

Inolux Surface Mount High Power Ultraviolet LED IN-3021PUV

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Tentative Product	*****			IN-3021PUV
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DISCLAIMER

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1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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Label Specifications
INOLUX P/N:
I N - 3 0 2 1 P U V - X X X X

Series Name	Substrate / Emitting Color	Customer Code
IN-3021 Inolux 3021 package	3020 1 chip PLCC UV@390-420nm	XXXX Customer Product Code

Lot No.:

1	2	3	4	5	6	7	8	9	10
E	1	A	1	A	2	2	L	1	2
Code 1 2		Code 3	Code 4	Code 5	Code 6	Code 7	Code 8	Code 9	Code 10
		Mfg. Year	Mfg. Month	Mfg. Date	Consecutive number		Special code		
Internal Tracing Code		2010-A 2011-B 2012-C 2013-D . .	1:Jan. 2:Feb. ... A:Oct. B:Nov. C:Dec.	1:A 2:B 3:C ... 26:Z 27:7 28:8 29:9 30:3 31:4	01~ZZ		000~ZZZ		

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Product Characteristics

Absolute Maximum Ratings

(T_j =25 °C)

Parameter	Rating
Electrostatic Discharge	200V
LED Operating Temperature	-40°C ~ 85°C
Storage Temperature	-40°C ~ 100°C
Soldering Temperature	Max. 245°C / Max. 5 sec.

Electro-Optical Characteristics@150mA

(T_j 25 °C)

Parameter	Symbol	Min	Typ	Max	Unit	Test
Luminous Intensity	I _v	12	15	25	mW	I _f =20mA
Viewing Angle	2θ _{1/2}	-	120	-	Deg	I _f =20mA
Peak Emission Wavelength	λ _p	390	-	425	nm	I _f =20mA
Forward Voltage	V _f	-	3.3	4.0	V	I _f =20mA
Power Dissipation	P _d	-	66	-	mW	I _f =20mA

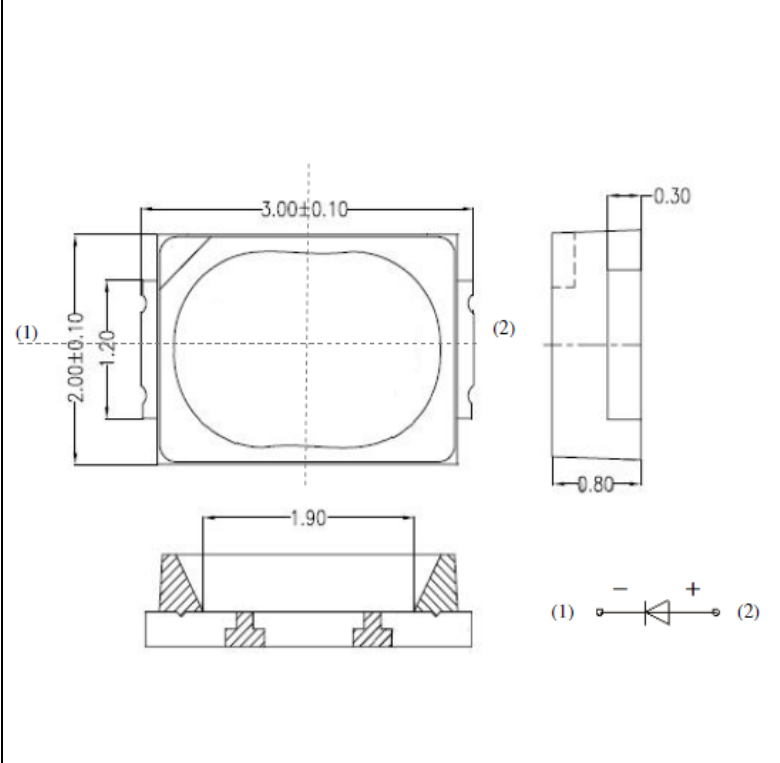
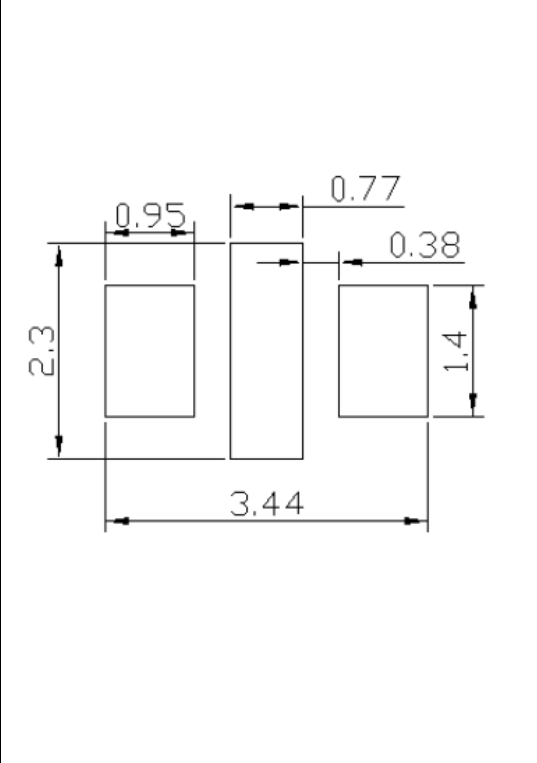
Notes:

