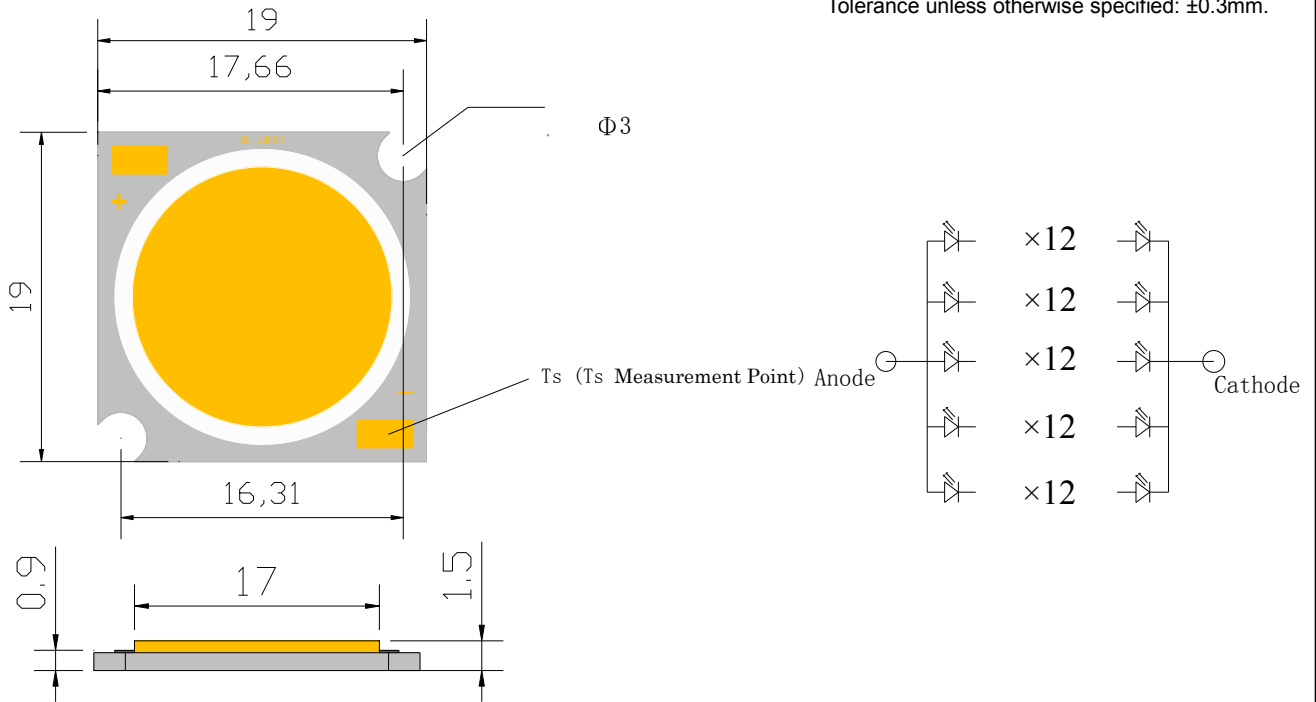
- Dimension 19mm×19mm×1.5mm
- CRI: Ra 80
- Wide viewing angle : 120°
- RoHS compliant
- sulphation corrosion resistance
- Manual Soldering

## 3.Applications

- Down light
- Track light

## 4.Package Dimensions

Tolerance unless otherwise specified:  $\pm 0.3\text{mm}$ .



## 5.Performance

### (1) Absolute Maximum Ratings

Parameter参数	Symbol	Rating Value	Units
Input power 输入功率	$P_i$	21.8	W
Maximum operating current 最大工作电流	$I_{F_{max}}$	600	mA
Junction Temperature结温	$T_j$	115	$^{\circ}\text{C}$
Operating Temperature Range工作温度	$T_{op}$	-20 $^{\circ}\text{C}$ To +85 $^{\circ}\text{C}$	
Storage Temperature Range储藏温度	$T_{stg}$	-40 $^{\circ}\text{C}$ To +100 $^{\circ}\text{C}$	
Lead Soldering Temperature*引线焊接温度	$T_{SOL}$	Max. 350 $^{\circ}\text{C}$ for 5sec Max.	

