

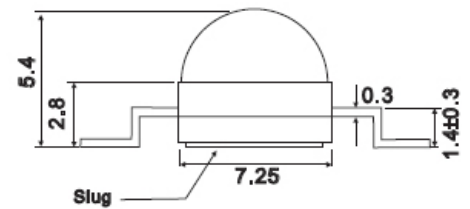
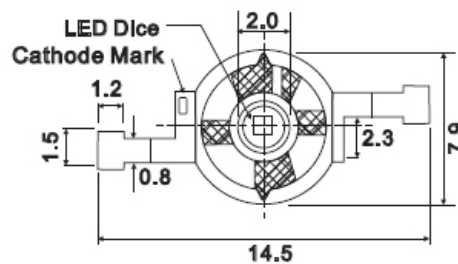
HPB8-49KWG (1W White, 6000K, 105Lm)

HUEY JANN High Power 1W LED is made of hi-eff AS/TS AlInGaP and GaInN chips with precise package technique which makes excellent heat dissipation to reach the advantages of high luminous efficiency, low decay, and long endurance. Now we have these colors available: red, green, blue, white, yellow and infrared.



FEATURES

- Instant light
- Long operating life
- Superior ESD defense
- Low voltage DC operated
- More energy efficient than incandescent and most halogen lamps



TYPICAL APPLICATIONS

- Architectural detail lighting
- Portable flashlight
- Reading lights
- Medical applications
- LCD backlights
- Beacon lights
- Decoration lights

Notes

1. All dimensions are in millimeter.
2. Lead spacing is measured where the lead emerge from the package.
3. Protruded resin under flange is 1.5mm max.
4. Specifications are subject to change without notice.
5. Tolerance is ± 0.3 mm unless otherwise noted.
6. Driving LED without heat sinking device is forbidden.
7. It is strongly recommended that the temperature of lead be not higher than 55°C.
8. Proper current derating must be observed to maintain junction temperature below the maximum.
9. LEDs are not designed to be driven in reserve bias.

	Diffusion	Dice Source	Color
Water Clear	Non-Diffusion	GaInN/GaN	Super White

Absolute Maximum Rating

PARAMETER	SYMBOL	MAX. RATING	UNIT
Continuous Forward Current	IF	350	mA
Peak Forward Current *1	IFM	500	mA
Electrostatic Discharge (HBM)	ESD	4000	V
LED Junction Temperature	Tj	135	°C
Operating Temperature	Topr	-40 ~ +110	°C
Storage Temperature	Tstg	-40 ~ +120	°C
Manual Soldering Temperature 260 °C for 5 seconds max. *2			

*1. Duty Ratio=0.1%, Pulse Width=10us. *2. Iron soldering high temperature will not cause damage to the dice. But be aware of the high temperature will not only make the epoxy soften but also cause the lead moving and the gold wire broken and even open. So before returning to the normal temperatures PLEASE AVOID any serious pressure on the top of epoxy and lead. *3. We suggest using PWM (Pulse Width Modulation) for driving. *4. It is recommended to use series as there are several 3pcs. If there are more than 5pcs, please use product with higher power.

ELECTRICAL OPTICAL CHARACTERISTICS

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
View Angle of Half Power	2θ _{1/2}	IF=350mA		120		deg
Forward Voltage	VF		3.5	4.0		V
Reverse Current	IR	VR=5V			15	μA
Luminous Intensity *2	IV	IF=350mA		105		lm
Color Temperature	CCT			6000		°K
Thermal Resistance Junction To Case	Rθ _{C-J}			15		°C/W
Temperature Coefficient Of Forward Voltage	ΔVF/ΔT			-2		mV/°C

ENDURANCE TEST

Test Item	Reference Standard	Test Conditions	Result
Operation Life	MIL-STD-750:1026 MIL-STD-883:1005 JIS-C-7021 :B-1	Connect with a power if=350mA Ta=Under room temperature Test Time=1,000hrs	0/22
High Temperature High Humidity Storage	MIL-STD-202:103B JIS-C-7021 :B-11	Ta=+85°C ±5°C RH=80% ~ 85% Test Time=1,000hrs	0/22
High Temperature Storage	MIL-STD-883:1008 JIS-C-7021 :B-10	High Ta=+120°C ±5°C Test Time=1,000hrs	0/22
Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-40°C ±5°C Test Time=1,000hrs	0/22

