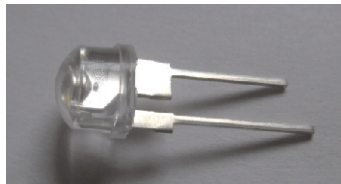


SPECIFICATIONS FOR HANGKE **WHITE LED**

杭科 Φ 8草帽白色LED产品规格书



Model: HK8H4UWCT/8H4ULCT



HangZhou HangKe Optoelectronics Co.,LTD.

[Http://www.hkled.com](http://www.hkled.com) 杭科光电



1. SPECIFICATIONS

(1) Absolute Maximum Ratings

(Ta=25°C)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	IF	120	mA
Pulse Forward Current	IFP	480	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	420	mW
Operating Temperature	Topr	-25 ~ + 85	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	Tsld	260°C for 2sec.	

IFP Conditions : Pulse Width 10msec. and Duty 0.1

(2) Initial Electrical/Optical Characteristics

(Ta=25°C)

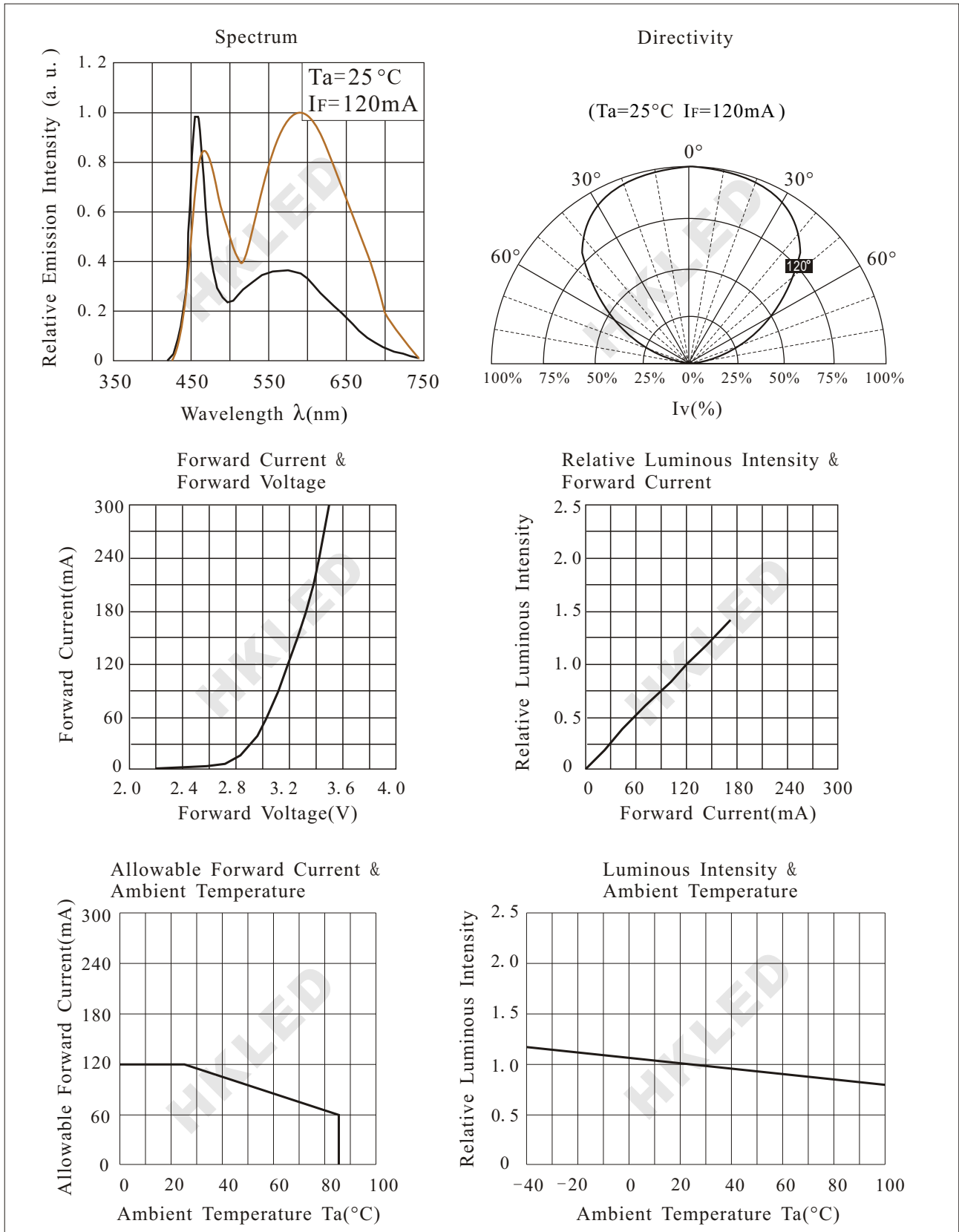
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	VF	IF=120[mA]	3.0	3.2	3.5	V
Reverse Current	IR	VR= 5[V]	—	—	10	μA
Luminous Flux	Φ _v	IF=120[mA]	25.0	30.0	32.0	lm
Viewing Angle	2θ ^{1/2}	IF=120[mA]	—	120	—	Deg.
CRI	Ra	IF=120[mA]	—	75	—	—

