

## SPECIFICATION FOR KEE TAT LED LAMP

KEETAT Document No. : SPC/ KT-3FWNC7F50-340

KEETAT Model No. : KT-3FWNC7F50-340

Customer Part No.:

Sample No. : KT-WN1410

Rev. No. : 02

Date: 2011-07-07


Description:

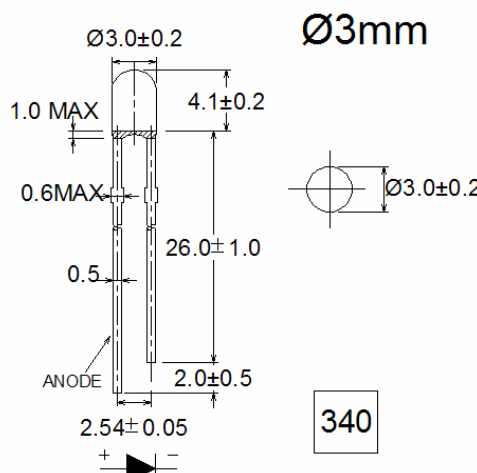

3mm Round LED Lamp in Long-lead White Color with Water  
Transparent Lens

Dice Material: InGaN

## Formal Specification



Approved By Customer	Confirmed By KEETAT
	

Package Outline	Features
	High Luminous Intensity Output White Color LED Lamp
	Chip Technology-- InGaN
	Standard 3mm Water Clear Packages
	Viewing Angle 50 Degree (Reference)
	Picture 

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Absolute maximum Rating	Unit
Forward Current	$I_F$	20	mA
Peak Forward Current*	$I_{FP}$	100	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_D$	72	mW
Operation Temperature	$T_{opr}$	-30 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Lead Soldering Temperature	$T_{sol}$	260°C for 5sec Max	

Where pulse width  $\leq 0.1\text{msec}$ , duty cycle  $\leq 1/10$

#### Typical Electrical & Optical Characteristics at Ta = 25°C

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous Intensity	$I_v$	$I_F = 20\text{mA}$	300	700	1000	mcd
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	2.8	3.2	3.5	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	---	---	10	$\mu\text{A}$
Chromaticity Coordinates	x	$I_F = 20\text{mA}$	---	0.275	---	---
	y	$I_F = 20\text{mA}$	---	0.265	---	---
50% Power Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$	---	50	---	deg

#### Luminous Intensity Bin Table (IF = 20mA):

Rank Name	Min (mcd)	Max (mcd)
1	300	1000

\*Tolerance for each bin limit is  $\pm 15\%$

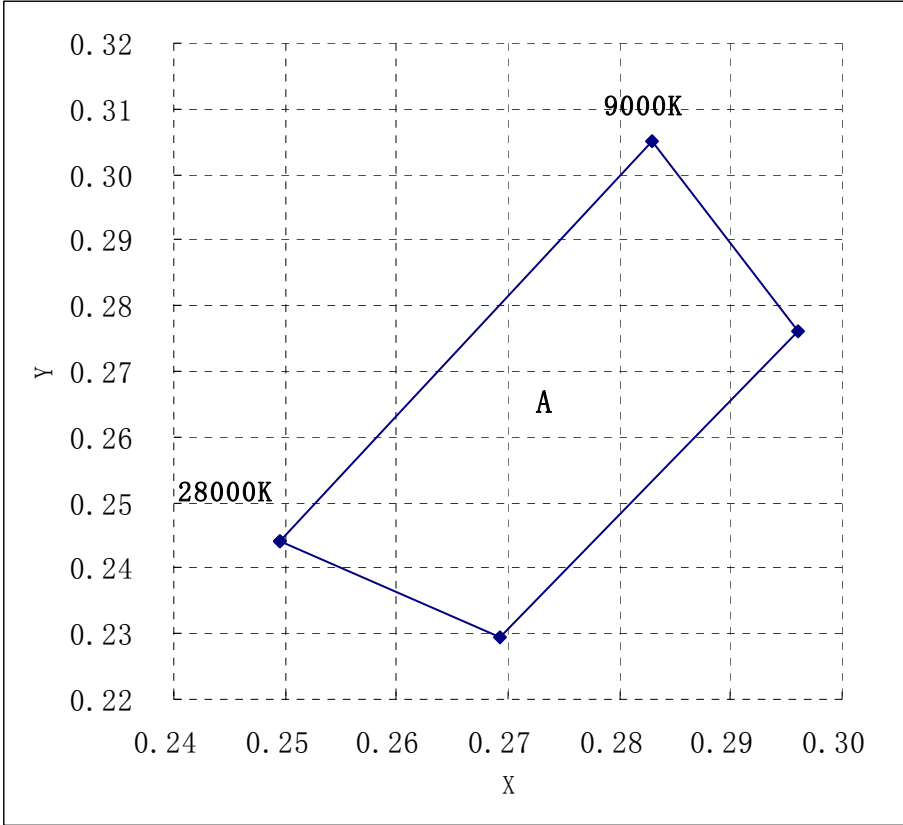
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Forward Voltage Bin Table (IF = 20mA):