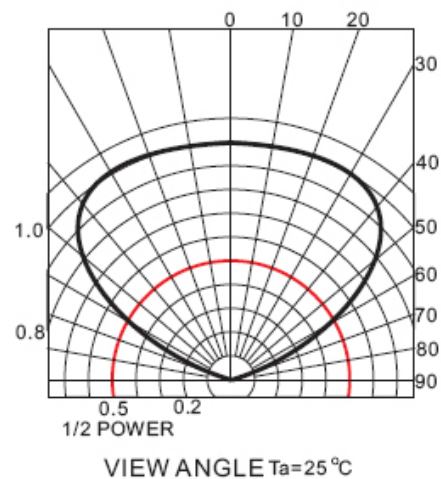
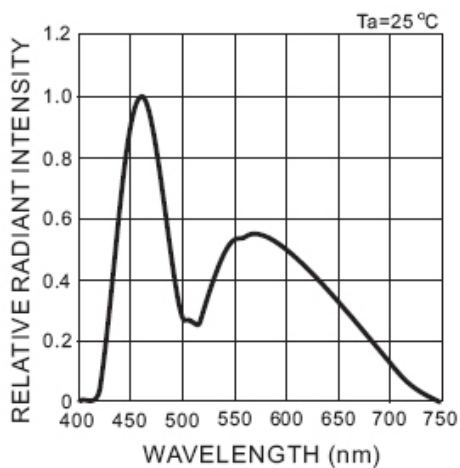
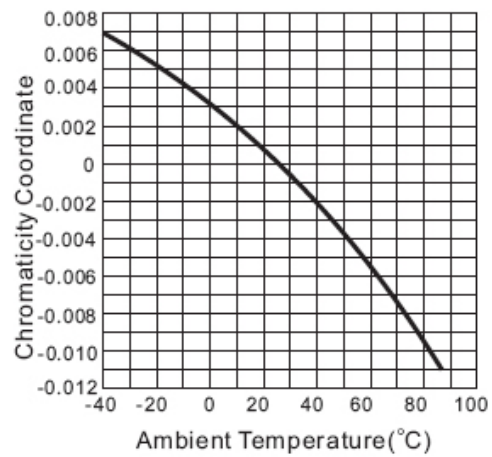
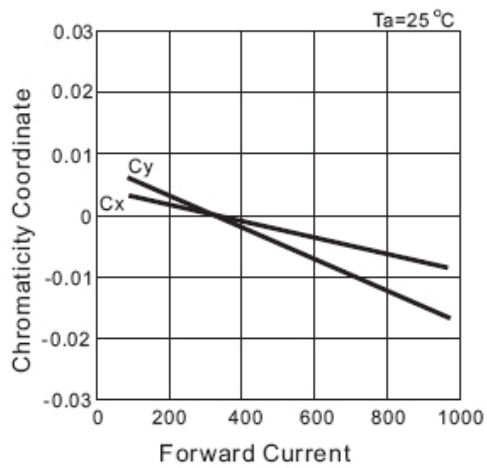
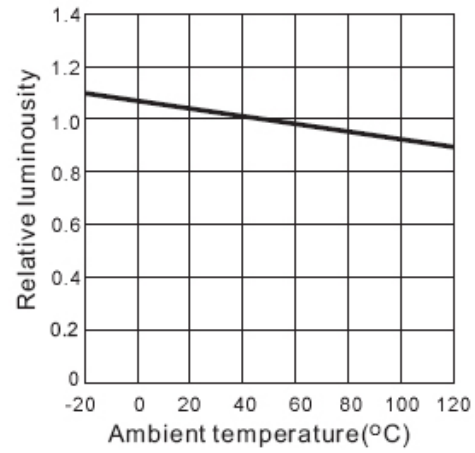
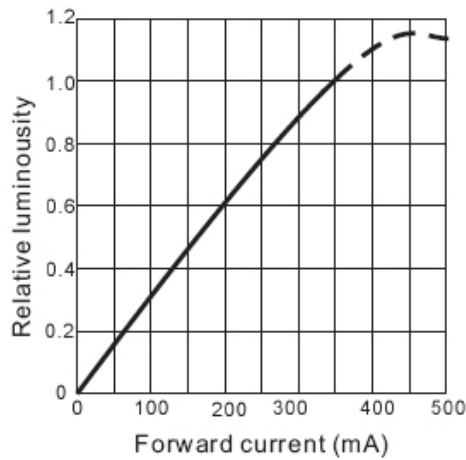
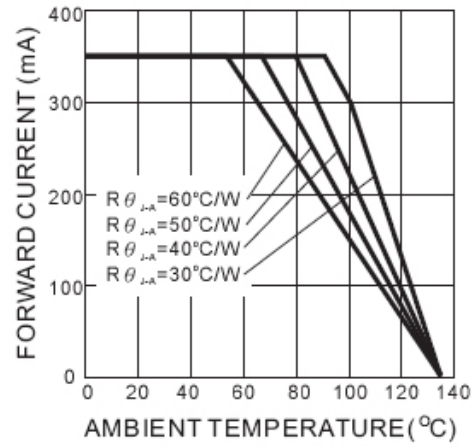
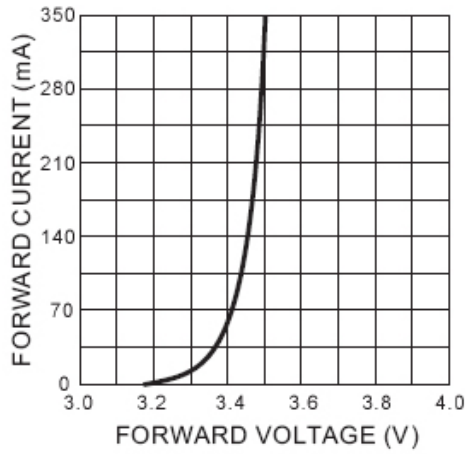
*Failure Criteria:

