

EH-T680TGKT-5A

Features

- High luminous intensity output.
- RoHS compliant.
- ERP compliant.
- Sideview Package carrier tape reel.
- Long life solid state reliability

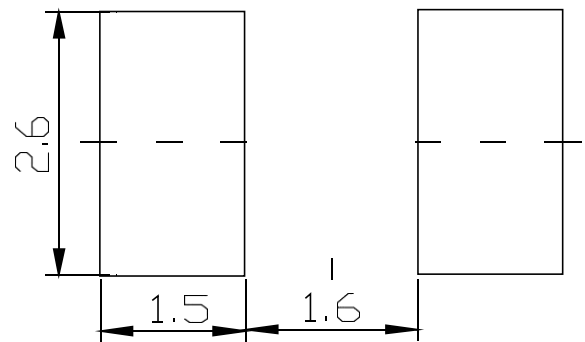
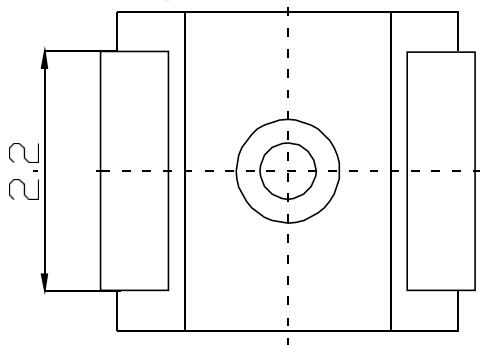
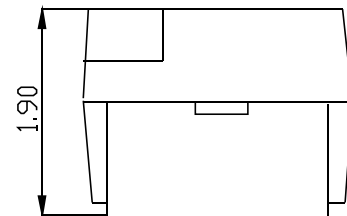
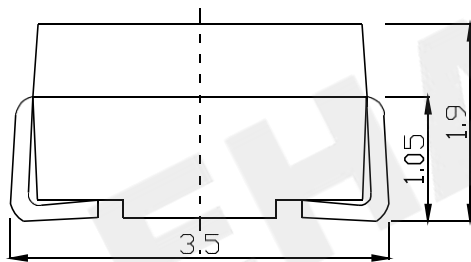
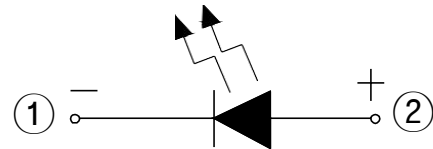
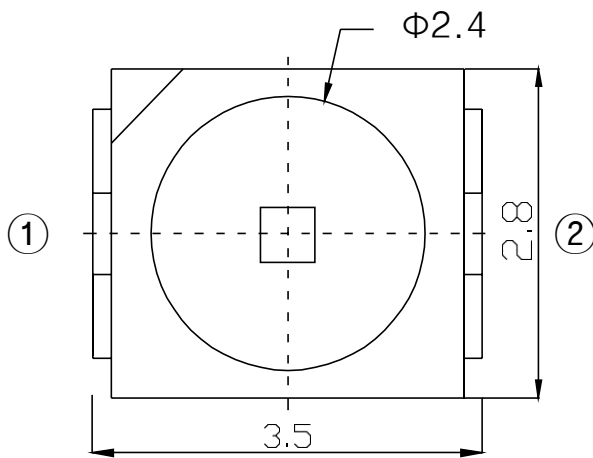
Applications

- Reading Light (car,bus,aircraft)
- Portable(flashlight,bicycle).
- LCD Backlights / Light Guides.
- Automotive Exterior (Stop-Tail-Turn,CHMSL,Mirror Side Repeat).
- Commercial and Residential Architectural lighting.
- Mini-accent / Uplighters / Downlighters / Orientation lighting
- Fiber Optic Alternative / Decorative / Entertainment lighting.
- Security / Garden lighting.
- Cove / Undershelf / Task lighting.
- Traffic signaling / Beacons / Rail crossing and Wayside lighting.
- Decorative.
- Sign and channel Letter