1. Radiometric power is measured with an accuracy of ±10%
2. The forward voltage is measured with an accuracy of ±0.1V

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**Package Outline Dimension
Recommended Soldering Pattern for Reflow Soldering**

Unit: mm Tolerance: +/-0.13

Outline Dimension	Solder Pattern
 <p> The 'Outline Dimension' section contains three drawings: a top view showing a square package with a rounded center, a side view showing the package height, and a cross-sectional view showing the internal structure. Dimensions include a total width of 3.00 ± 0.10 mm, a total height of 2.00 ± 0.10 mm, a central width of 1.20 mm, a side view height of 0.30 mm, a base width of 1.90 mm, and a base thickness of 0.80 mm. A schematic symbol for a diode is shown with terminals (1) and (2) and polarity markings (-) and (+). </p>	 <p> The 'Solder Pattern' section shows a top view of the solder pads. Dimensions include a total width of 3.44 mm, a total height of 2.3 mm, a central pad width of 0.95 mm, a distance from the center to the right edge of 0.77 mm, a distance from the center to the left edge of 0.38 mm, and a pad height of 1.4 mm. </p>
Soldering terminals may shift in the x, y direction.	Unit: mm

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Characteristic Curves

Relative Spectral Power Distribution, $T_a=25\text{ }^\circ\text{C}$

UV

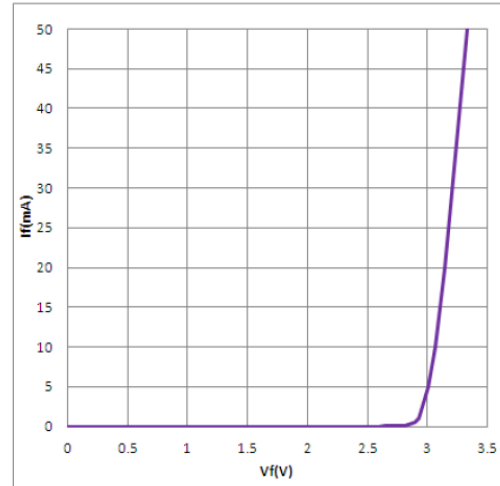
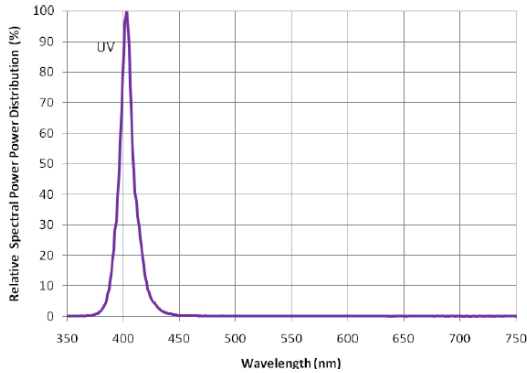


Fig-1 Forward Current vs. Forward Voltage.