1. VF arise ≥ 10%
2. IV decline ≥ 30%
3. A failure is an LED that is open or shorted

ENVIRONMENTAL TEST

Test Item	Reference Standard	Test Conditions	Result
Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS-C-7021 :A-4	-40°C ~ +25°C ~ +85°C ~ +25°C 60min 20min 60min 20min Test Time=200cycle	0/22
Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010	-40°C ±5°C ~ +110°C ±5°C 20min 20min Test Time= 200cycle	0/22

TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES



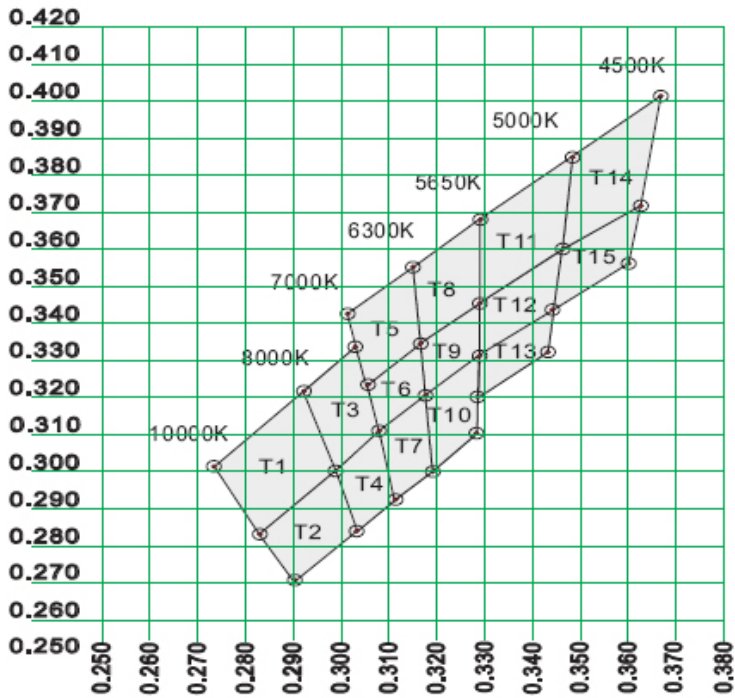
BRIGHTNESS BIN SELECTION

Brightness Code		
BIN CODE	Brightness in lm	
	Minimum	Maximum
L	85	110
M	110	143

WHITE COLOR BIN SELECTION

Bin	CCT (° K)	Chromaticity Coordinates				
	TYP					
T1	9000	x	0.274	0.292	0.299	0.283
		y	0.301	0.322	0.300	0.284
T2	9000	x	0.283	0.299	0.303	0.290
		y	0.284	0.300	0.283	0.270
T3	8000	x	0.292	0.303	0.308	0.299
		y	0.322	0.333	0.311	0.300
T4	8000	x	0.299	0.308	0.311	0.303
		y	0.300	0.311	0.293	0.283
T5	6700	x	0.301	0.314	0.316	0.305
		y	0.342	0.355	0.333	0.322
T6	6700	x	0.305	0.316	0.317	0.308
		y	0.322	0.333	0.320	0.311
T7	6700	x	0.308	0.317	0.319	0.311
		y	0.311	0.320	0.300	0.293
T8	6000	x	0.314	0.329	0.329	0.316
		y	0.355	0.369	0.345	0.333
T9	6000	x	0.316	0.329	0.329	0.317
