

Inolux Surface Mount High Power LED IN-505FCHWV

Official Product	Product: IN-505FCHWV			Data Sheet No.
Tentative Product	*****			IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Oct. 03, 2014	Version of 1.0	Page 1/12

DISCLAIMER	3
LABEL SPECIFICATIONS	4
PRODUCT CHARACTERISTICS	5
ABSOLUTE MAXIMUM RATINGS	5
ELECTRO-OPTICAL CHARACTERISTICS	6
PACKAGE OUTLINE DIMENSION	7
RECOMMENDED SOLDERING PATTERN FOR REFLOW SOLDERING	7
CHARACTERISTIC CURVES	8
REFLOW SOLDERING	10
PACKING INFORMATION	11
REVISION HISTORY	12

Official Product	Product: IN-505FCHWV			Data Sheet No.
Tentative Product	*****			IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Oct. 03, 2014	Version of 1.0	Page 2/12

DISCLAIMER

INOLUX reserves the right to make changes without further notice to any products herein to improve reliability, function or design. INOLUX does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

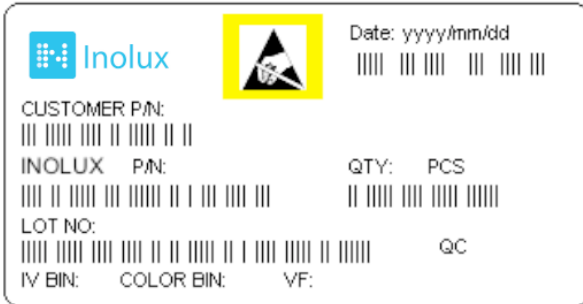
LIFE SUPPORT POLICY

INOLUX's products are not authorized for use as critical components in life support devices or systems without the express written approval of the President of INOLUX or INOLUX Technologies. As used herein:

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.

Official Product	Product: IN-505FCHWV			Data Sheet No.
Tentative Product	*****			IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.		Oct. 03, 2014	Version of 1.0	Page 3/12

Label Specifications



INOLUX P/N:

I N - 5 0 5 F C H W V - X X X X

Series Name	Substrate / Emitting Color	Customer Code
IN-505 Inolux 5050 package	FCHW - RGB White V - 700mA	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		

Official Product	Product: IN-505FCHWV	Data Sheet No.
Tentative Product	*****	IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0
		Page 4/12

Product Characteristics

Absolute Maximum Ratings

(T_j =25 °C)

Parameter	Symbol	Rating	Unit
DC Forward Current (mA)	I _f	700mA	mA
Peak Pulsing Current	I _{Peak}	1000mA	mA
Reverse Voltage	V _R	5	V
LED Junction Temperature	T _J	125°C	°C
LED Operating Temperature	T _{Opr}	-40°C ~ 85°C	°C
Storage Temperature	T _{Stg}	-40°C ~ 110°C	°C
Soldering Temperature at T _p (JEDEC-020-D)	T _{sol}	20~40 sec.	s
ESD Sensitivity	HBM	8,000V (MIL-STD-883G Class 3B)	V
	MM	400V (JESD22-A115-B Class C)	V

Official Product	Product: IN-505FCHWV		Data Sheet No.
Tentative Product	*****		IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0	Page 5/12

Electro-Optical Characteristics
--

(T_j 25 °C)

Part Number	Color	CCT / Dominate Wavelength		Luminous Flux (lm) @ 350mA	Luminous Flux (lm) @ 700mA	Forward Voltage @ 700mA	
		Min	Max			Min	Max
IN-505FCHWV	Red	620nm	630nm	>45	80-113.6	2.1	3.2
	Green	515nm	535nm	>100	150-195	3.2	4.2
	Blue	455nm	470nm	>18	25-39.8	3.2	4.0
	White	5000k	8300k	>100	180-220	3.2	4.0

Notes:

1. The peak/dominant wavelength is measured with an accuracy of ±1nm.
2. Luminous Flux is measured with an accuracy of ±10%
3. The forward voltage is measured with an accuracy of ±0.2V
4. Never operate the LEDs in reverse bias.
5. Do not drive at rated current for more than 5 seconds without proper thermal management.
6. When the LEDs are illuminating, operating current should be decided after considering the packages maximum temperature.
7. Caution: These devices emit high intensity light. Necessary precautions must be taken during operation. Do not look directly into the light or look through the optical system when in operation. Protective eyewear should be worn at all times during operation.

