

DATASHEET

SURFACE MOUNT LED SPECIFICATION

Product Description	WHITE SIDE LED
Model	IE-3806W-HB-C
Date	2013. 05



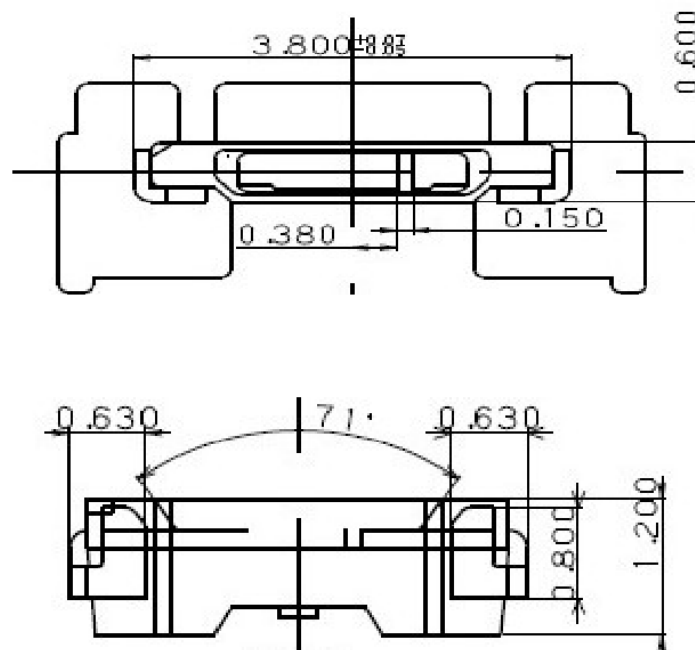
Features

- Package: 3.8*1.2*0.6
- Emitted colour:White
- Soldering methods:SMT assembly available
- Comply ROHS standard
- High intensity
- Extremely wide view angle
- Anti-electrostatic tape package
- Reliable and stable
- RoHS compliant & Pb free.

Applications

- LCD backlight
- Mobile phones LCD backlight, Keyboard and symbol
- Mp3/Mp4 backlight

[Package Outline Dimensions]



NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are $\pm 0.2\text{mm}$ (0.008inch) unless otherwise noted.

[Absolute maximum ratings at Ta=25°C]

Parameter	Symbol	Typical	Unit
Power dissipation	Pd	100	mW
Forward current	IF	15/20	mA
Reverse voltage	Vr	5	V
Operating temperature range	Top	-40 ~ +85	°C
Storage temperature range	Tstg	-40 ~ +100	°C
Peak pulsing current	Ifp	100	mA
Electrostatic Discharge	ESD	2000 (HBM)	V
IFP Conditions: Pulse Width ≤ 10msec. and Duty cycle ≤ 1/10.			

[Electrical-optical characteristics at Ta=25°C]

Parameter	Test Condition	Symbol	Typical			Unit
			Min.	Typ.	Max.	
Forward voltage	IF=15/20mA	VF		2.8	3.4	V
Luminous intensity	IF=15mA	Iv	1300	--	1700	mcd
Luminous intensity	IF=20mA	Iv	2100	--	2740	mcd
Viewing angle at 50% Iv	IF=15/20mA	2 θ 1/2	--	120	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

