

# SE-2810HTCW



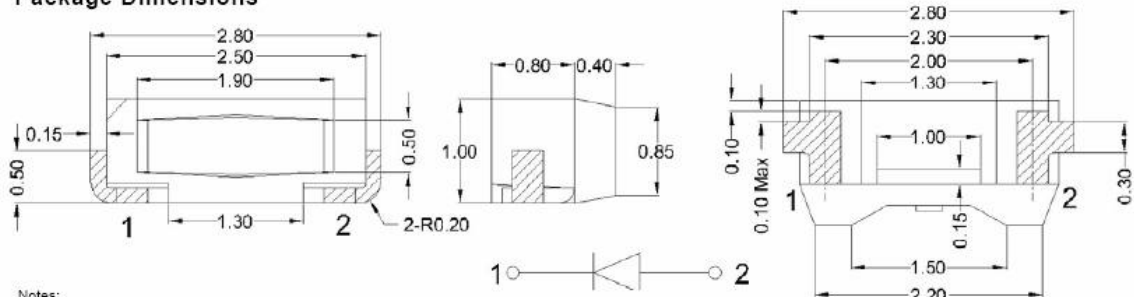
**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



## Features

- 2.8mmX1.0mm RIGHT ANGLE SMT LED, 1.2mm THICKNESS.
- LOW POWER CONSUMPTION.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE: 3000PCS / REEL .

## Package Dimensions



Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is  $\pm 0.2\text{mm}$  unless otherwise noted.
3. An epoxy meniscus may extend about 1.5mm down the leads.

## Description

The source color devices are made with InGaN on SiC Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

## Selection Guide

Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
		Min.	Typ.	2 $\theta$ 1/2
WHITE (InGaN )	Yellow Diffused	1000	1400	90°

Note:

1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Min.	Typ.	Units	Test Conditions
V <sub>F</sub>	Forward Voltage	White	3.0	3.2	V	I <sub>F</sub> =20mA
I <sub>R</sub>	Reverse Current	White		5	uA	V <sub>R</sub> = 5V
X	Chromaticity Coordinates	White		0.28		
Y				0.29		
C	Capacitance	White		100	pF	V <sub>F</sub> =0V;f=1MHz

### Absolute Maximum Ratings at T<sub>A</sub>=25°C

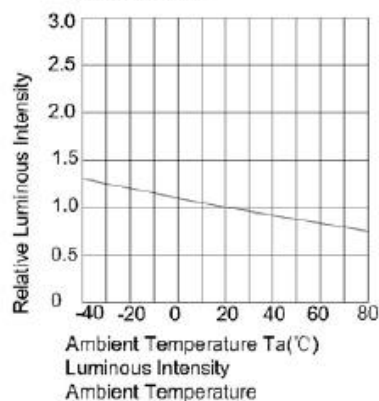
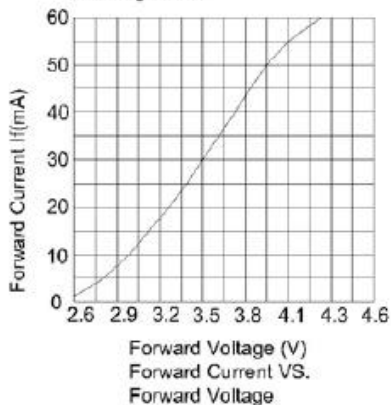
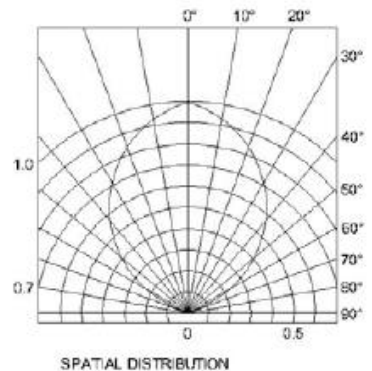
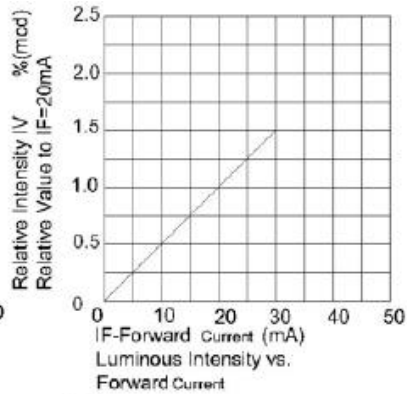
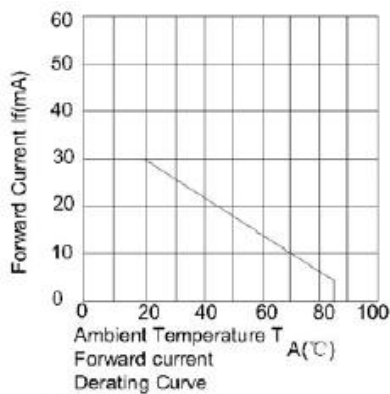
Parameter	White	Units
Power dissipation	114	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	