		y	0.333	0.345	0.331	0.320
T10	6000	x	0.317	0.329	0.329	0.319
		y	0.320	0.331	0.310	0.300
T11	5300	x	0.329	0.348	0.346	0.329
		y	0.369	0.385	0.359	0.345
T12	5300	x	0.329	0.346	0.329	0.344
		y	0.345	0.359	0.331	0.344
T13	5300	x	0.344	0.329	0.343	0.329
		y	0.344	0.331	0.331	0.320
T14	4750	x	0.348	0.367	0.362	0.346
		y	0.385	0.400	0.372	0.359
T15	4750	x	0.346	0.362	0.360	0.344
		y	0.359	0.372	0.357	0.344
Tolerance			x ± 0.02		y ± 0.02	

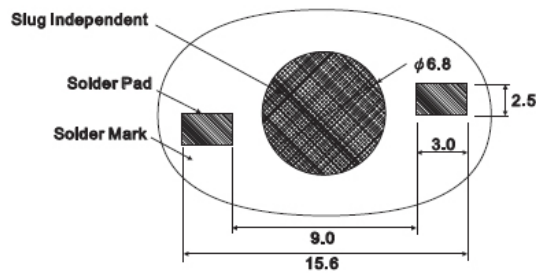
CIE LIGHT COLOR CHART



Requirements to user

The LED products by HUEY-JANN is designed, manufactured, and sold aiming at high standard quality and reliability, however, reliability of electronic apparatus is seen as a product of reliability superior to HUEY-JANN and using status at users. From this point, HUEY-JANN requests user's for following things.

Recommended Solder Pad Design

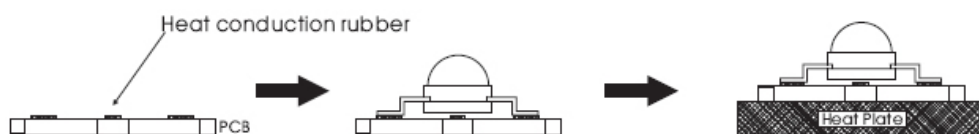


Note:

1. All dimensions are in millimeters.
2. Electrical isolation is required between Slug and Solder Pad.

Heat Plate Soldering Condition

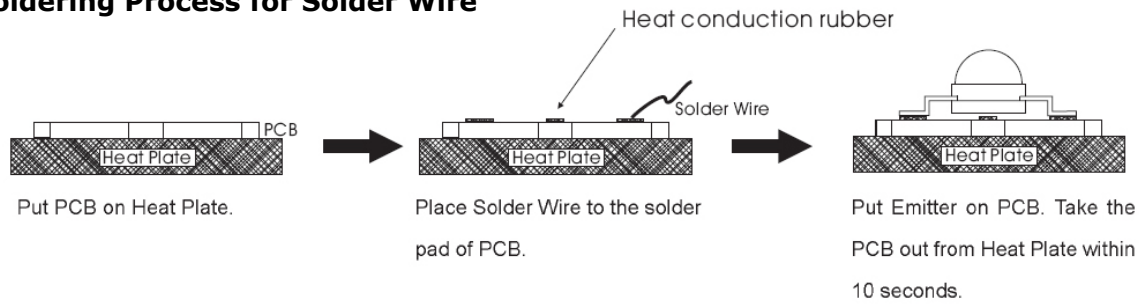
a. Soldering Process for Solder Paste



Use Solder Mask to print Solder Paste on PCB. Place Emitter on PCB. Put PCB on Heat Plate until

