



# WC101606-ETC4

## SMD Type White Emitter

### Features

- Top view 1016 package
- Viewing Angle =  $\pm 60^\circ$
- Compatible with infrared and vapor phase reflow solder process
- High reliability
- Ultra bright White
- RoHS compliance

### Applications

- Optical indicator.
- Switch and Symbol Display.

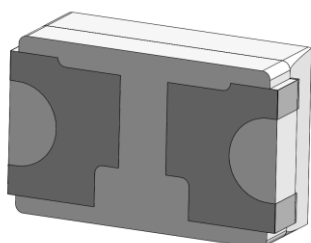
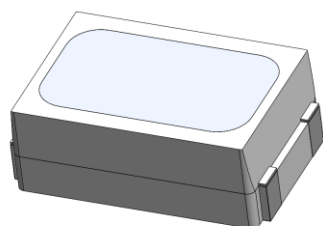
### Description

The WC101606-ETC4 is an AlInGaN White LED housed in a miniature SMD package.

Static electricity and surge damage the LEDs.

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

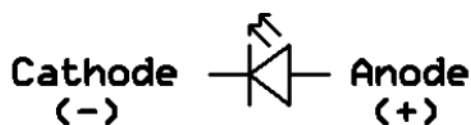
### Package Outline



Cathode

Anode

### Schematic





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### Absolute Maximum Rating at 25°C

Symbol	Parameters	Ratings	Units	Notes
I <sub>F</sub>	Continuous Forward Current	30	mA	
I <sub>FP</sub>	Peak Forward Current	90	mA	1
V <sub>R</sub>	Reverse Voltage	5	V	
T <sub>opr</sub>	Operating Temperature	-40 ~ +85	°C	
T <sub>stg</sub>	Storage Temperature	-40 ~ +100	°C	
T <sub>sol</sub>	Soldering Temperature	260	°C	2
P <sub>D</sub>	Power Dissipation at(or below) 25°C Free Air Temperature	115	mW	

### Electro-Optical Characteristics *TA = 25°C (unless otherwise specified)*

#### Optical Characteristics

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
I <sub>v</sub>	Luminous Intensity	I <sub>F</sub> =30mA	2250	-	3600	mcd	3
θ <sub>1/2</sub>	Angle of Half Intensity	I <sub>F</sub> =30mA	-	±60	-	deg	

#### Electrical Characteristics

Symbol	Parameters	Test Conditions	Min	Typ	Max	Units	Notes
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> =30mA	2.9	-	3.7	V	5
I <sub>R</sub>	Reverse Current	V <sub>R</sub> =5V	-	-	1	μA	

#### Notes:

1. I<sub>FP</sub> Conditions--Pulse Width ≤ 100μs and Duty ≤ 10%.
2. Soldering time ≤ 10 seconds.
3. Bin Range of Luminous Intensity

Bin Code	Min	Max	Unit	Condition
X2	2250	2850	mcd	I <sub>F</sub> =30mA
Y1	2850	3600		

Tolerance of Luminous Intensity ±10%



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### 4. Bin Range of Forward Voltage

Bin Code	Min	Max	Unit	Condition
V10	2.9	3.1	V	I <sub>F</sub> =30mA
V11	3.1	3.3		
V12	3.3	3.5		
V13	3.5	3.7		

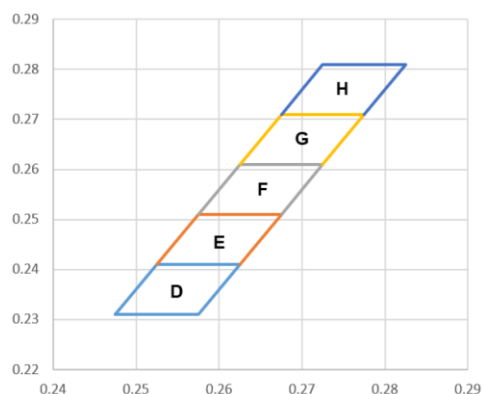
Tolerance of Forward Voltage  $\pm 0.1V$

