

SPECIFICATION

Product : Topview 1W Power Infra Red SMD LED

Part No. : IWS-S83D3-EI-K3

Date : 2011. 04. 20 Ver. 0.1

Proposed By	Checked By	Checked By	Checked By	Approval

Comment



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Topview 1W Power LED

IWS-S83D6-EI-K3 (850nm)



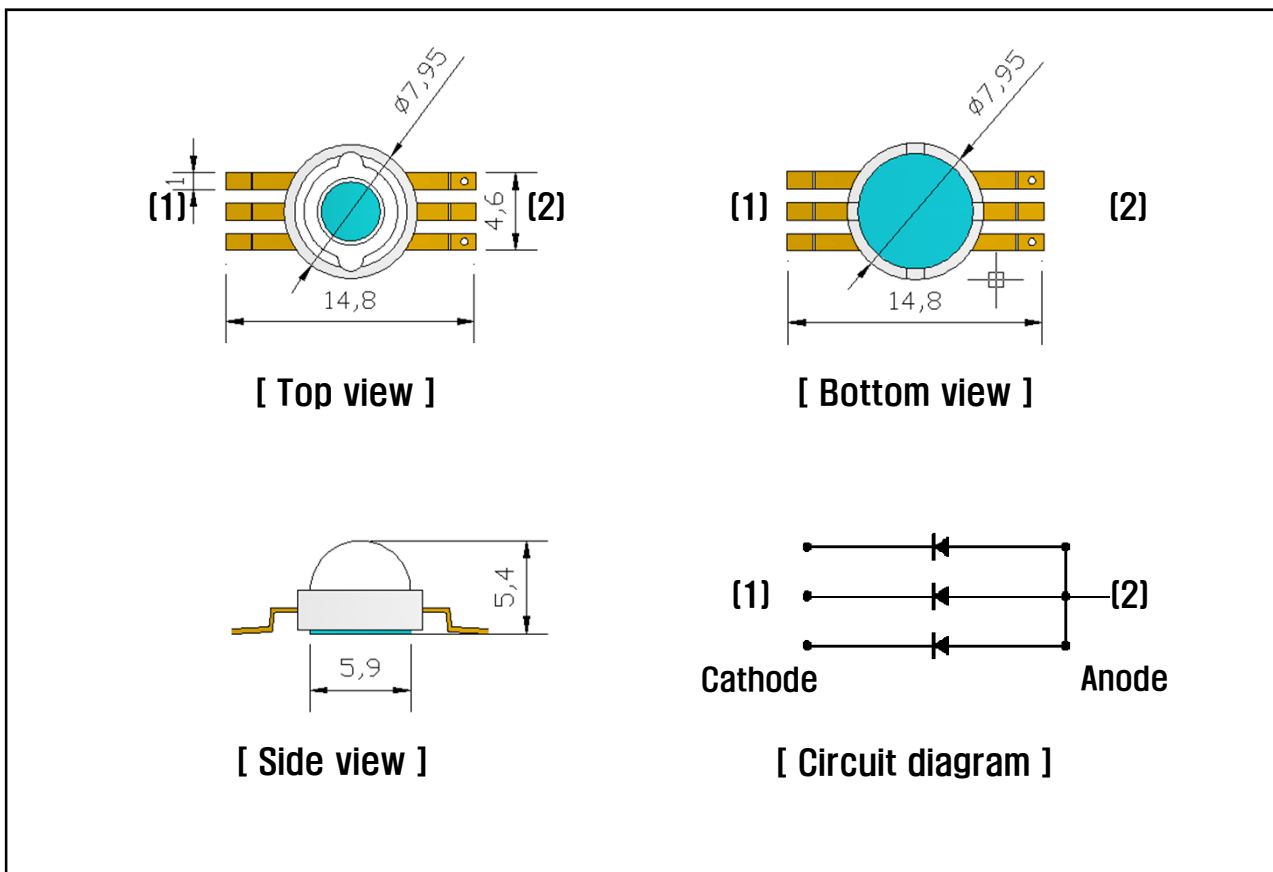
1. Features

- 3 Chip High-Luminosity SMD LED
- 7.95 x 14.8 x 5.4 mm (L x W x H), Low Thermal Resistance
- Wide Viewing Angle
- Long Operating Life

2. Applications

- Automotive: Backlight in Dashboard and Switch
- Lighting Device: Indicator, General Lighting
- Camera Flash, Hand Carrier Flash
- General Use

3. Outline Drawing and Dimension



Note

1. All dimensions are in millimeters
2. All dimensions without tolerances are for reference only

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4. Absolute Maximum Ratings($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Power Dissipation	P_d	1.19	mW
Continuous Forward Current	I_F	700	mA
Peak Forward Current ^{*1}	I_{FP}	1000	mA
Operating Temperature	T_{opr}	-30 ~ 85	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 ~ 100	$^\circ\text{C}$
Soldering Temperature	T_{sol}	260 (5sec)	$^\circ\text{C}$