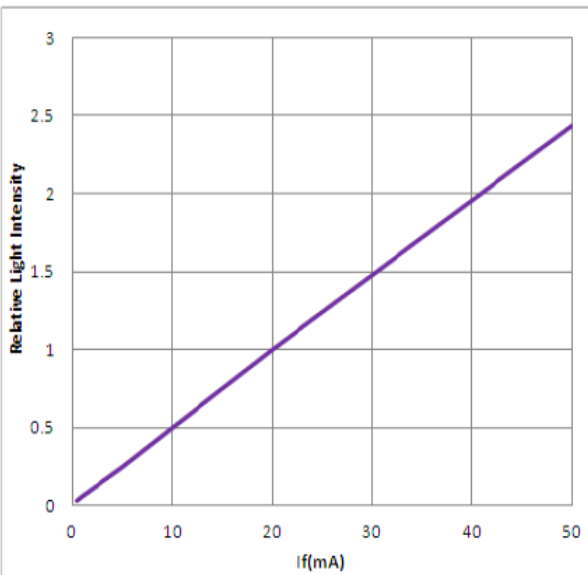
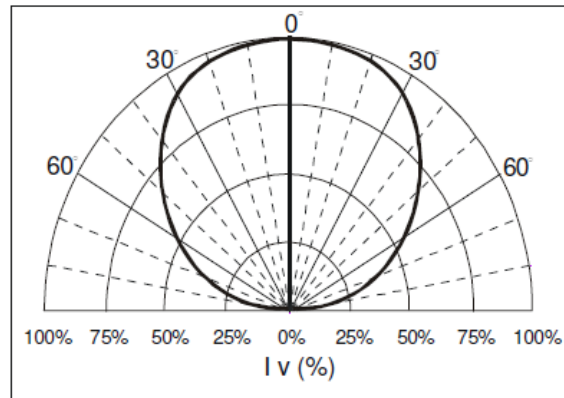


Fig-2 Relative Intensity vs. Forward Current.

Beam Pattern



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Manual Soldering using Soldering Iron

The manual soldering process is not recommended for quality consideration. When it is absolutely necessary, the LEDs may be mounted in this fashion but the user will assume responsibility for any problems.

The following conditions are recommended:

- (1) Soldering material: SN60 (60% tin and 40% lead) solder or with silver content is recommended.
- (2) Temperature of the iron : lower than 300°C
- (3) Soldering time: maximum 3 seconds
- (4) Operation cautions:
 - Please avoid overheating of LED component in any process. Overheating may damage the LED package.
 - Please don't place any stress on the lens of LED, especially at high temperature

Reflow Soldering

To prevent LED from cracking in reflow process, it's better to bake LED components before reflow soldering. After the package sealing bag is opened, please use the LED device as soon as possible to keep LED from moisture.

It's banned to load any stress on the resin during soldering. Please never take next process until the component is cooled down to room temperature after reflow. And, the manual soldering process is not recommended for quality consideration.

To ensure the performance of LED device, it is recommended to set up a reflow profile at lower temperature.

Recommended soldering paste specifications:

Contains: Sn 63%, Pb 37%(Melting temperature: 178~192°C)

The recommended reflow soldering profile (measure point is near the bottom of the LED package) is following:

Figure 1:
Recommended Sn-Pb IR-Reflow Soldering Profile

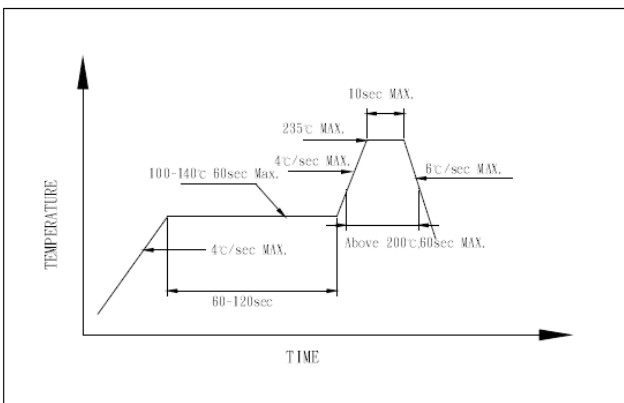
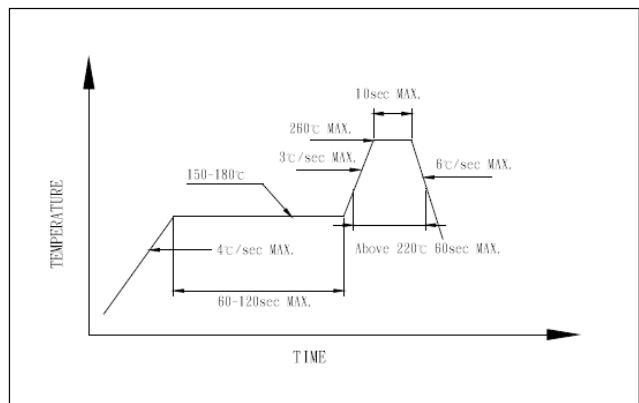
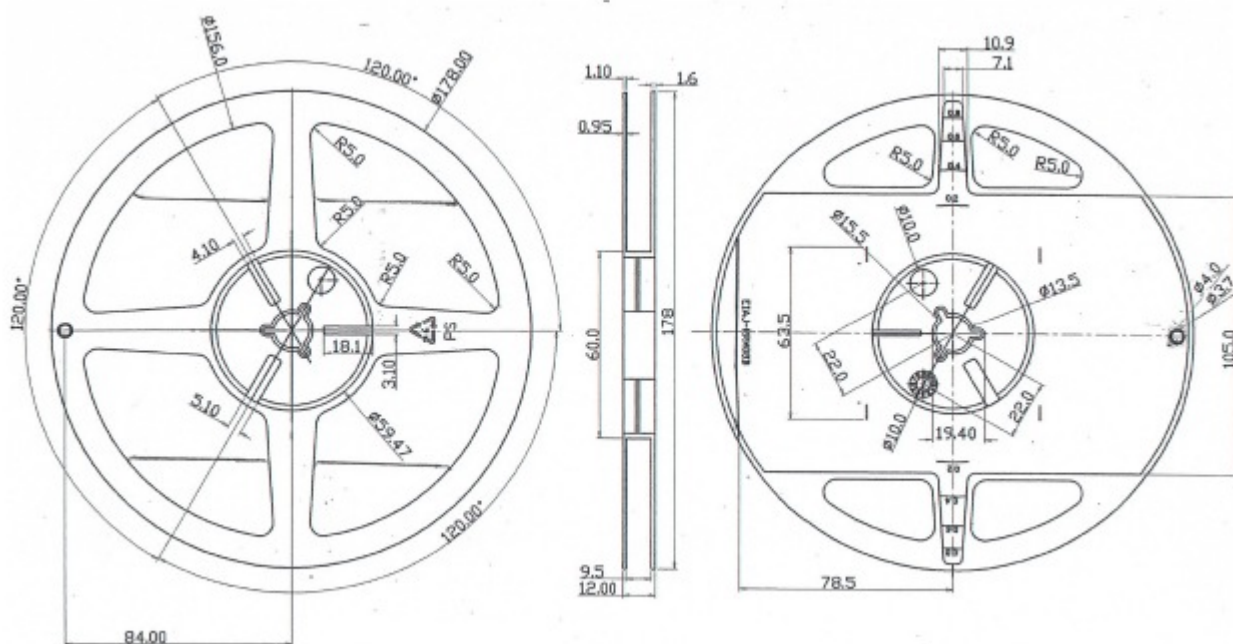
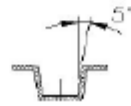
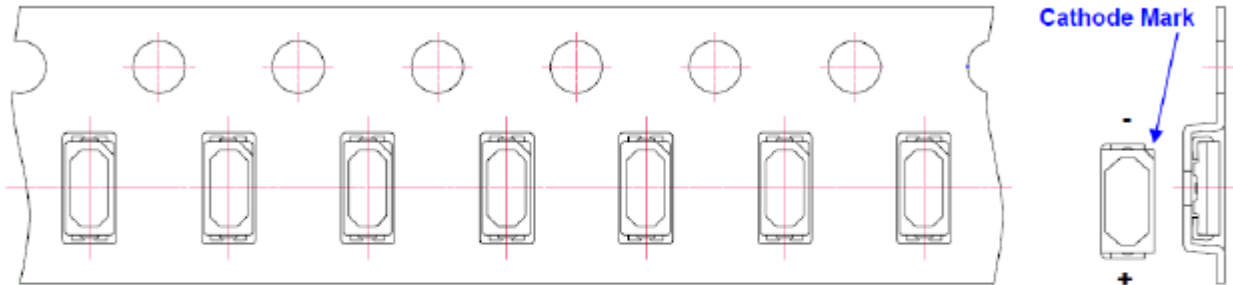


Figure 2:
Recommended Pb-free Soldering Profile



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Packing Information


Note : All Dimensions are in millimeter

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Revision History

Changes since last revision	Page	Version No.	Revision Date
Initial release		1.0	04-21-2014

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