### 5. Bin Range of Chromaticity Coordinates

Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y
D	0.2475	0.2310	E	0.2525	0.2410
	0.2525	0.2410		0.2575	0.2510
	0.2625	0.2410		0.2675	0.2510
	0.2575	0.2310		0.2625	0.2410
F	0.2575	0.2510	G	0.2625	0.2610
	0.2625	0.2610		0.2675	0.2710
	0.2725	0.2610		0.2775	0.2710
	0.2675	0.2510		0.2725	0.2610
H	0.2675	0.2710			
	0.2725	0.2810			
	0.2825	0.2810			
	0.2775	0.2710			

Tolerance of Chromaticity Coordinates:  $\pm 0.01$

### The C.I.E. 1931 Chromaticity Diagram

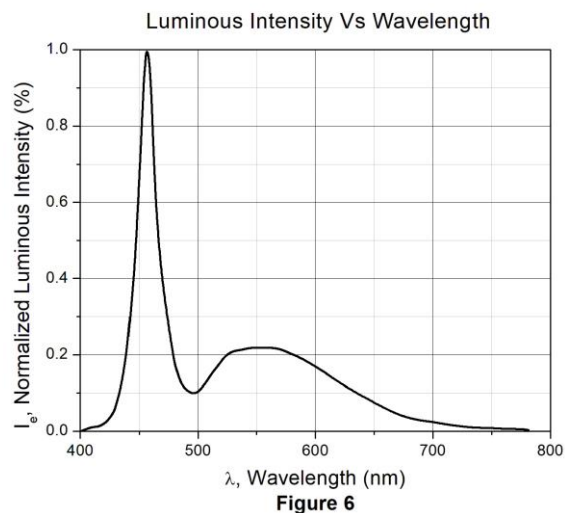
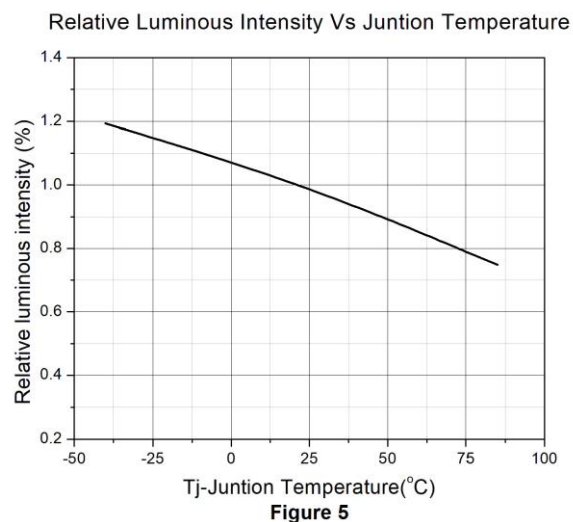
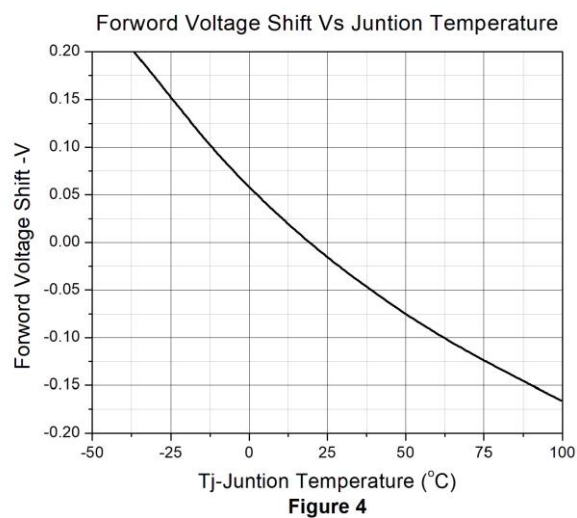
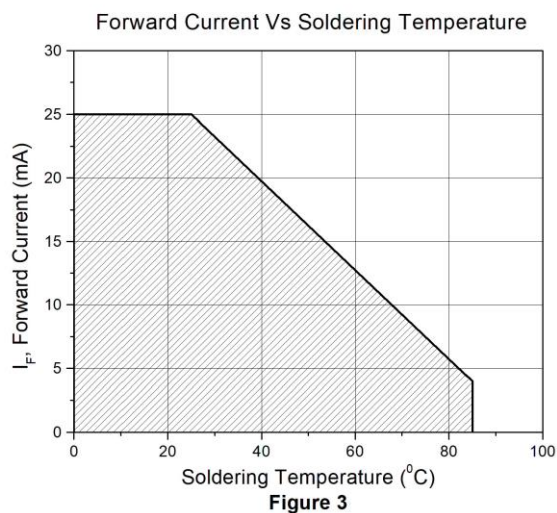
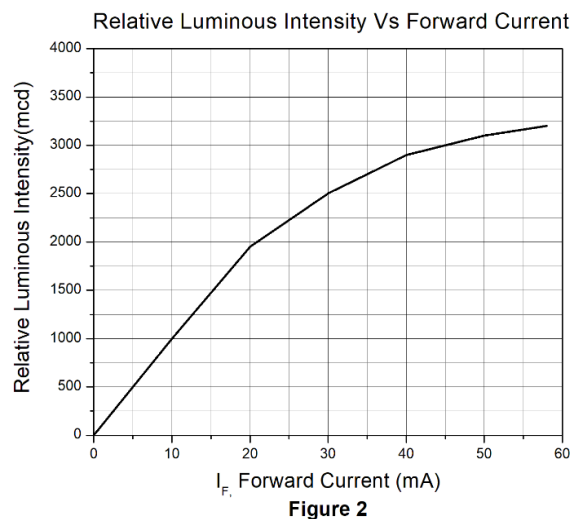
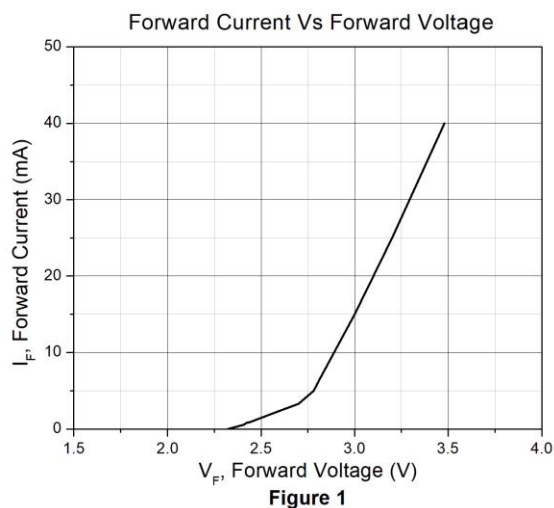