Device Selection Guide

Chip Materials	Emitted Color	Resin Color
InGaN	Brilliant Green	Water Clear

Package Dimension



Soldering PAD Suggest

Note: Tolerances unless mentioned ± 0.1 mm. Unit = mm

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Forward Current	IF	30	mA
Peak Forward Current	IFP	100	mA
Reverse Voltage	VR	5	V
Power Dissipation	Pd	90	mW
Operating Temperature	Topr	-30~+85	°C
Storage Temperature	Tstg	-40~+90	°C
Lead Soldering Temperature	Tsol	260°C for 5 Sec.	

Opto-Electrical Specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	----	1150	----	mcd	IF=20mA
Viewing Angle	2θ1/2	----	120	----	deg	IF=20mA
Peak Wavelength	λp	----	530	----	nm	IF=20mA
Dominant Wavelength	λd	515	----	527	nm	IF=20mA
Spectrum Radiation Bandwidth	Δλ	----	35	----	nm	IF=20mA
Forward Voltage	VF	2.8	----	3.6	V	IF=20mA
Reverse Current	IR	----	----	5	μA	VR=5V

Bin Range of Luminous Intensity

Bin	Min.	Max.	Unit	Condition
Q1	720	900	mcd	If=20mA
R1	900	1150		
R2	1150	1400		
S1	1400	1800		

Bin Range Of Dom. Wavelength

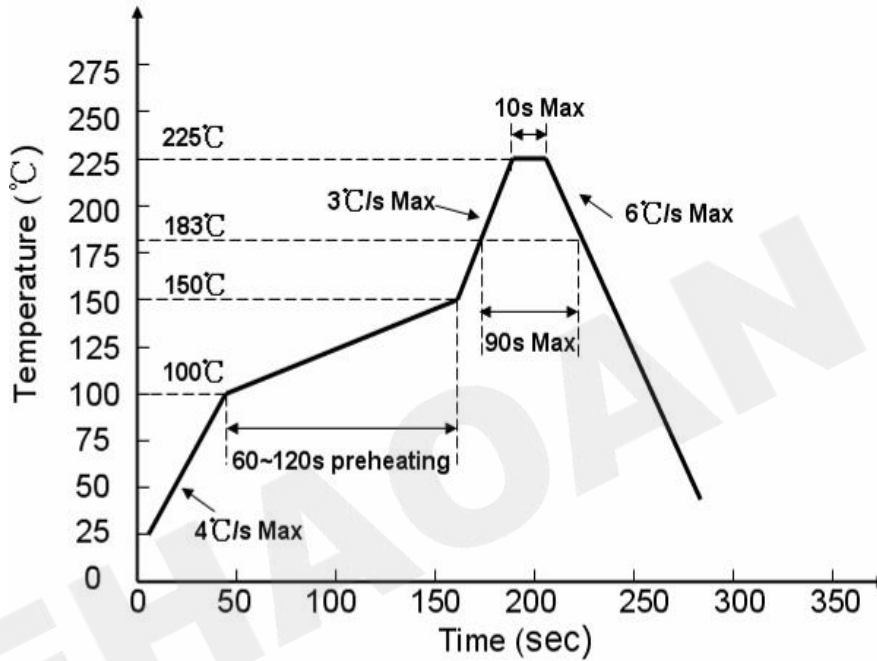
Bin	Min.	Max.	Unit	Condition
B	515	518	nm	If=20mA
C	518	521		
D	521	524		
E	524	527		