Rank Name	Min (V)	Max (V)
1	2.8	3.5

\*Tolerance for each bin limit is  $\pm 0.1V$

Color Bin Table ( IF=20mA):



WN	X1	Y1	X2	Y2	X3	Y3	X4	Y4
A	0.2495	0.244	0.283	0.305	0.296	0.276	0.2693	0.2293

\*Tolerance for each bin limit is  $\pm 0.01$

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Optical-Electrical Characteristic Graphs

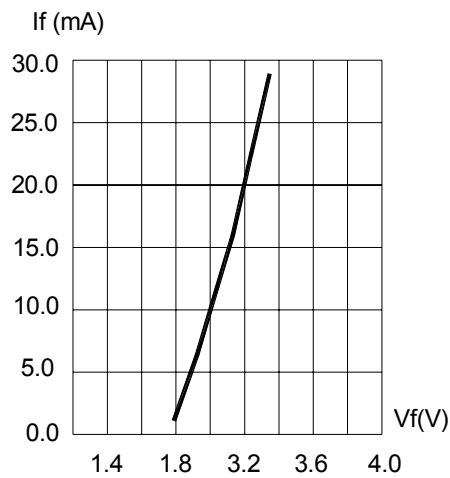


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

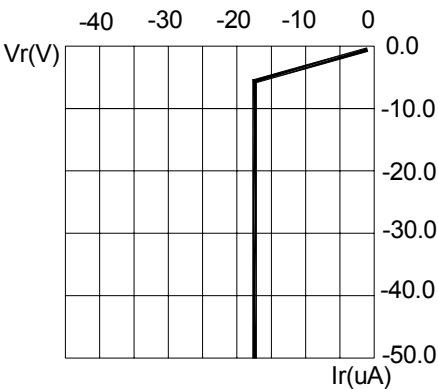


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

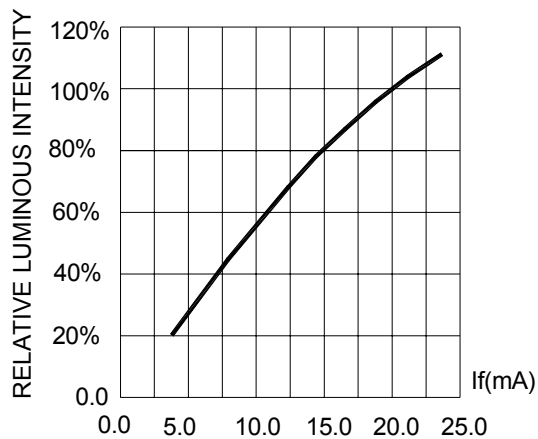


FIG.3 FORWARD CURRENT.

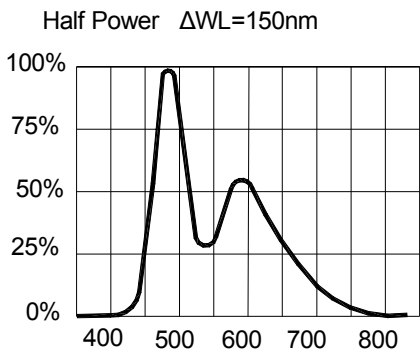


FIG.4 RELATIVE LUMINOUS FLUX VS. WAVELENGTH.