Note:

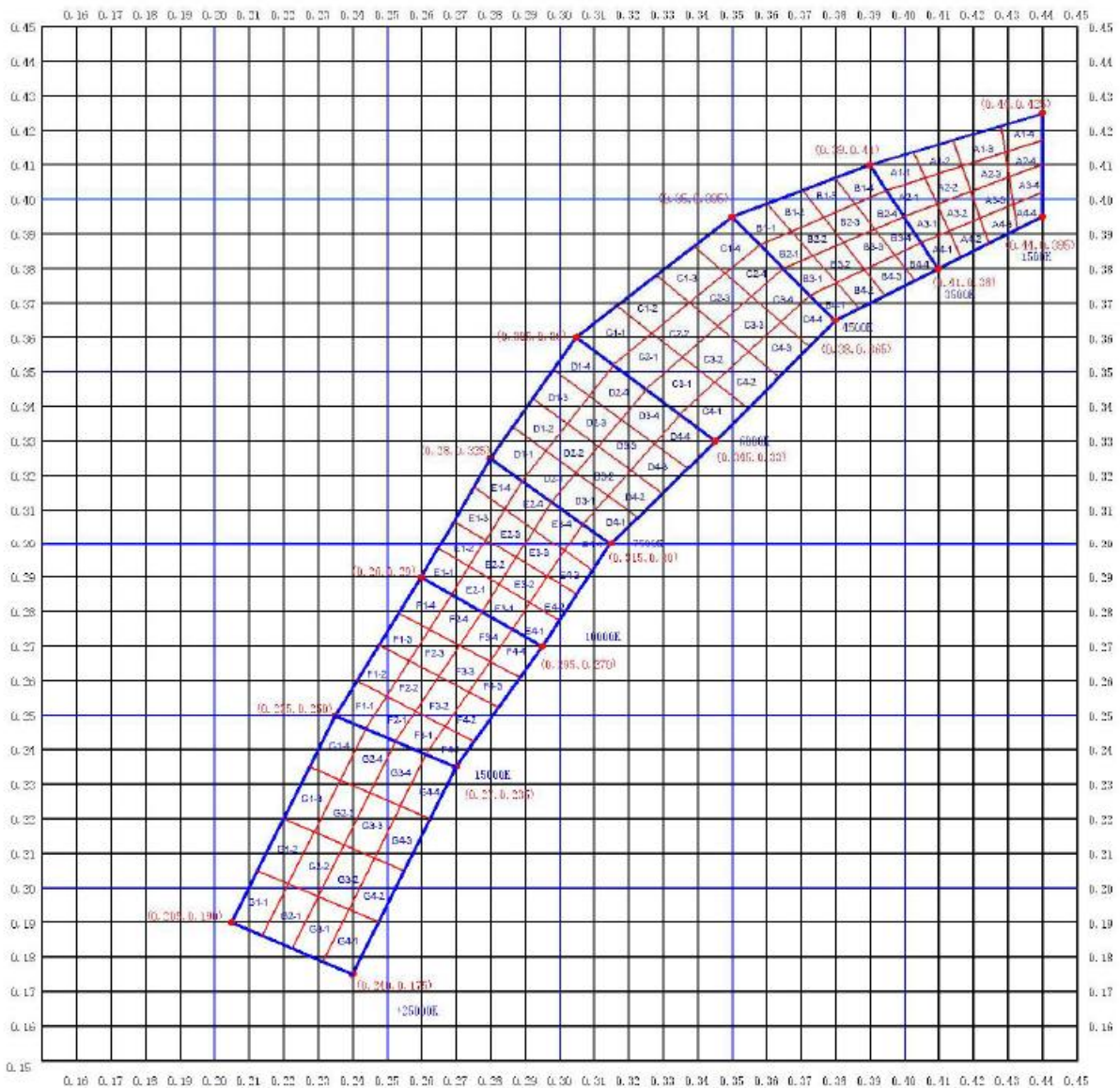
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