Bin Range Of Forward Voltage

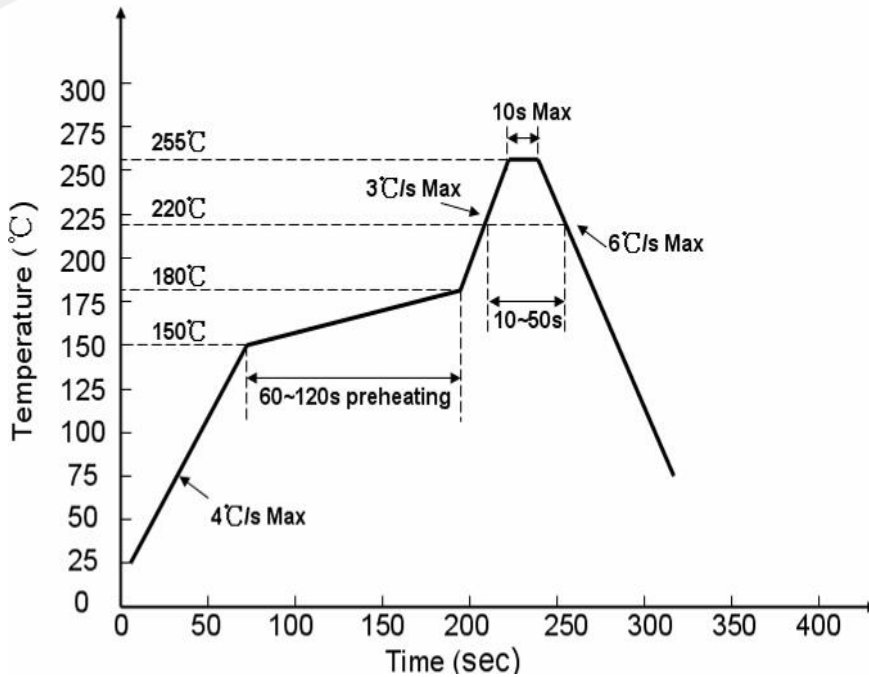
Bin	Min.	Max.	Unit	Condition
6	2.8	3.0	V	If=20mA
7	3.0	3.2		
8	3.2	3.4		
9	3.4	3.6		