(Ta=25°C IFP=120mA)

Correlated Color Temperature (K)						
Rank	G	F	E	D	B	A
Correlated Color Temperature (K)	3000	4500	5500	6500	8000	12000



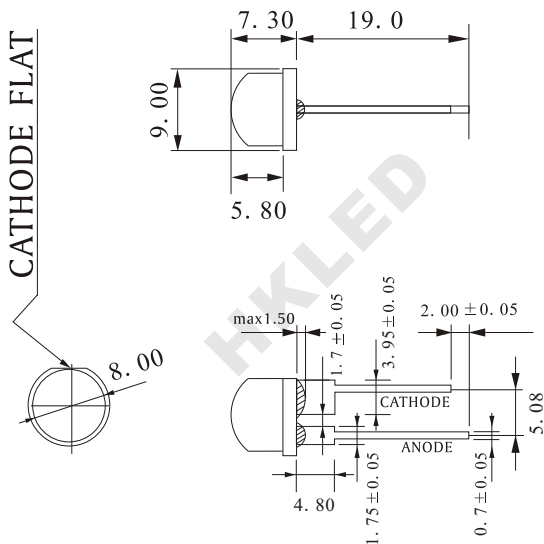
2. TYPICAL INITIAL OPTICAL/ELECTRICAL CHARACTERISTICS





3. OUTLINE DIMENSIONS AND MATERIALS

Package Dimensions



Notes:

1. All dimensions are in millimeters.
2. Tolerance is ± 0.25 mm unless otherwise noted.
3. Protruded resin under flange is 1.0mm max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.

- ◆ Lens Color : Water Clear
- ◆ Emitting Color : Super Bright White
- ◆ Chip material : InGaN
- ◆ Resin(Mold) : Epoxy Resin
- ◆ Leadframe : Ag plating Iron



CAUTIONS

(1) Lead Forming

- * When forming leads, the leads should be bent at a point at least 2.0mm from the base of the epoxy bulb. Do not use the base of the leadframe as a fulcrum during lead forming.
- * When forming leads, hold the leadframes tightly not to give stress to the inside of the resin and the leadframe before soldering.
- * Do not apply any bending stress to the base of the lead. The stress to the base may damage the LED's characteristics or it may break the LEDs.
- * When mounting the LEDs onto a printed circuit board, the holes on the circuit board should be exactly aligned with the leads of the LEDs. If the LEDs are mounted with stress at the leads, it causes deterioration of the epoxy resin and this will degrade the LEDs.

(2) Storage

- * The LEDs should be stored at 30°C or less and 70%RH or the storage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with moisture absorbent material.
- * HangKe LED leadframes are comprised of a silver plated Iron. The silver surface may be affected by environments which contain corrosive gases and so on. Please avoid conditions which may cause the LED to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the LEDs be used as soon as possible.
- * Please avoid rapid transitions in ambient temperature, especially, in high humidity environments.

(3) Static Electricity

- * Static electricity or surge voltage damages the LEDs. 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 measures be taken against surge voltage to the equipment that mounts the LEDs.
- * When inspecting the final products in which LEDs were assembled, it is recommended to check whether the assembled LEDs are damaged by static electricity or not. It is easy to find static-damaged LEDs by a light-on test or a VF test at a lower current (below 1mA is recommended).
- * Damaged LEDs will show some unusual characteristics such as the leak current remarkably increases, the forward voltage becomes lower, or the LEDs do not light at the low current.

(4) Soldering Conditions

- * Solder the LED no closer than 2.0mm from the base of the epoxy bulb.
- * Recommended soldering conditions

Dip Soldering
Temperature: 260°C Max.
Dipping Time: 2 seconds Max.
Dipping Position: No lower than 2.0mm from
the base of the epoxy bulb.

Soldering
Temperature: 350°C Max.
Soldering Time: 2 seconds Max.
Position: No closer than 1.6 mm from
the base of the epoxy bulb.

- * Recommended through-hole diameter is 1.1mm.
- * Do not apply any stress to the lead particularly when heated.
- * The LEDs must not be repositioned after soldering.
- * After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- * It is possible to solder LEDs directly to the PC board. Take enough care not to damage the resin because of the stress of the bowed PC board.
- * When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- * Cut the LED leadframes at room temperature. Cutting the leadframes at high temperatures may cause failure of the LEDs.

(5) Cleaning

- * It is recommended that isopropyl alcohol be used as a solvent for cleaning the LEDs. When using other solvents, it should be confirmed beforehand whether the solvents will dissolve the resin or not. Freon solvents should not be used to clean the LEDs because of worldwide regulations.
- * Do not clean the LEDs by the ultrasonic. When it is absolutely necessary, the influence of ultrasonic cleaning on the LEDs depends on factors such as ultrasonic power and the assembled condition. Before cleaning, a pre-test should be done to confirm whether any damage to the LEDs will occur.