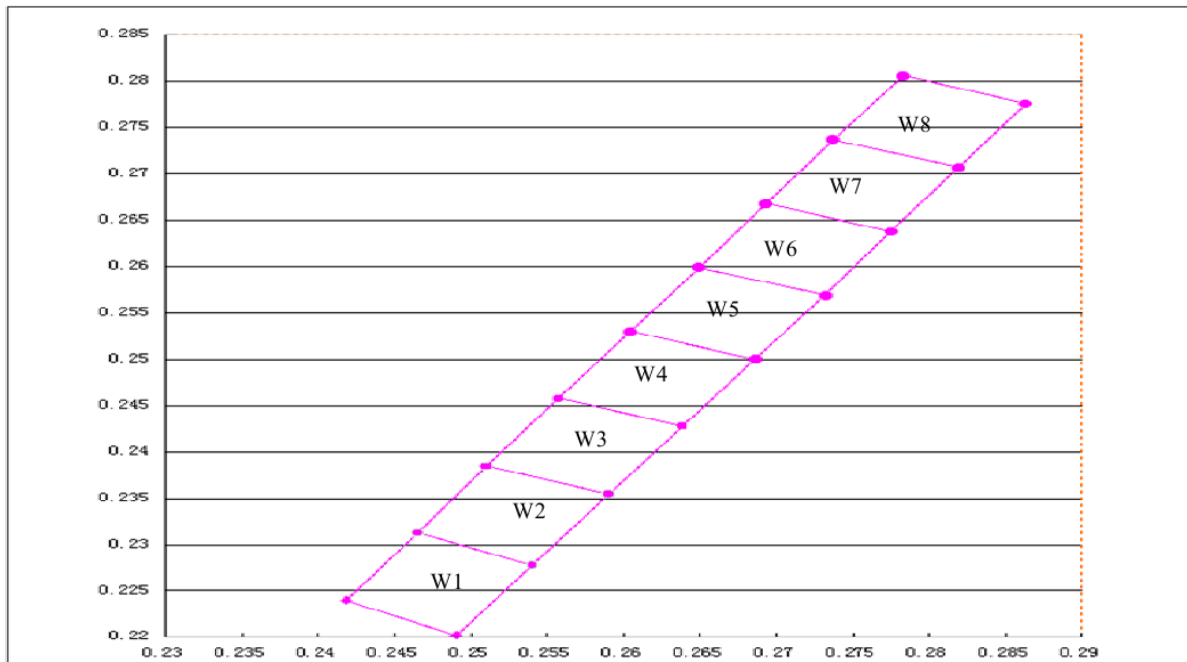
NOTES:

1. Tolerance of luminous intensity is 10%
2. Tolerance of forward voltage is 0.05V

White Bin Structure

BIN CODE	X	Y	BIN CODE	X	Y	BIN CODE	X	Y
W1	0.249	0.2202	W2	0.254	0.2278	W3	0.259	0.2355
	0.2418	0.224		0.2465	0.2313		0.251	0.2385
	0.2465	0.2313		0.251	0.2385		0.2557	0.2458
	0.254	0.2278		0.259	0.2355		0.2638	0.2428
BIN CODE	X	Y	BIN CODE	X	Y	BIN CODE	X	Y
W4	0.2638	0.2428	W5	0.2686	0.25	W6	0.2732	0.2569
	0.2557	0.2458		0.2604	0.253		0.2649	0.2599
	0.2604	0.253		0.2649	0.2599		0.2693	0.2668
	0.2686	0.25		0.2732	0.2569		0.2775	0.2638
BIN CODE	X	Y	BIN CODE	X	Y	BIN CODE	X	Y
W7	0.2775	0.2638	W8	0.2819	0.2707		0	0
	0.2693	0.2668		0.2737	0.2737		0	0
	0.2737	0.2737		0.2783	0.2806		0	0
	0.2819	0.2707		0.2863	0.2776		0	0

CIE Chromaticity Diagrams(IF=15mA,Ta=25)



Light Intensity rank and bin code($I_F=15\text{mA}$, $T_a=25^\circ\text{C}$)

BIN CODE	IV Range (mcd)	BIN CODE	IV Range (mcd)
13A	1300-1350	15A	1500-1550
13B	1350-1400	15B	1550-1600
14A	1400-1450	16A	1600-1650
14B	1450-1500	16B	1650-1700