Reflow Soldering Instructions

Lead Solder



Lead-Free Solder



Note: Number of reflow process shall be less than 1 times

Typical Electro-Optical Characteristics Curve

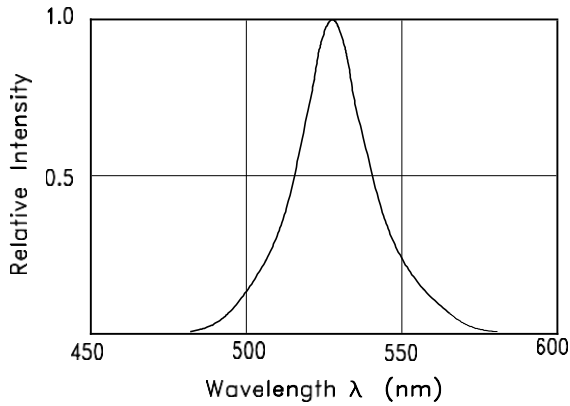


Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

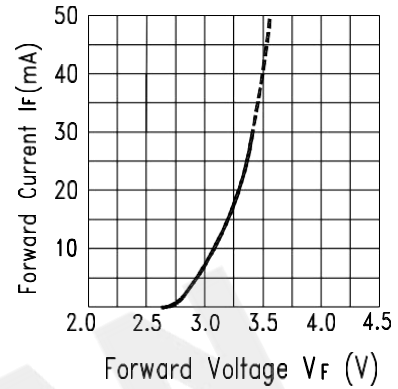


Fig.2 Forward Current vs. Forward Voltage

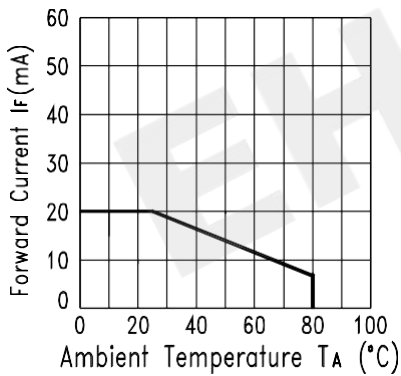


Fig.3 Forward Current Derating Curve

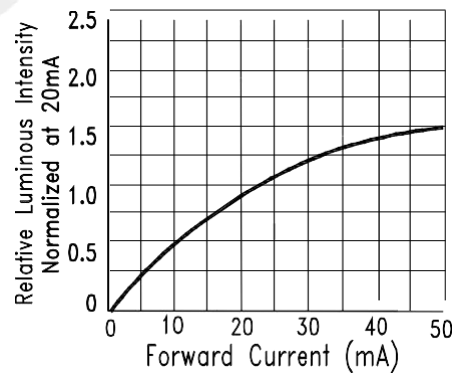


Fig.4 Relative Luminous Intensity vs. Forward Current

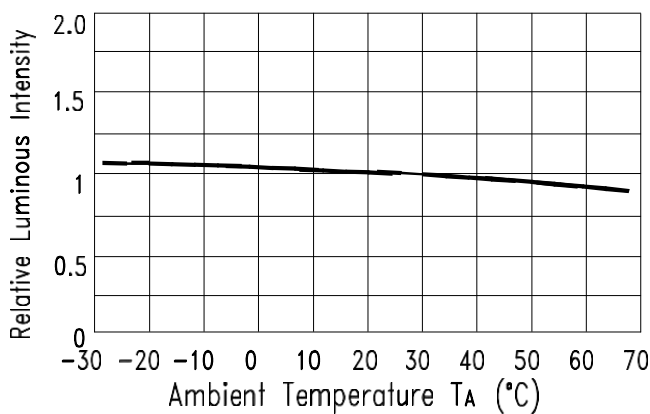


Fig.5 Luminous Intensity vs. Ambient Temperature

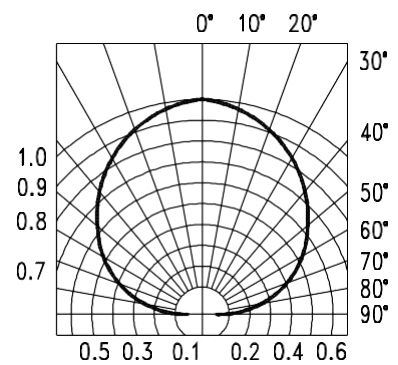
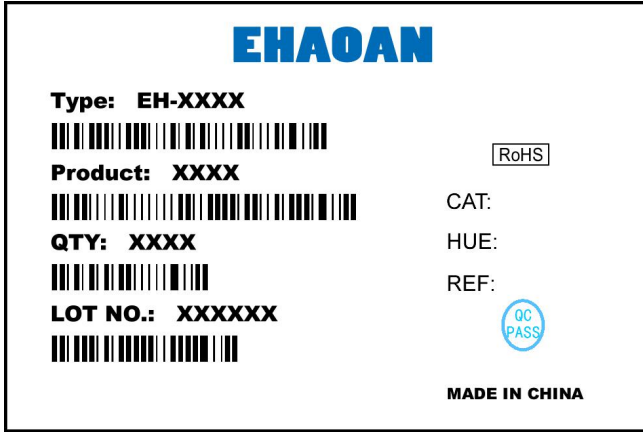