1. The Solder Paste could be melted within 10 seconds.
2. Take out PCB out from Heat Plate within 15 seconds.

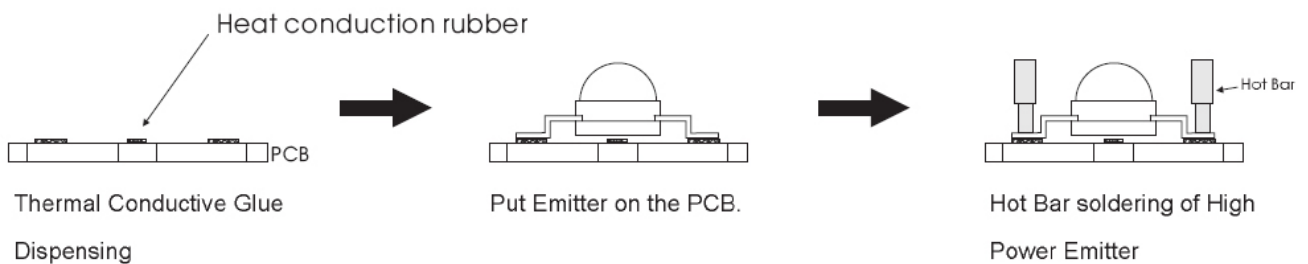
b. Soldering Process for Solder Wire



NOTE:

1. Heat plate temperature: 230°C max for Lead Solder and 260 °C max for Lead-Free Solder.
2. When soldering, do not put stress on the LEDs during heating.
3. After soldering, do not warp the circuit board.

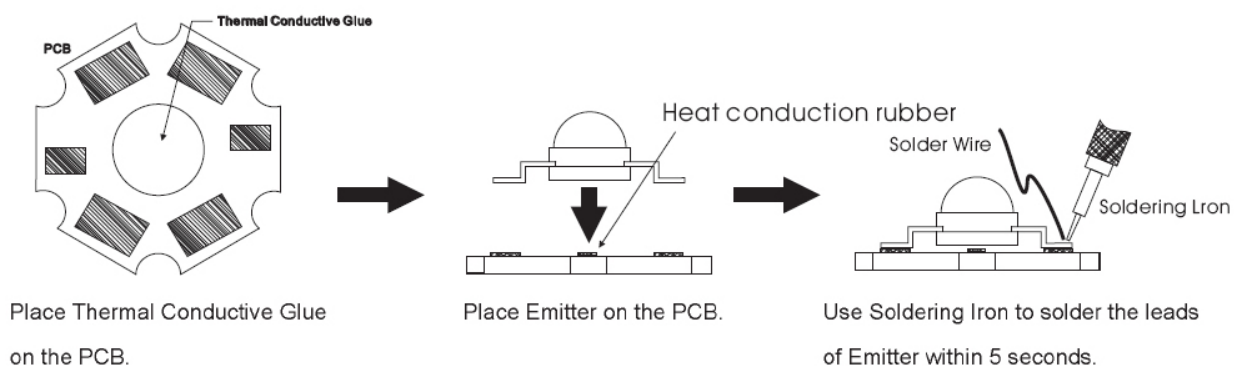
Soldering Process For Hot Bar



NOTE:

1. Hot Bar temperature: 230°C max for Lead Solder and 260 °C max for Lead-Free Solder.
2. When soldering, do not put stress on the LEDs during heating.
3. After soldering, do not warp the circuit board.

Manual Hand Soldering



1. Solder tip temperature: 230°C max for Lead Solder and 260°C max for Lead-Free Solder.
2. Avoiding damage to the emitter or to the PCB dielectric layer. Damage to the epoxy layer can cause
3. Do not let the solder contact from solder pad to back-side of PCB. This one will cause a short circuit and damage emitter.