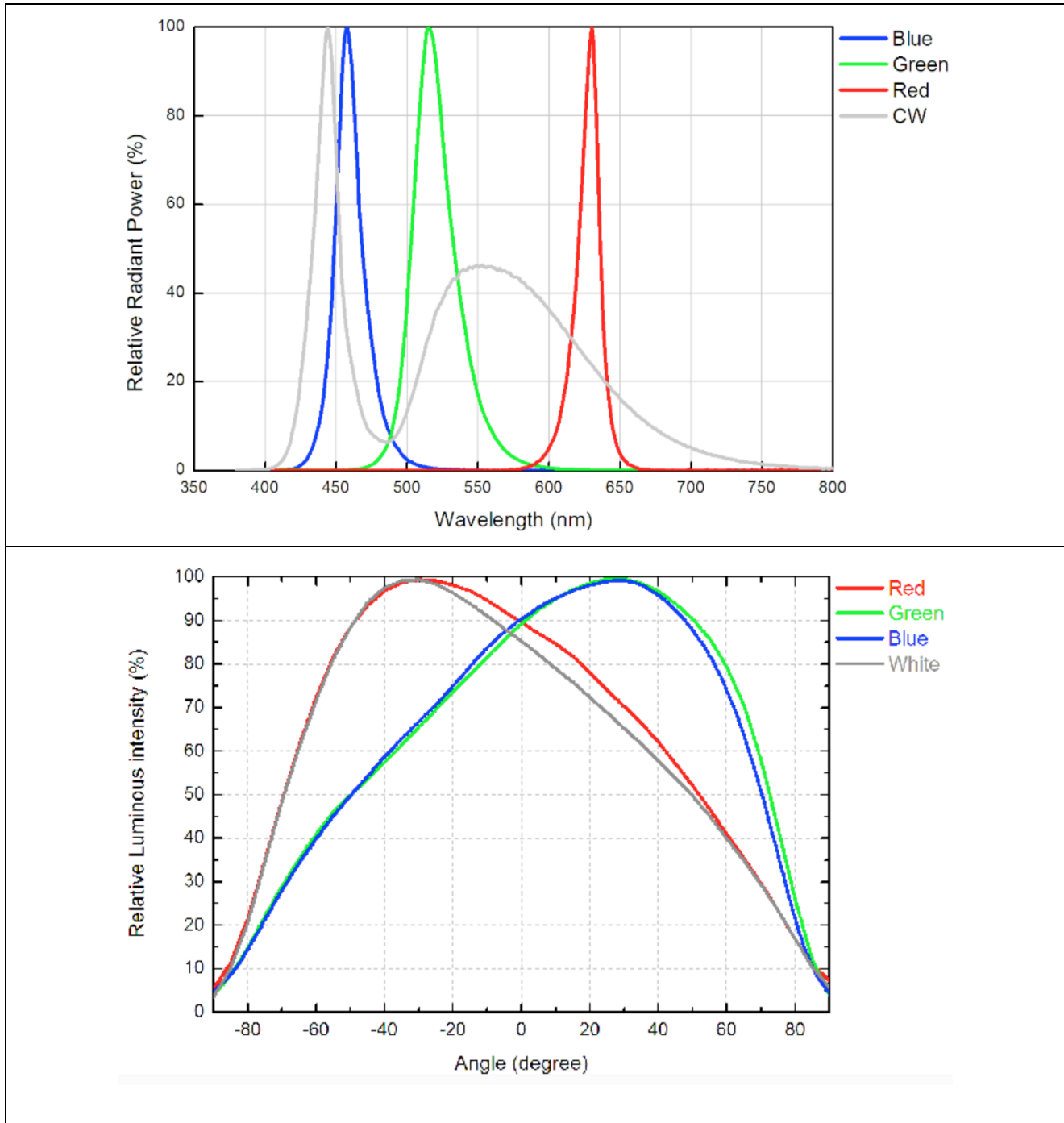
Official Product	Product: IN-505FCHWV	Data Sheet No.
Tentative Product	*****	IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0
		Page 6/12