# WC101606-ETC4

## SMD Type White Emitter

### Typical Characteristic Curves





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## SMD Type White Emitter

### Typical Characteristic Curves

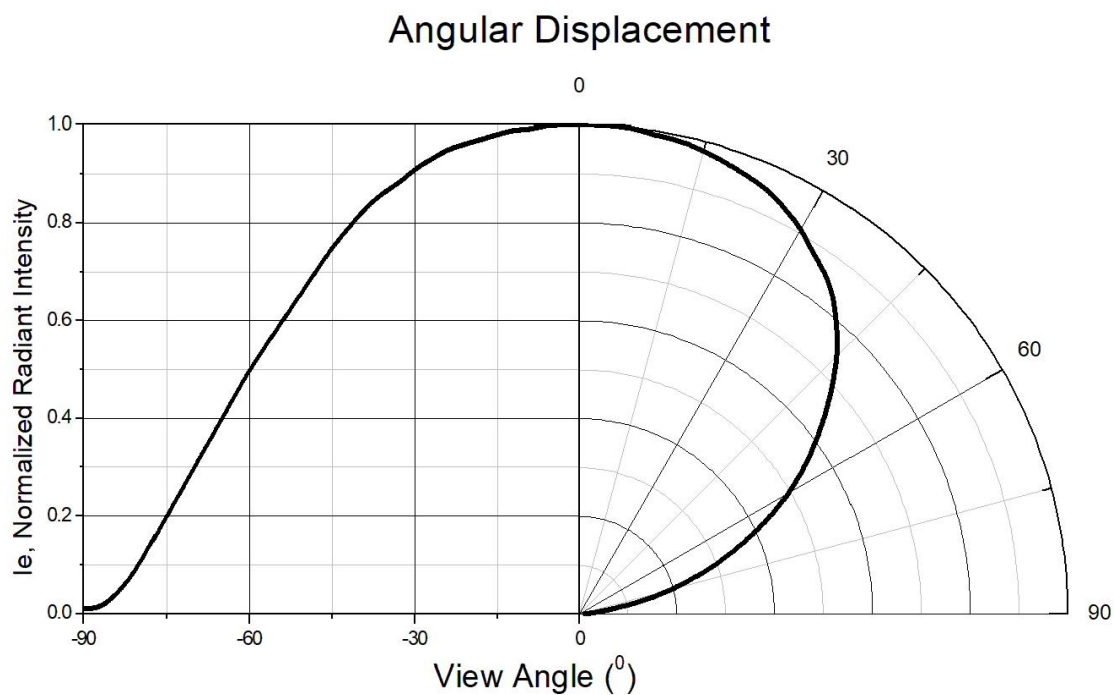


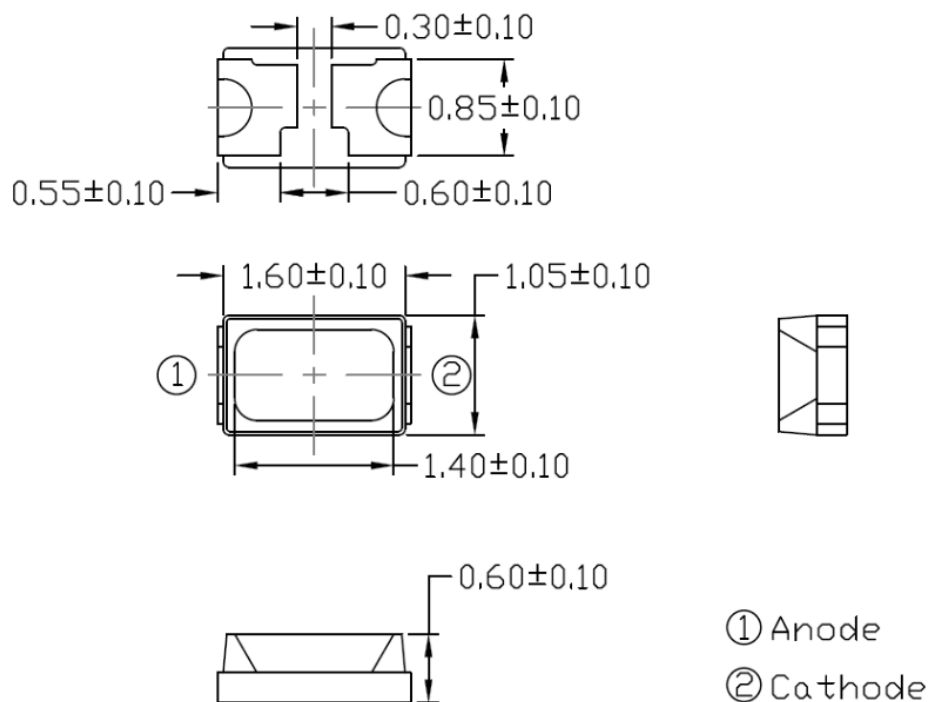
Figure 7



# WC101606-ETC4

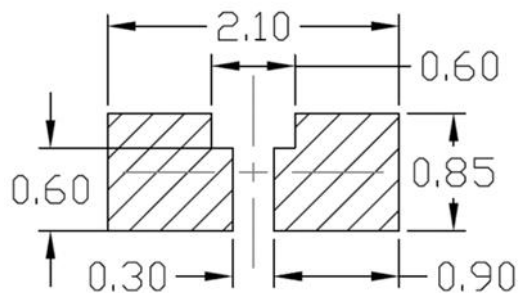
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### Package Dimension *All dimensions are in mm, unless otherwise stated*



Note: Tolerance unless mentioned is  $\pm 0.1$ mm.

### Recommended Soldering Mask *All dimensions are in mm, unless otherwise stated*



Note: Tolerance unless mentioned is  $\pm 0.1$ mm.

### Ordering Information

Part Number	Description	Quantity
WC101606-ETC4	Tape & Reel	4000 pcs



Technical drawing of a circular component. The top view shows a circle with a central circular feature containing a cross-like shape. Four teardrop-shaped cutouts are arranged around the center. A rectangular label is positioned at the top, containing the text "Label". The side view shows the component's profile with a total height of 180 and a central section height of 60. The bottom view shows a circular base with a diameter of 9 and a width of 11.4.

Technical drawing of a 10-pin D-sub connector. The drawing includes a top view and a side view. The top view shows a rectangular body with a total width of 8.00. The pins are spaced at a pitch of 2.00. The distance from the left edge to the first pin is 4.00. The pins are labeled with a diameter of  $\varnothing 1.50$ . The side view shows a total height of 3.50, a mounting flange width of 0.75, and a pin height of 1.75. A polarity symbol is shown on the left.

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Oct, 2020



