HONGLITRONIC
鸿利光电

High Power COB LED
LT005F22W-100B10C10

Under Development	●
Mass production	

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

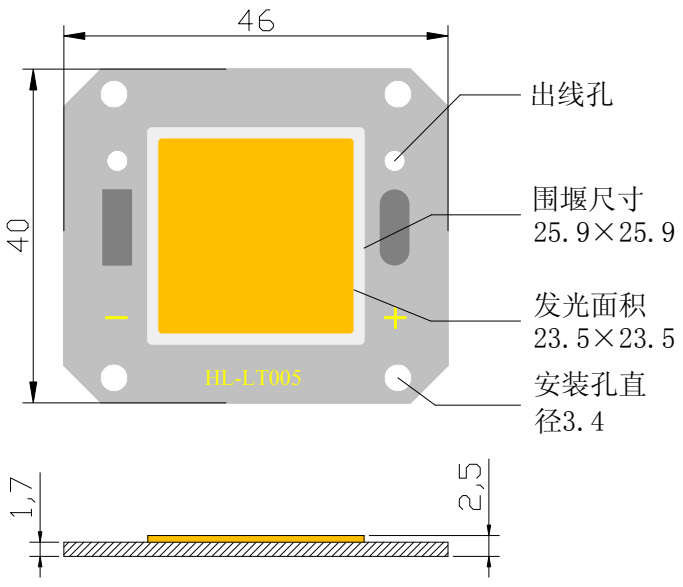
Features

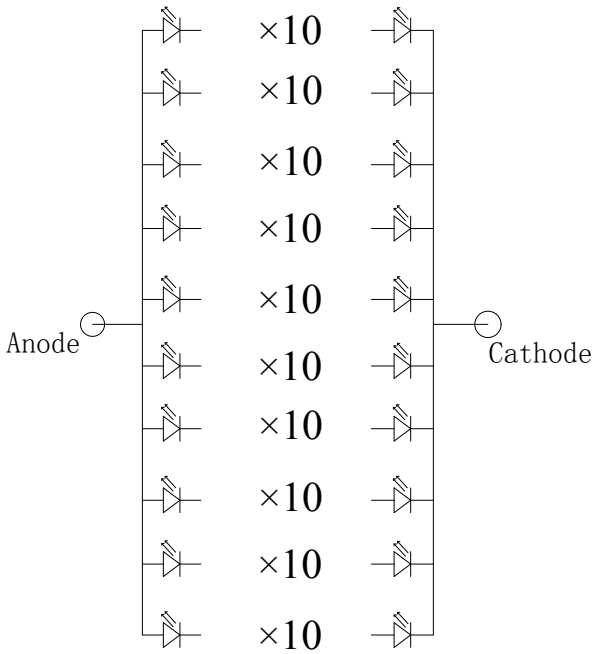
- Long operating life
- Higher flux
- Available in White:2870-3220K
- More energy efficient than incandescent and most halogen lamps
- Cool beam, safe to the touch
- Instant light (less than 100ns)
- Fully dimmable
- No UV
- Superior ESD protection
- RoHS compliant

Applications

- Street lights
- Floodlight
- Mining lamp
- Tunnel Light

Package Dimensions





Device Selection Guide

Part No.	Chip		Lens Type	
	Material	Emitting Color		
HL-LT005F22W-100B10C10	InGaN	Blue	Cool White	Yellow Diffused

Electrical / Optical Characteristics @T_a=25℃

Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Color Temperature[2]	TC	6020		7040	K	IF=3.5A
Color-rendering index[2]	Ra	—	70	—	—	IF=3.5A
Forward Voltage [2]	VF	—	30	34	V	IF=3.5A
thermal resistance	Rth	—	0.3	—	°C/W	IF=3.5A
Luminous Flux[2]	Φ_V	11000	11400	—	lm	IF=3.5A
Power dissipation[1]	Pd	—	105	—	W	IF=3.5A

Note:

1.All high power LED products mounted on copper substrate can be lighted directly, but we do not recommend lighting the high power products for more than 5 seconds without a appropriate heat dissipation equipment.