Package Outline Dimension
Recommended Soldering Pattern for Reflow Soldering

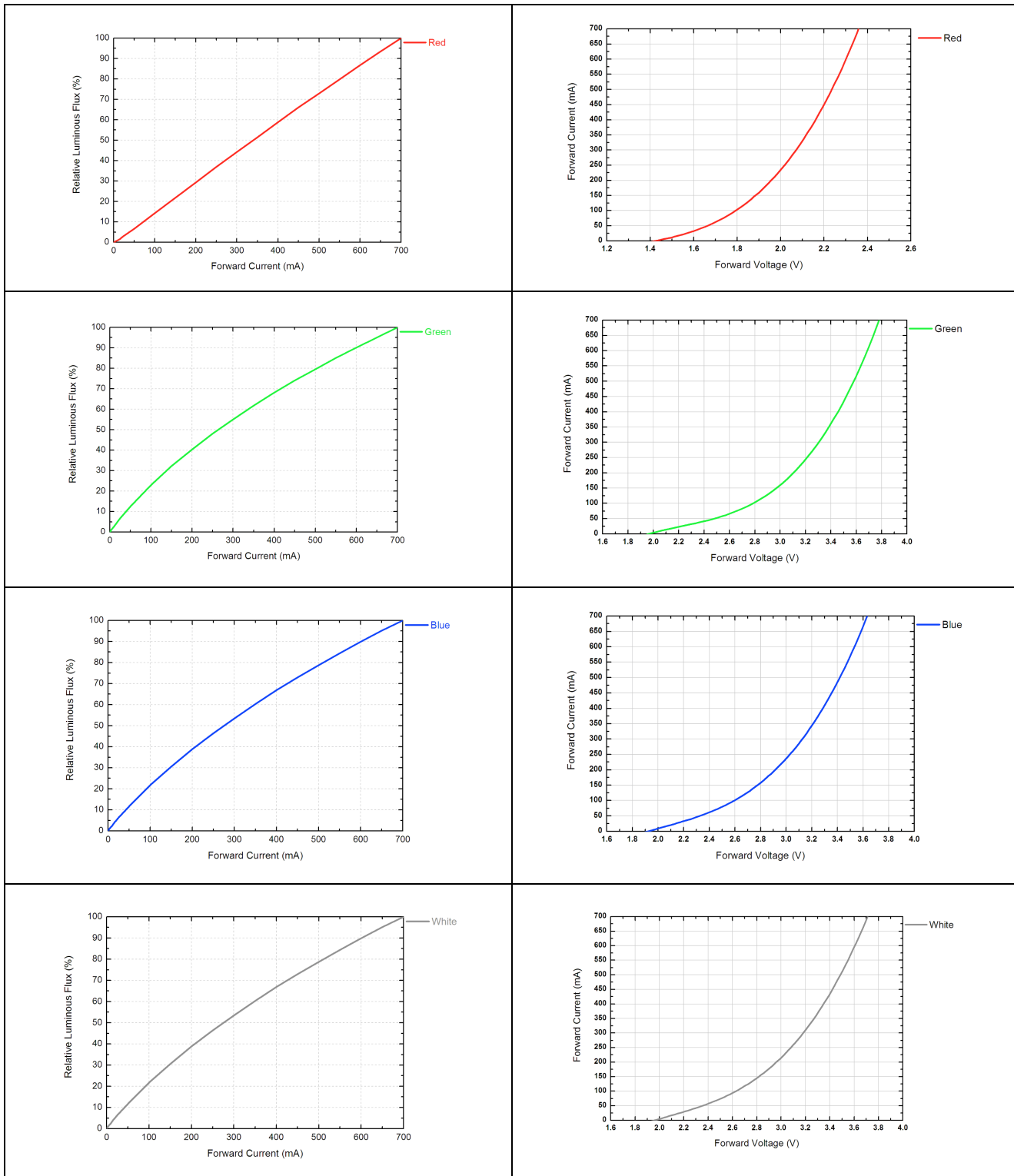
Unit: mm Tolerance: +/-0.13

Outline Dimension		Solder Pattern													
		<p>Recommended Soldering Pad Design</p>													
		<p>Recommended Stencil Pattern Design (Marked Area is Opening)</p>													
	<table border="1"> <thead> <tr> <th>Chip</th> <th>Color</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Red</td> </tr> <tr> <td>B</td> <td>Green</td> </tr> <tr> <td>C</td> <td>Blue</td> </tr> <tr> <td>D</td> <td>White</td> </tr> <tr> <td>-</td> <td>-</td> </tr> </tbody> </table>	Chip	Color	A	Red	B	Green	C	Blue	D	White	-	-	<p>Unit: mm</p>	
Chip	Color														