Reliability Test Items And Conditions The reliability of products shall be satisfied with items listed below.  
Confidence level :90% LTPD :10%

No.	Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Rc
1	Reflow	Temp:240°C±5°C Min.5 sec.	6 Min.	22Pcs.	0/1
2	Temperature Cycle	H:+100°C 15 min. ∞ 5 min. L:-40°C 15 min.	300 Cycles	22Pcs.	0/1
3	Thermal Shock	H:+100°C 5 min. ∞ 10 sec. L:-10°C 5 min.	300 Cycles	22Pcs.	0/1
4	High Temperature Storage	Temp.:100°C	1000Hrs.	22Pcs.	0/1
5	Low Temperature Storage	Temp.: -55°C	1000Hrs.	22Pcs.	0/1
6	DC Operating Life	I <sub>F</sub> =20mA	1000Hrs.	22Pcs.	0/1
7	High Temperature/High Humidity	85°C/R.H85%	1000Hrs.	22Pcs.	0/1



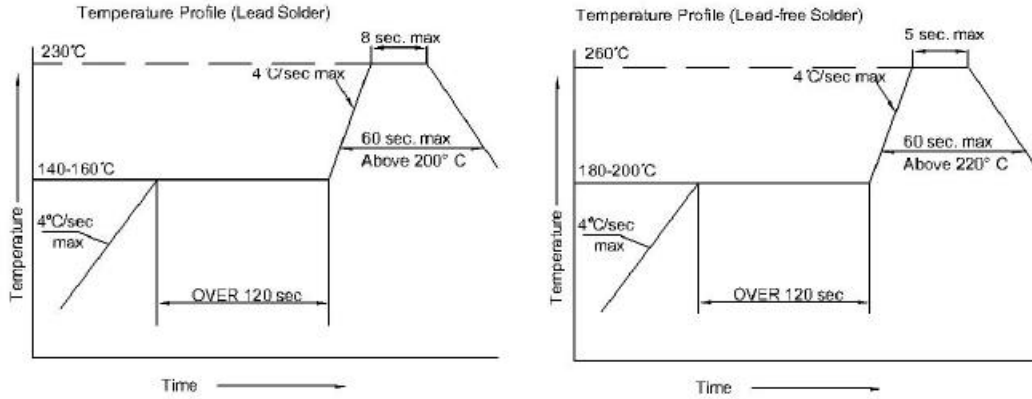
# CIE CHROMATICITY DIAGRAM



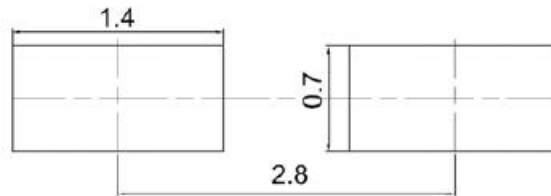
<b>G</b> X:0.24 Y:0.22	X	0.205	0.235	0.270	0.240	<b>C</b> X:0.35 Y:0.36	X	0.305	0.350	0.380	0.345
	Y	0.190	0.250	0.235	0.175		Y	0.360	0.395	0.365	0.330
<b>F</b> X:0.265 Y:0.26	X	0.235	0.260	0.295	0.270	<b>B</b> X:0.38 Y:0.38	X	0.350	0.390	0.410	0.380
	Y	0.250	0.290	0.270	0.235		Y	0.395	0.410	0.380	0.365
<b>E</b> X:0.285 Y:0.30	X	0.260	0.280	0.315	0.295	<b>A</b> X:0.41 Y:0.40	X	0.390	0.440	0.440	0.410
	Y	0.290	0.325	0.300	0.270		Y	0.410	0.425	0.395	0.380
<b>D</b> X:0.31 Y:0.33	X	0.280	0.305	0.345	0.315	Tolerance for each Bin limit is $\pm 0.15$ .					
	Y	0.325	0.360	0.330	0.300						

**SMT Reflow Soldering Instructions**

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and second soldering process.



**Recommended Soldering Pattern  
(Units : mm)**



**Tape Specifications  
(Units : mm)**