2.The tolerance of measurement at our tester is TC+/-5% V_F+/-3% , Φv+/-10% and Ra+/-1.

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Rating	Units
Input Power[2]	Pi	150	W
Peak Forward Current [1]	I_{FP}	5	A
Operating Temperature Range	Topr	-20°C To +75°C	
Storage Temperature Range	Tstg	-40°C To +100°C	
Junction Temperature	Tj	120°C	

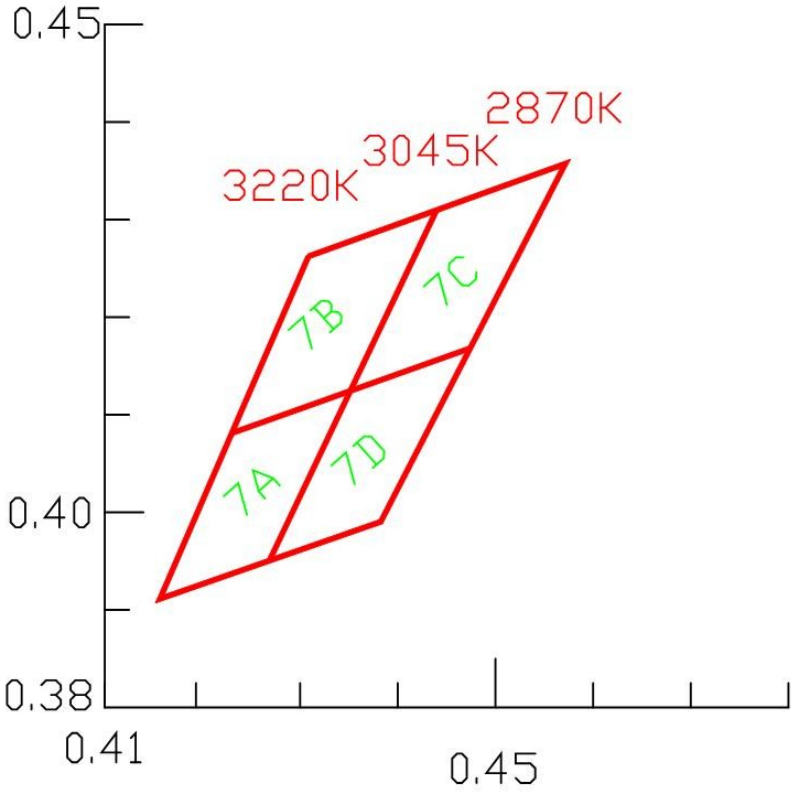
Note:

1.Honglitronic recommends a maximum duty cycle of 10% when operating LED Arrays at the maximum peak pulsed current specified.

2.The temperature of copper substrate do not exceed 55℃.