A	Red														
B	Green														
C	Blue														
D	White														
-	-														
<p>Soldering terminals may shift in the x, y direction.</p>															

Official Product	Product: IN-505FCHWV	Data Sheet No.
Tentative Product	*****	IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0
		Page 7/12

Characteristic Curves


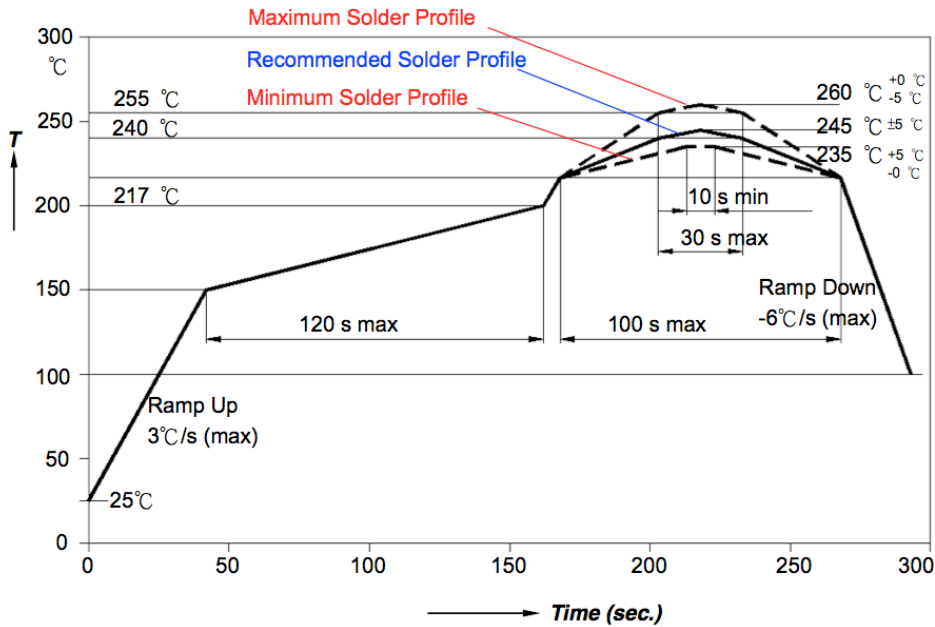
Official Product	Product: IN-505FCHWV	Data Sheet No.	
Tentative Product	*****	IN-505FCHWV	
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0	Page 8/12



Official Product	Product: IN-505FCHWV	Data Sheet No.
Tentative Product	*****	IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0
		Page 9/12