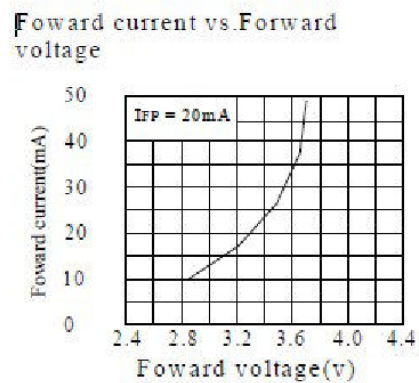
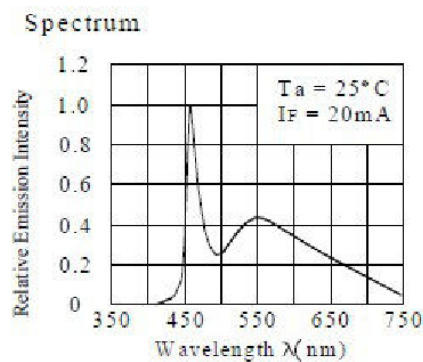
Light Intensity rank and bin code($I_F=20\text{mA}$, $T_a=25^\circ\text{C}$)

BIN CODE	IV Range (mcd)	BIN CODE	IV Range (mcd)
21A	2100-2180	24A	2420-2500
21B	2180-2260	25A	2500-2580
22B	2260-2340	25B	2580-2660
23A	2340-2420	26B	2660-2740

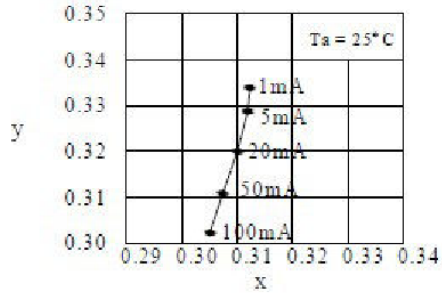
Forward voltage rank and bin code($I_F=15\text{mA}$, $T_a=25^\circ\text{C}$)

BIN CODE	VF (V)	BIN CODE	VF (V)
V1	2.8-2.9	V4	3.1-3.2
V2	2.9-3.0	V5	3.2-3.3
V3	3.0-3.1	V6	3.3-3.4

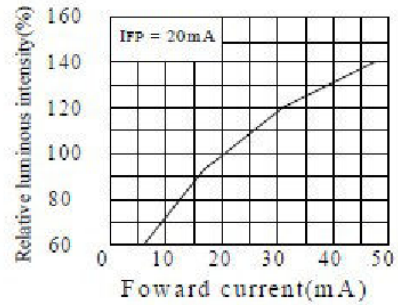
Typical optical characteristics curves



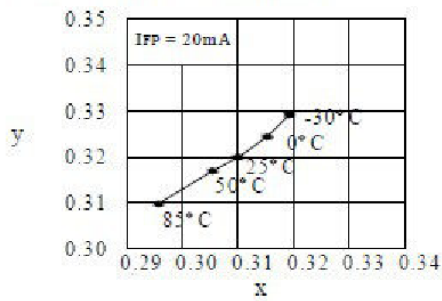
Forward Current vs. Chromaticity Coordinate (λD)



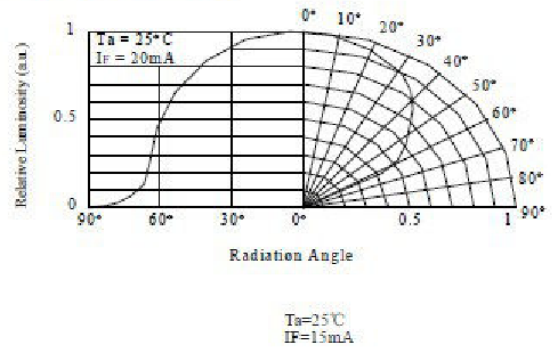
Forward current vs. Relative luminous intensity



Ambient Temperature vs. Chromaticity Coordinate (λD)