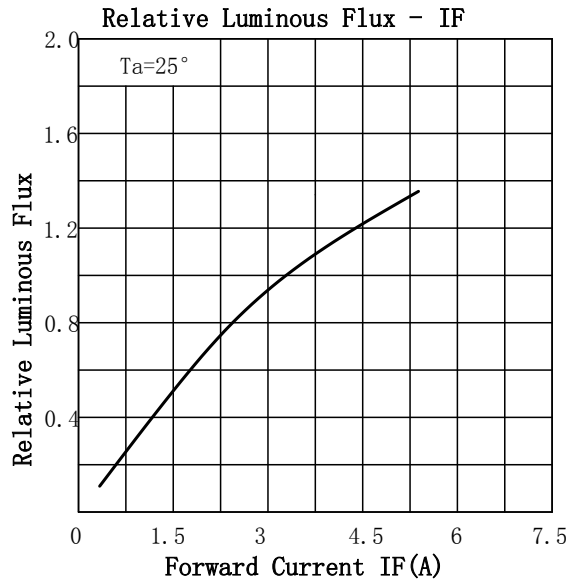
Product bins

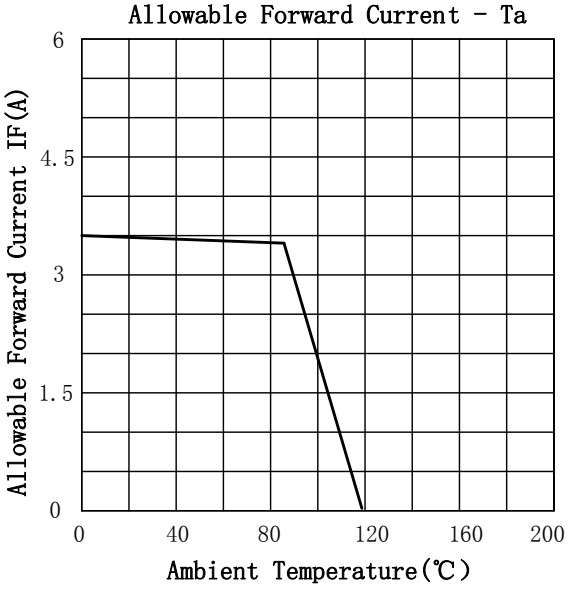
Chromaticity bins

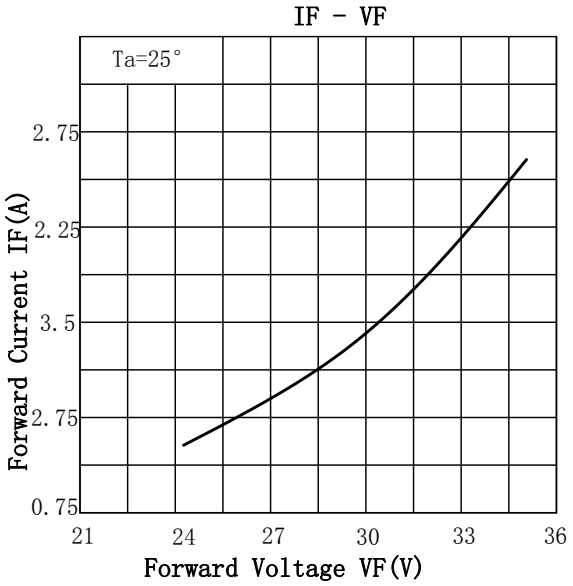


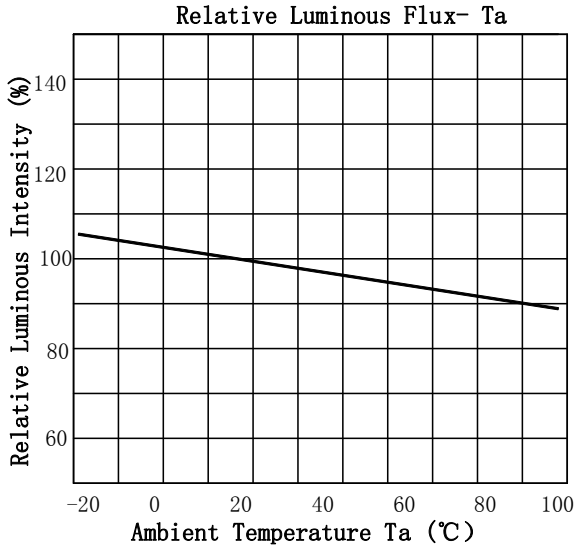
bin code	CIEX	CIEY
7A	0.4147	0.3814
	0.4221	0.3984
	0.4342	0.4028
	0.4259	0.3853
7B	0.4221	0.3984
	0.4299	0.4165
	0.4430	0.4212
	0.4342	0.4028
7C	0.4342	0.4028
	0.4430	0.4212
	0.4562	0.4260
	0.4465	0.4071
7D	0.4259	0.3853
	0.4342	0.4028
	0.4465	0.4071
	0.4373	0.3893