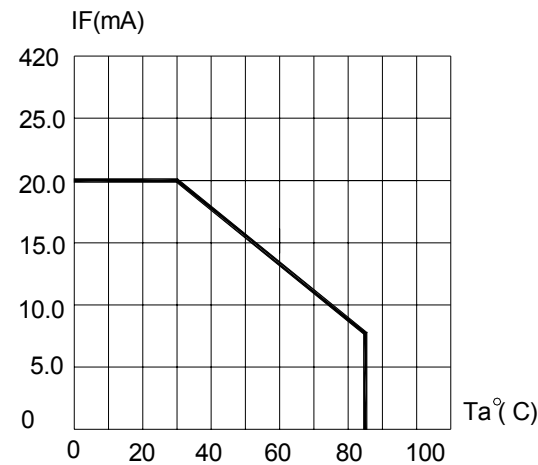


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON  $T_{jmax}=110^{\circ}$ C

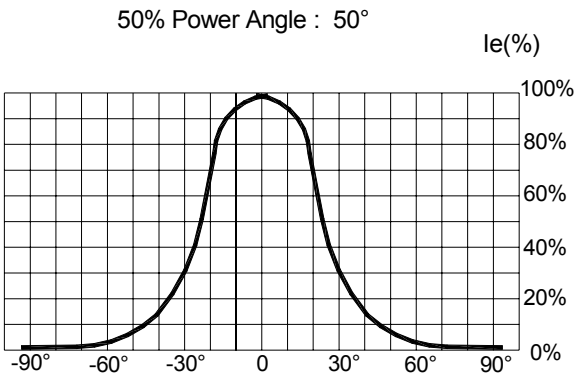
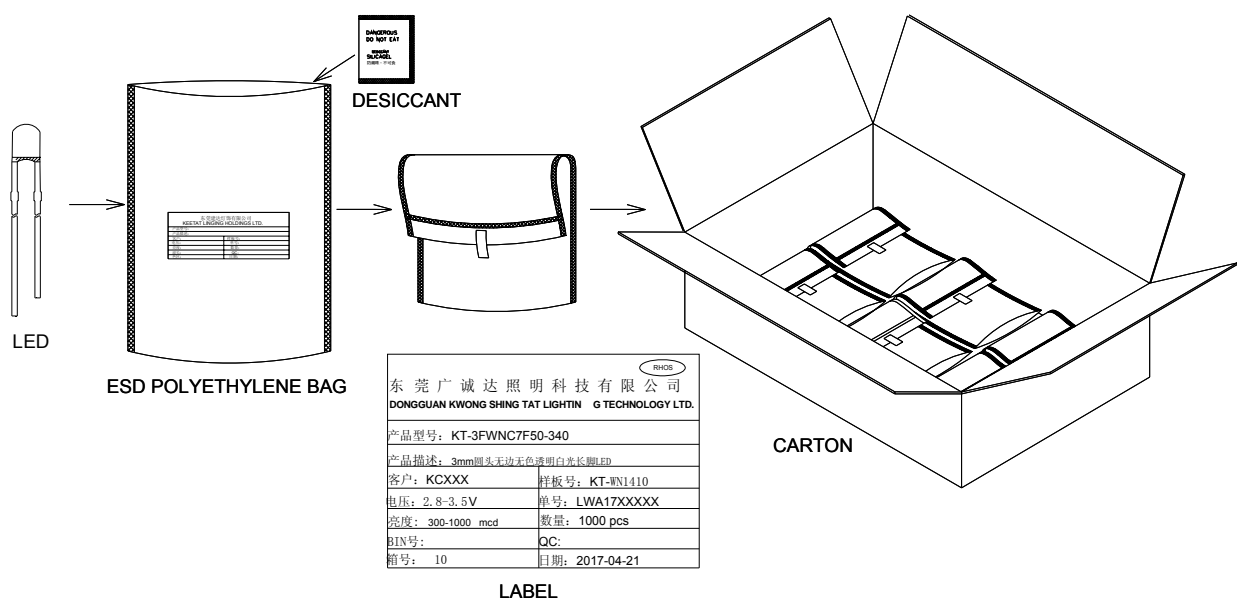


FIG.6 FAR FIELD PATTERN

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Packaging Standard:



Important Notes:

- 1) Do not apply any stress to the lead, particularly when heated.
- 2) The LEDs must not be repositioned after soldering.
- 3) After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- 4) Direct soldering onto a PC board should be avoided, Mechanical stress to the resin may be caused by the PC board warping or from the clinching and cutting of the lead frames, When it is absolutely necessary, the LEDs may be mounted in this fashion, but, the User will assume responsibility for any problems, Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur.
- 5) When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- 6) Cut the LED leadframes at room temperature, Cutting the lead frames at high temperatures may cause LED failure.
- 7) Customer acknowledges that it should not operate the samples beyond the level recommended in the specification guidelines.

Item	Signatures	Date	Revision History		
Prepared by	Huai Wang	2011-07-07	Rev. No	Date	Change Description
Checked by	Frank Yan	2011-07-07	02	2011-07-07	Change CIE bin Table.
Approved by	Bill Zhang	2011-07-07			
FCN#					

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