Notes for Table:

1.The temperature of Aluminum PCB do not exceed **85 $^{\circ}\text{C}$** . If the input power reach 80% max  $P_i$ , the temperature of Aluminum PCB should be control below **75 $^{\circ}\text{C}$**

2.When hand soldering, keep the temperature of iron below less **350 $^{\circ}\text{C}$ less than 5seconds**

3.D.C. Current :  $T_j = T_s + R_{j-c} \times P_i$

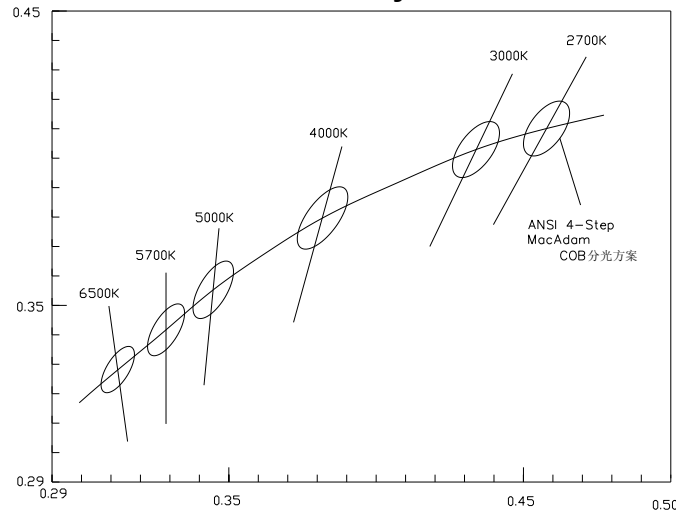
## (2) Electro-Optical Characteristics

at Tc=25°C

Parameter参数	Symbol	Condition	Min.	Typ.	Max.	LM/W (typ)	Unit
Forward Voltage 正向电压	VF	IF=500mA	34	37.5	40	—	V
Luminous Flux 光通量	Φv	TC=2700K	1610	1700	2040	95	Lm
		TC=3000K	1690	1780	2150	100	
		TC=4000K	1760	1850	2220	104	
		TC=5000K	1850	1950	2350	109	
		TC=5700K	1960	2050	2460	115	
		TC=6000±300K	1960	2050	2460	115	
		TC=6500K	1960	2050	2460	115	
CRI 显色指数	Ra	IF=500mA	80	—	—	—	—
Thermal Resistance 热阻	R (j-c)	IF=500mA	—	2.0	—	—	°C/W

## 6.Product bins

### Chromaticity bins



Center TC	2725K	3045K	3985K	5028K	5665K	6530K
X, Y	0. 4578, 0. 4101	0. 4338, 0. 403	0. 3818, 0. 3797	0. 3447, 0. 3553	0. 329, 0. 3417	0. 3123, 0. 3282

Notes for Table

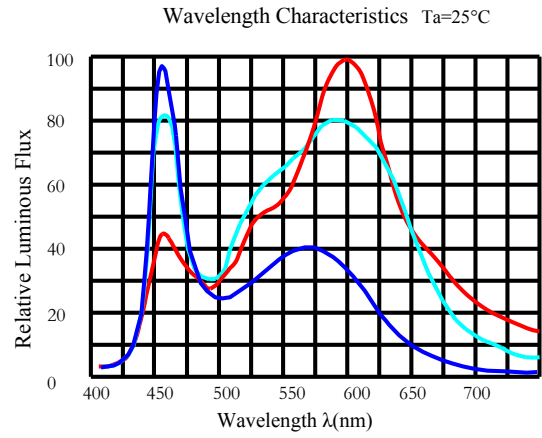
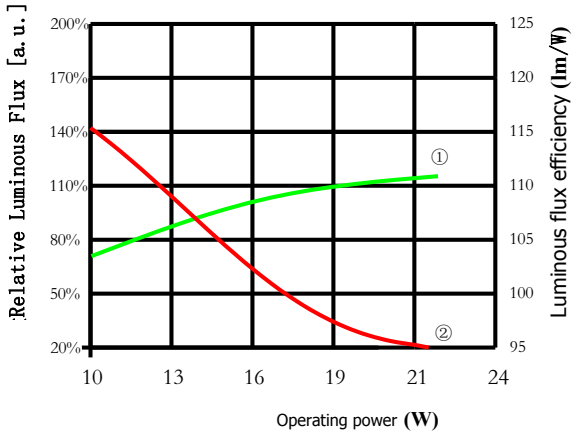
\*1.Color bins are defined at IF=500mA operation. If use different forward current, it may cause the change of chromaticity and forward voltage.