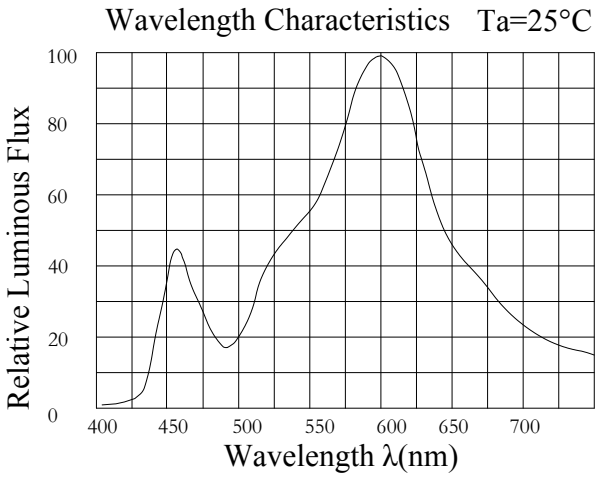
Typical Optical/Electrical Characteristics Curves (T_a=25℃ Unless Otherwise Noted)

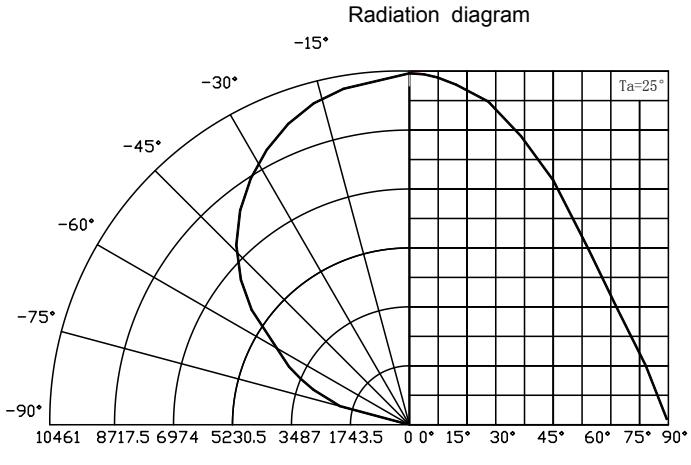












Packing Specifications

(1) Packing

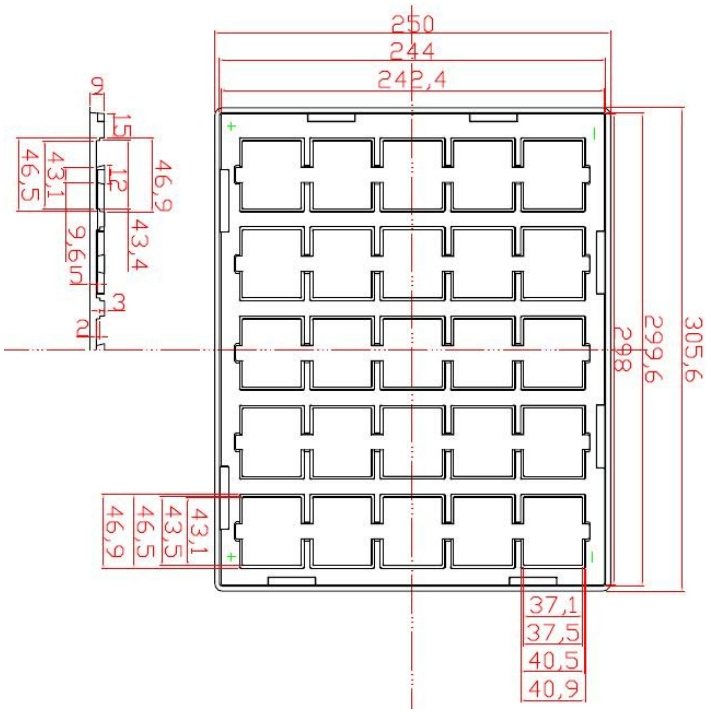
A cover is placed on top of a five-tier tray which contain 25 pieces each. The set of six trays is banded together with a moisture-proof aluminum foil bags .