Fig.6 Spatial Distribution

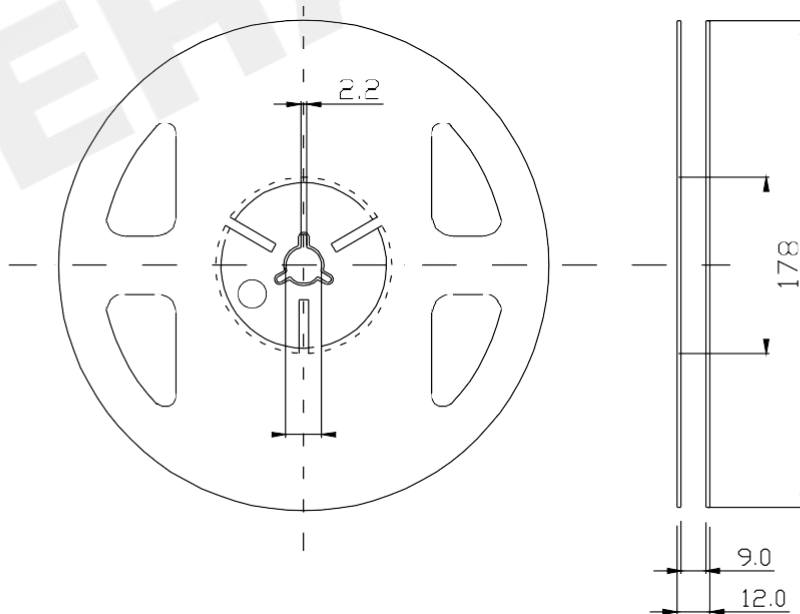
Moisture Resistant Packing Materials

Label Explanation

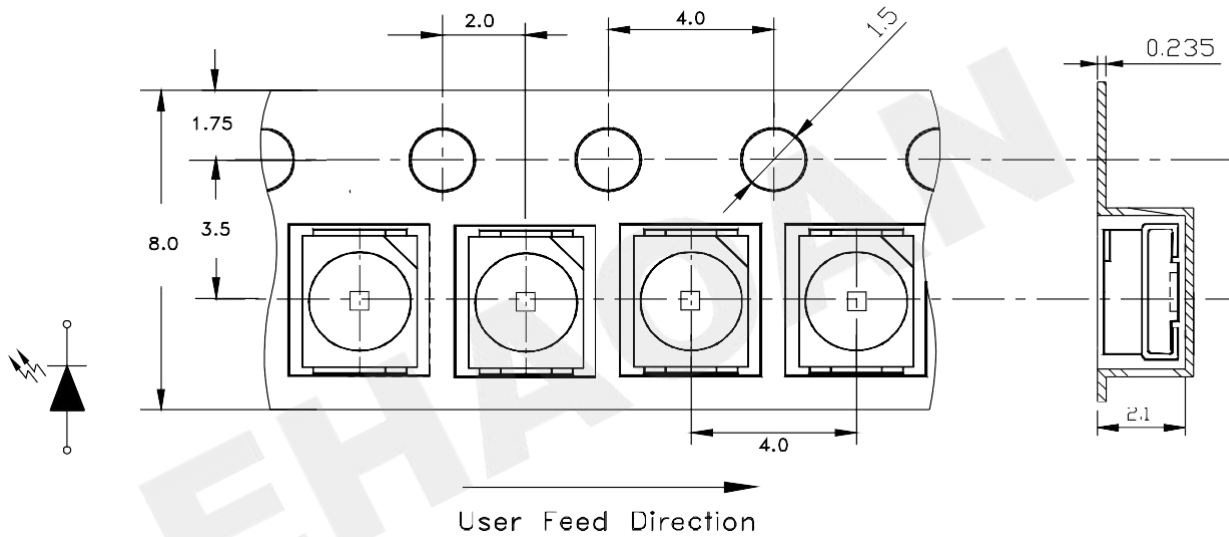


- CAT: Luminous Intensity Rank (unit : mcd)
- HUE: Dominant Wavelength Rank (unit : nm)
- REF: Forward Voltage Rank (unit : V)
- Rank Tolerance:
 - a. Luminous Intensity: $\pm 15\%$
 - b. HUE: $\pm 1\text{nm}$
 - c. Forward Voltage: $\pm 0.1\text{V}$