\*2.The instrument errors of different light source test standards : VF+/-3% , Φv+/-10% and Ra+/-2.

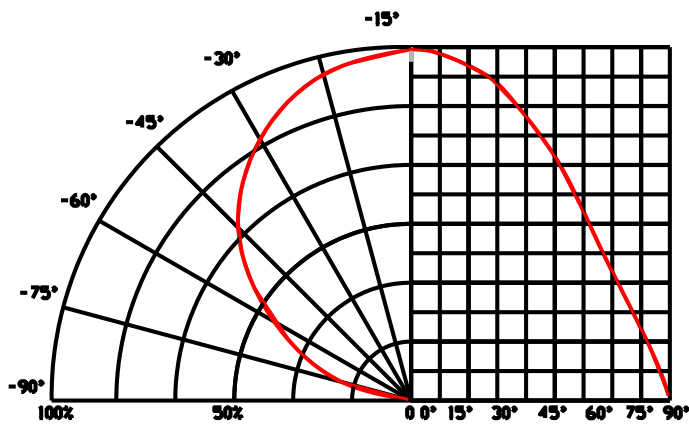
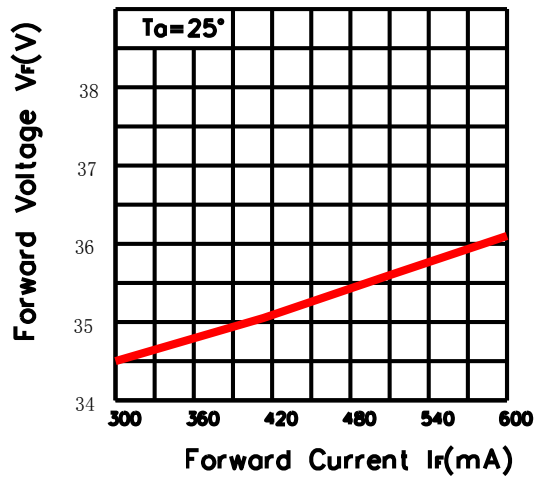
3.Tolerance of ±0.005 on x,y coordinates.

4.Color region stay within MacAdam "4-step" ellipse from the chromaticity center. but does not contain the color temperature 6000±300K. The chromaticity center refers to ANSI C78.377-2008.

# 7.Characteristics



— Cool White      — Neutral White      — Warm White



## 8.Packing Specifications

		<b>RoHS</b>
TYPE:		QTY:
VF:	IF:	$\phi$ V:
TC:	X/Y:	
SDCM<	Ra:	
DATE:	LOT.NO:	

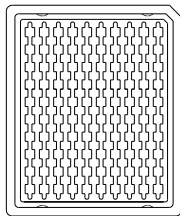
Label on ESD shielding

$\Phi$ V: Luminous Flux rank

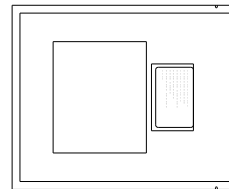
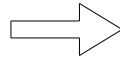
VF: Forward voltage rank