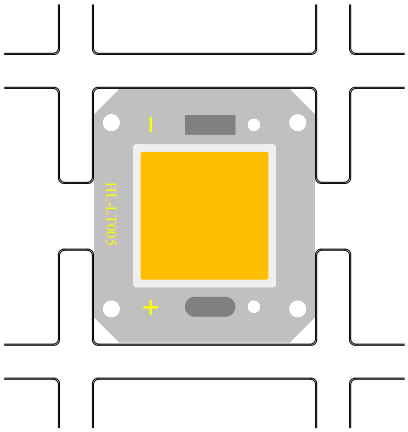
(Smallest packing unit: 125pieces)

A label with product name, quantity, lot number is placed on the upper moisture-proof aluminum foil bags .

Tray (Dimensions: 305.6 × 250 × 10 mm / Materials: Electrically conductive PS)

< Packing figure >





< Example of indication label >

1.TYPE

2.QTY

3.Bin:Chromaticity bins

4.Φv:Luminous Flux

5.Tc :Color temperature

6.Vf:Forward Voltage

Precaution for use

1、Hand Soldering

Be careful because the damage of the product is often started at the time of the hand soldering.

Stress on the LEDs should be avoided during heating in soldering process.

After soldering, do not deal with the product before its temperature drop down to room temperature.

This product is not adaptable reflow process.

2、Cleaning

It is recommended that alcohol be used as a solvent for cleaning after soldering. Cleaning is to go under 30℃ for 3 minutes or 50℃ for 30 seconds. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the package and the silicone or not.

Ultrasonic cleaning is also an effective way for cleaning. But the influence of Ultrasonic cleaning on LED depends on factors such as ultrasonic power. Generally, the ultrasonic power should not be higher than 300W. Before cleaning, a pre-test should be done to confirm whether any damage to LEDs will occur.

3、Static Electricity

Static electricity or surge voltage damages the LEDs. Damaged LEDs will show some unusual characteristics such as the forward voltage becomes lower, or the LEDs do not light at the low current., even not light.

All devices, equipment and machinery must be properly grouded. At the same time, it is recommended that wrist bands or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs.

4、Design Consideration

In designing a circuit, the current through each LED must not exceed the absolute maximum rating specified for each LED. In the meanwhile, resistors for protection should be applied, otherwise slight voltage shift will cause big current change, burn out may happen.

Thermal Design is paramount importance because heat generation may result in the Characteristics decline, such as brightness decreased, Color changed and so on. Please consider the heat generation of the LEDs when making the system design.

In the use of screws, you need to pay attention to LED damaged, need to be careful;installation, you can use clip-type to install, to avoid damage!

Precaution for use (continued)

1.Storage

To avoid the moisture penetration ,we recommend storing LEDs in a dry box (or a desiccator) with a desiccant. The recommended conditions are temperature 5 to 30 degrees Centigrade. Humidity 60% maximum.

2.Precaution after opening packing

2.1.Soldering should be done right after opening the package (within 24Hrs).

2.2.Keeping of a fraction.

-Sealing

-Temperature: 5~30℃ Humidity: less than 30%

2.3.If the package has been opened than 1 week or the color of desiccant changed, components should be dried for 10-12 Hrs at 60±5℃.

3.Any mechanical force or any excess vibration shall not be accepted to apply during cooling process to normal temperature after soldering.

4.Please avoid rapid cooling after soldering.

5.Components should not be mounted on warped direction of PCB.

6.This device should not be used in any fluid such as water, oil ,organic solvent etc. When washing is required, Isopropyl Alcohol should be used.

7.When the LEDs are illuminating, operating current should be decided after considering the package maximum temperature.

8.Avoid touching Lens parts especially by sharp tools such as pincette.

9.Please do not force over 1000g impact or pressure diagonally on the silicone lens. It will cause fatal damage on this product.

10.Please do not cover the silicone resin of the LEDs with other resin.

11.Do not use metal suction nozzle, rubber or silica gel suction nozzle is recommended.

12.Recommend that the area of the heat sink is larger than 50cm^2/W (with thickness about 2 mm).

13.Viewing direct to the light emitting center of the LEDs, especially those of great Luminous Intensity, will cause great hazard to human eyes. Please be careful.