Reflow Soldering

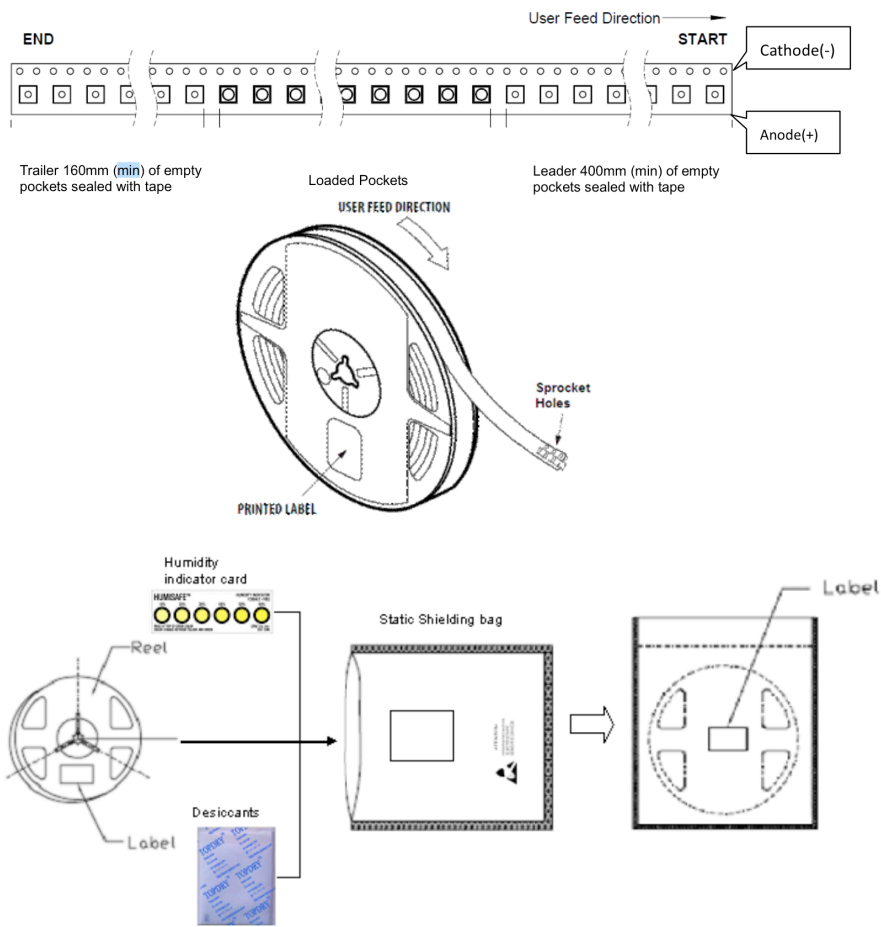
The LEDs can be soldered using the parameter listed below. As a general guideline, the users are suggested to follow the recommended soldering profile provided by the manufacturer of the solder paste. Although the recommended soldering conditions are specified in the list, reflow soldering at the lowest possible temperature is preferred for the LEDs.



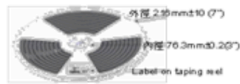
Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average Ramp-up Rate (Ts _{max} to Tp)	3°C/second max.	3°C/second max.
Preheat		
- Temperature Min(Ts _{min})	100°C	150°C
- Temperature Max(Ts _{max})	150°C	200°C
- Time(ts _{min} to ts _{max})	60-120 seconds	60-180 seconds
Time maintained above:		
- Temperature(T _L)	183°C	217°C
- Time(t _L)	60-150 seconds	60-150 seconds
Peak/classification Temperature(Tp)	215°C	240°C
Time within 5°C of actual Peak Temperature(tp)	10-30 seconds	20-40 seconds
Ramp-Down Rate	6°C/second max.	6°C/second max.
Time 25°C to Peak Temperature	6 minutes max.	8 minutes max.

Official Product	Product: IN-505FCHWV	Data Sheet No.
Tentative Product	*****	IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0
		Page 10/12

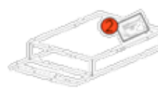
Packing Information



MFG Packing



Ship out packing Step



1 bag in an inner box = 400pcs

FG in after OQC Packing



1 reel in a bag = 400pcs



Small size: 5 inner box in an outer box = 2000pcs

Note : All Dimensions are in millimeter

Official Product	Product: IN-505FCHWV	Data Sheet No.
Tentative Product	*****	IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0
		Page 11/12

Revision History

Changes since last revision	Page	Version No.	Revision Date
Initial release		1.0	10-03-2014

Official Product	Product: IN-505FCHWV		Data Sheet No.
Tentative Product	*****		IN-505FCHWV
Specifications are subject to change without notice. Data and drawings herein are copyrighted.	Oct. 03, 2014	Version of 1.0	Page 12/12