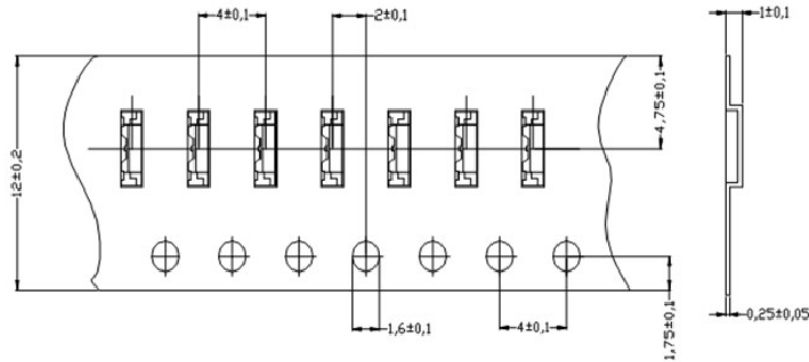


Directivity (Angle : 120°)

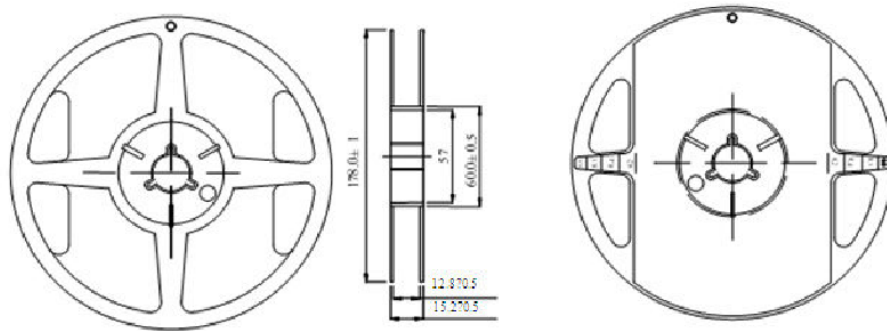


Pacaging Specification

卷带尺寸 Dimensions of Tape (Unit: mm)



Dimensions of Reel (Unit: mm)



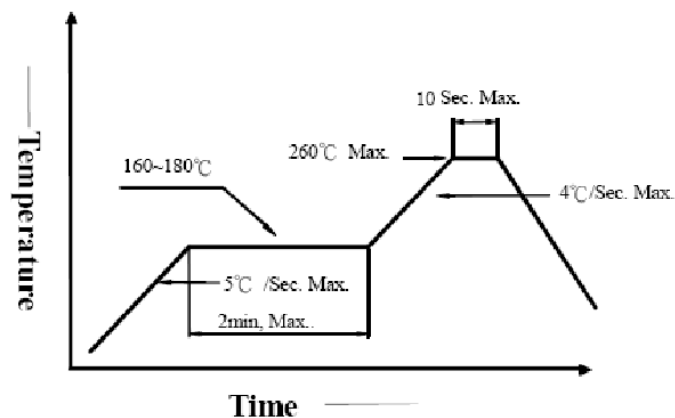
NOTES:

1. Specifications are subject to change without notice.
2. All dimensions are in mm, tolerance is ± 2.0 mm unless otherwise noted.
3. Empty component pockets are sealed with top cover tape, 4,000 pcs/ Reel.

[Importation for user]

[Reflow Profile]

Pb-free Solder temperature Profile



1. Do not put stress on the LEDs when soldering.
2. Do not warp the circuit board before it have been returned to normal ambient conditions after soldering.
3. [Hand Soldering Profile]
The temperature of the iron should be lower than 300°C and soldering within 3sec per solder-pad is to be observed.
4. Caution must be used in handing this device to avoid damage to the lens surfaces that will reduce optical efficiency.

[Storage Profile]

1. Do not open the moisture proof bag before ready to use the LEDs.
2. The LEDs should be kept at 30°C or less and 60%RH or less before opening the package. The max. storage period before opening the package is 1 year.
3. After opening the package, the LEDs should be kept at 30°C/40%RH or less, and it should be used within 7 days.
4. If the LEDs be kept over the condition of 3, baking is required before mounting. Baking condition as below: $60\pm 5^{\circ}\text{C}$ for 12 hours.