TC: Color temperature

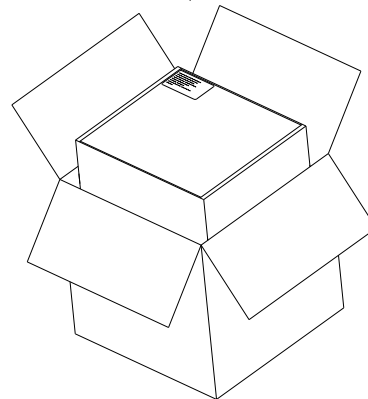
### ■ Packing figure



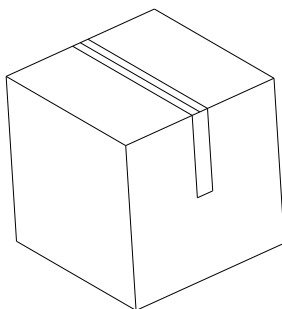
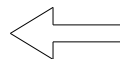
Tray: 45pcs



1Tray/ESD Shieding Bag: 270pcs



2ESD Shieding Bag/Inner Box: 540pcs



4Inner Box/Outer Box:2160pcs

## Precaution for use

### 1. Storage

To avoid moisture, we recommend storage conditions for the unopened LED +5 ~ +30 °C, relative humidity <60%. LED should be used within 168 Hrs. of opening the package. Please make sure to dehumidify and vacuum pack the remaining/ unused LED. Dehumidifying condition: +120 ° C ± 5 ° C, 04 Hrs. Effective age for the sealed led is one year.

### 2. The soldering precautions

Soldering conditions: Reflow soldering is not recommended for this LED. If hand soldering, set soldering iron temperature at 350°C and soldering time not More than 5 seconds, after the first soldering, make sure the substrate surface temperature returns to ambient temperature before a second soldering. Please make sure when soldering, there is no external force on the soldering surface (such as pressure, friction or sharp metal nails, etc.), to avoid gold wire deformation or damage and other abnormalities. If beyond recommended conditions, we cannot guarantee the LED stability, please do the risk assessment first.

### 3. Anti-Static Measures

Please take adequate measures to prevent electrostatic generation, such as wearing electrostatic ring or anti-static fingerstall etc; any relative products like plant equipment, machinery, carrier and transportation units shall be connected to discharging unit/ ground. The ESD sensitivity of this product is > 1000V, after assembly the final lamp, please make sure to discharge Static Electricity by proper ESD equipment.

#### 4. Temperature Control

Recommended temperature conditions for enhanced product life: TS (Cathode Point) is  $<85^{\circ}\text{C}$  and glue surface temperature  $<160^{\circ}\text{C}$ . During assembly, please ensure that a good quality thermal paste is applied and distributed evenly over the surface. While using thermal pad (Heat Sink), make sure LED is firmly tightened and there is no gap between surfaces. This product Heating conditions, tested at 500V with medium surface contact.

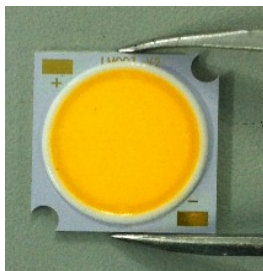
#### 5. The drive control

Drive this product at constant current. Output current range specifications should be according to the operational and other conditions, as mentioned in data sheet. Before using a constant voltage source or altered specifications other than recommended, please consider risk factors.

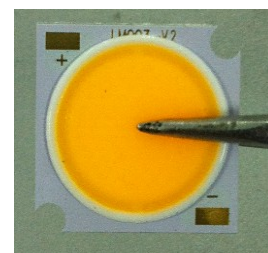
#### 6. Other;

Product is not suitable to use in following conditions

- Direct or indirect wet / damp conditions, such as rain, etc.;
- In contact with sea water and erosive materials
- Exposed to corrosive gases (e.g.,  $\text{Cl}_2$ ,  $\text{H}_2\text{S}$ ,  $\text{NH}_3$ ,  $\text{SO}_x$ ,  $\text{NO}_x$ , etc.);
- Exposed to dust, liquids or oils;



**OK**



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