*1 Duty ratio = 1/10, Pulse width = 0.1ms

5. Electro-optical Characteristics($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Forward Voltage	V_F	$I_F = 350\text{ mA}$	1.3	1.5	1.7	V
Reverse Current	I_R	$V_R = 5\text{ V}$	-	-	10	μA
Radiant Intensity ^{*2}	P_0	$I_F = 350\text{ mA}$	38	-	85	mW/sr
Peak Wavelength ^{*3}	W_p	$I_F = 350\text{ mA}$	835	-	860	nm
Viewing Angle ^{*4}	$2\theta_{1/2}$	$I_F = 350\text{ mA}$	-	120	-	$^\circ$

*2 Radiant Intensity is tested by a tester calibrated by CAS 140B(CIE LED_B) and has an accuracy of 10%

*3 Peak wavelength has an accuracy of $\pm 2\text{ nm}$.

*4 Viewing Angle is the angle until 50% of brightness measured from the front part of LED.

5.1 Radiant Intensity Rank

Rank	Radiant Intensity (mW/sr)
7	38 ~ 50
8	50 ~ 65
9	65 ~ 85

5.2 Forward Voltage

Rank	Forward Voltage (V)
1	1.3 - 1.7

5.3 Dominant Wavelength Rank

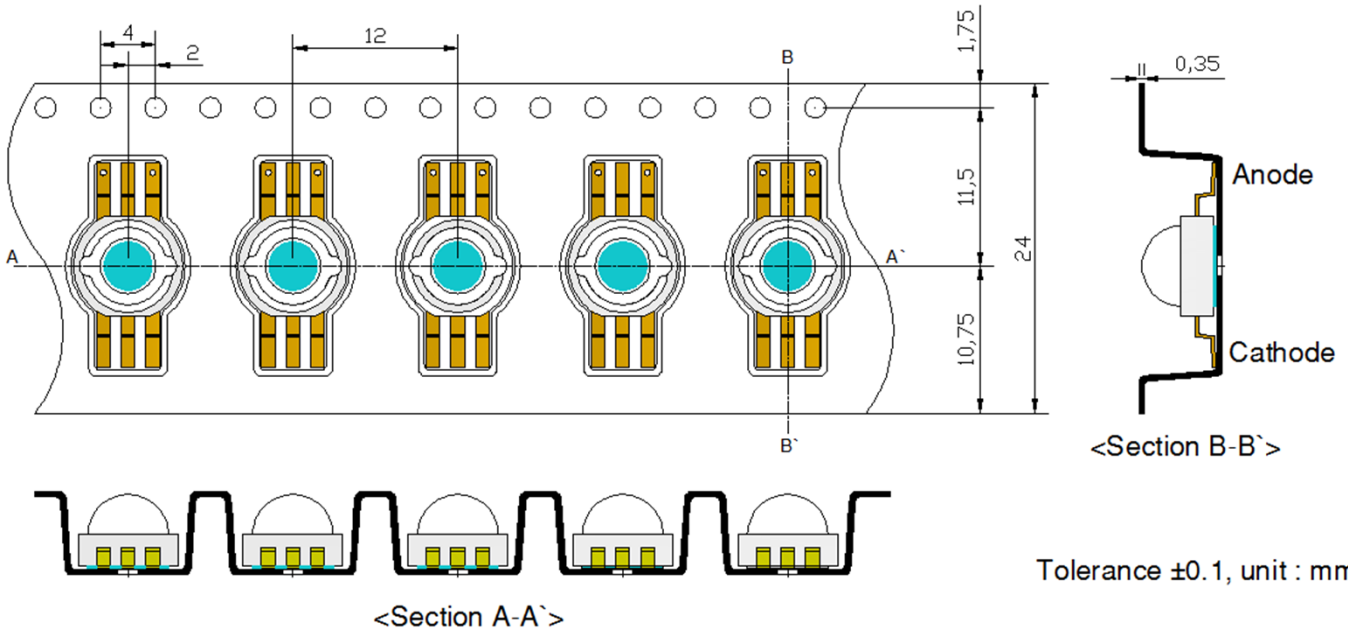
Rank	Peak wavelength (nm)
a	835 - 860

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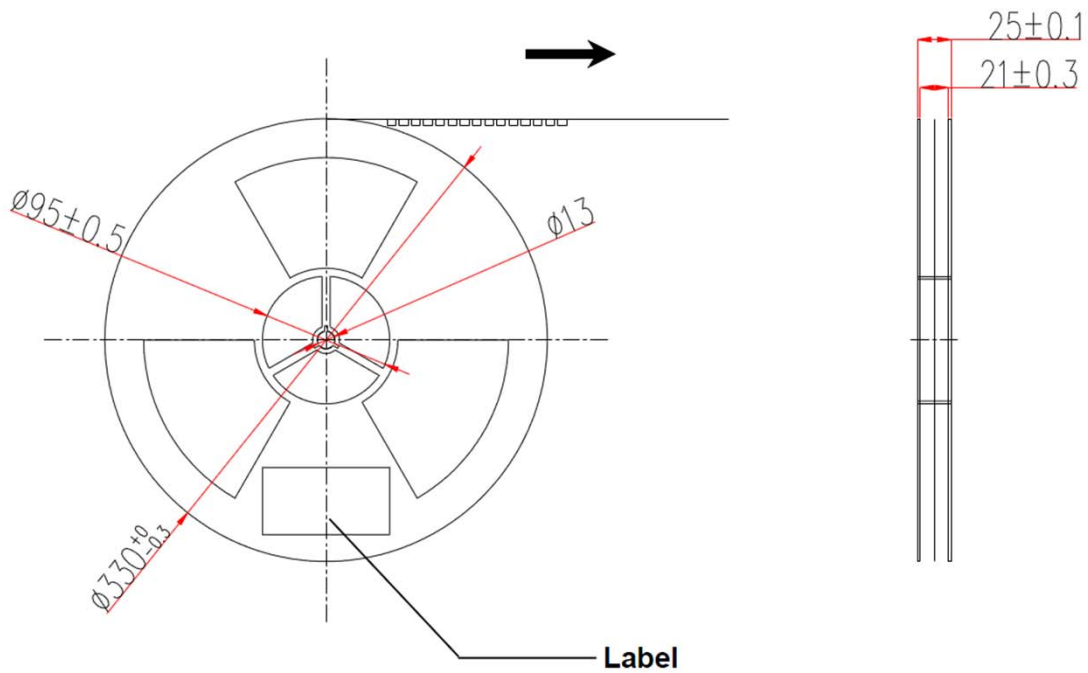
6. Dimension of Tape / Reel

6.1 Tape Dimension



Tolerance ± 0.1 , unit : mm

6.2 Reel Dimension

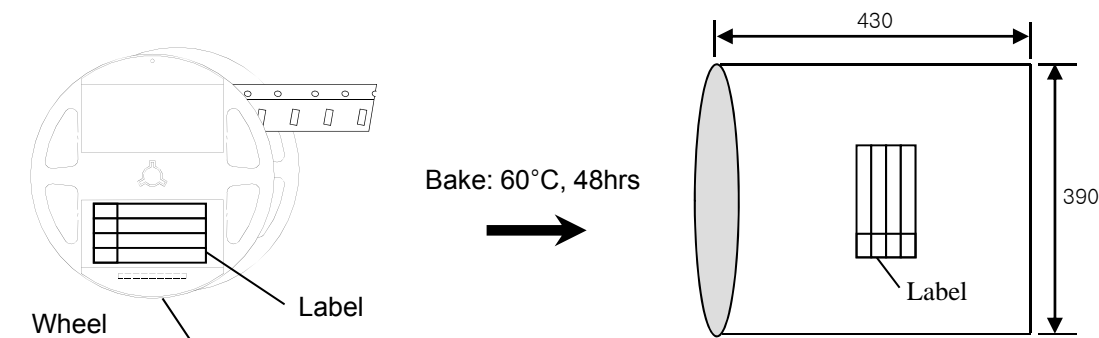


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7. Packing Dimension

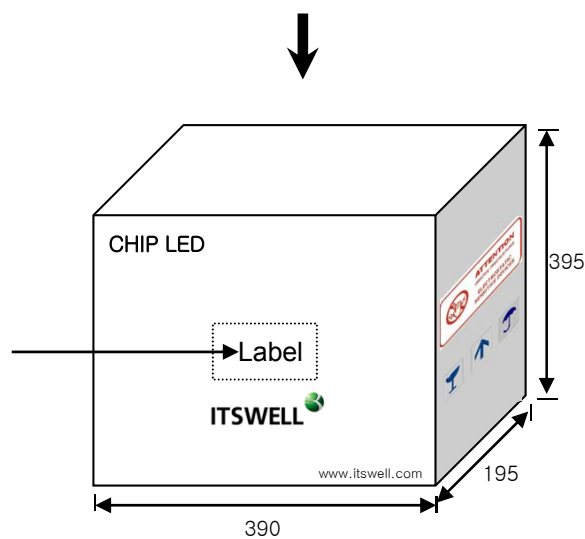
Unit :mm



Shield Bag(Polyester/Al/LDPE)
1 Reel/Bag (T = 0.1 mm) with Silica gel

Al Pack Label, Reel Label (70 × 37)

ITSWELL Lot : IWS-S83D3-EI-K3	MIN	AVG	MAX
mW/sr			
Vf			
Wp			
Q'ty :	yyyy/mm/dd		



	Dimensions (mm)	Reel /Box	Q'ty / Box(pcs)
Reel	Diameter :Φ330 Width :25	-	500 Max
Al Shield Bag	430x 390	-	500 Max
Outer Box	395 x 195 x 390	10 Max	5,000 Max