Reel Dimensions

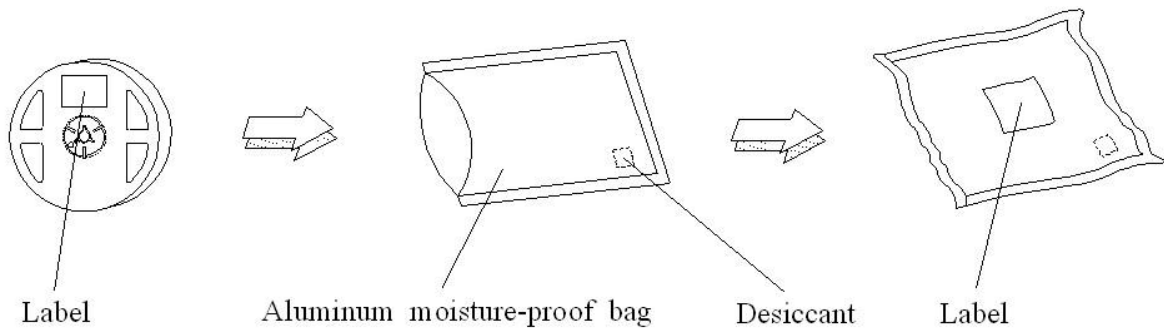


Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



Note: Tolerances unless mentioned $\pm 0.1\text{mm}$. Unit = mm

Moisture Resistant Packing Process



Note: Tolerances unless mentioned $\pm 0.1\text{mm}$. Unit = mm

Reliability test items and conditions

The reliability of products shall be satisfied with items listed below.

Confidence level: 97%

LTPD:3%

No.	Item	Ref. Standard	Test Condition	Time	Quantity	Ac/Re
1	Reflow	IEC/TR 60068-3-12-2014	Temp:260°C max T=8 sec	3 times	22PCS	0/1
2	Temperature Cycle	IEC60068-2- 14 : 2009	80°C±5°C 15min ↑↓5 min -30°C±5°C 15min	100Cycles	22PCS	0/1
3	High Humidity Heat Life Test	IEC60068-2-78: 2001	300 CYCLES	500H	22PCS	0/1
4	High Temperature Storage	Tested with yuliang standard	Temp:85°C±5°C	1000H	22PCS	0/1
5	Low Temperature Storage	IEC60068-2-1: 2007	Temp:-30°C±5°C	1000H	22PCS	0/1
6	Life Test	Tested with yuliang standard	Ta=25°C±5°C IF=50mA	1000H	22PCS	0/1

CAUTIONS

Storage

1. Storage condition before opening the package: 5°C~30°C, the largest percentage relative humidity is 60% and the storage period is one month. The LEDs beyond the storage period just can be used after dealing as step 4.
2. After opening the package, If the LEDs will be Infrared reflow soldering, Oxygen phase reflow soldering or any other welding.
 - a. must be welding within 24 hours.
 - b. the storage humidity must be below 30%.
3. If the situation does not satisfy 2a or 2b, the LEDs must be roasted.
4. If the LEDs need to be roasted, the roast temperature should be 60°C +/-3 and the roast time should be 48 hours.
5. The product meets EHAOAN published specification for a period of twelve (12) months from date of shipment.

ESD

Static Electricity or power surge will damage the LED. The following procedures may decrease the possibility of ESD damage:

1. All production machinery and test instruments must be electrically grounded.
2. Use a conductive wrist band or anti-electrostatic glove when handling these LEDs.
3. Maintain a humidity level of 50% or higher in production areas.
4. Use anti-static packaging for transport and storage.

Cleaning

1. Led should be cleaned in a normal temperature and the time for cleaning should be less than 3 minutes ; please use Alcohol as cleaner ,before you use other cleaning solvent ,please make sure that the cleaner will not make any damage to the LED performance or the appearance .
2. Ultrasonic Cleaning is also commonly used for cleaning LED, please verify the Ultrasonic cleaning 's Power and time to avoid any damage to the LED . The recommended solvent for cleaning.