## WC101606-ETC4

### SMD Type White Emitter

#### Label Form Specification

CT Micro  
International Corporation

MSL-X  
MADE IN CHINA

CPN: XXXXXXXXXXXXXXXXX  
|||||

Part no: XXXXXXXXXXXXXXX  
|||||

Serial no: XXXXXXXXX  
|||||

Lot no: XXXXXXXXX  
|||||

Qty: XXXXXX      Date Code: YWWJ  
|||||      |||||

IV: XX      WD:XX      VF:XX  
|||||      |||||      |||||

QR Code

Pb  
RoHS

CPN : Customer Part Number  
Part no: CTM Production Number  
Serial no: Production Number  
Lot no: Lot number  
Q'ty: Packing Quantity  
Date Code: Manufacture Date  
IV : Bin Code of Luminous Intensity  
WD : Bin Code of Dominant Wavelength  
VF : Bin Code of Forward Voltage  
MADE IN CHINA: Production Place

#### Storage Condition

1. Do not open moisture proof bag before the products are ready to use.
2. The moisture barrier bag should be stored at 30°C and 90%R.H. max. before opening.  
Shelf life of non-opened bag is 12 months after the bag sealing date.
3. After opening the moisture barrier bag floor life is 168h at 30°C/60%RH. max. Unused LEDs should be resealed into moisture barrier bag. (Refer to J-STD-020 Standard)
4. If the moisture absorbent material has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the J-STD-033 Standard conditions.





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### Reflow Profile



Profile Feature	Pb-Free Assembly Profile
Temperature Min. (Tssmin)	150°C
Temperature Max. (Tsmax)	200°C
Time (ts) from (Tssmin to Tsmax)	60-120 seconds
Ramp-up Rate (tL to tp)	3°C/second max.
Liquidous Temperature (TL)	217°C
Time (tL) Maintained Above (TL)	60 – 150 seconds
Peak Body Package Temperature	260°C +0°C / -5°C
Time (tp) within 5°C of 260°C	30 seconds
Ramp-down Rate (TP to TL)	6°C/second max
Time 25°C to Peak Temperature	8 minutes max.



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