

**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.

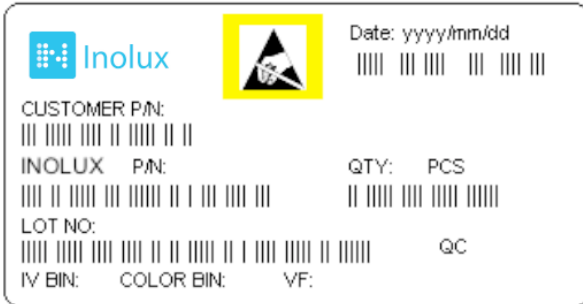
LIFE SUPPORT POLICY

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.

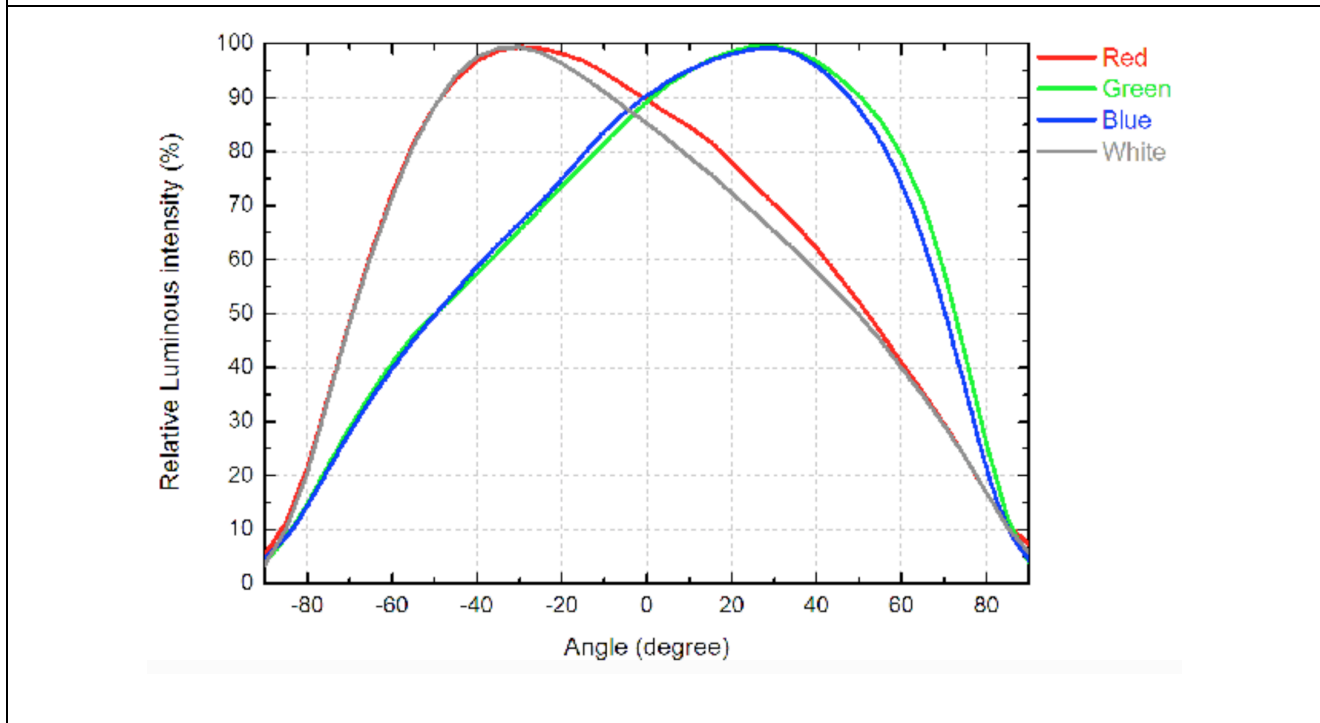
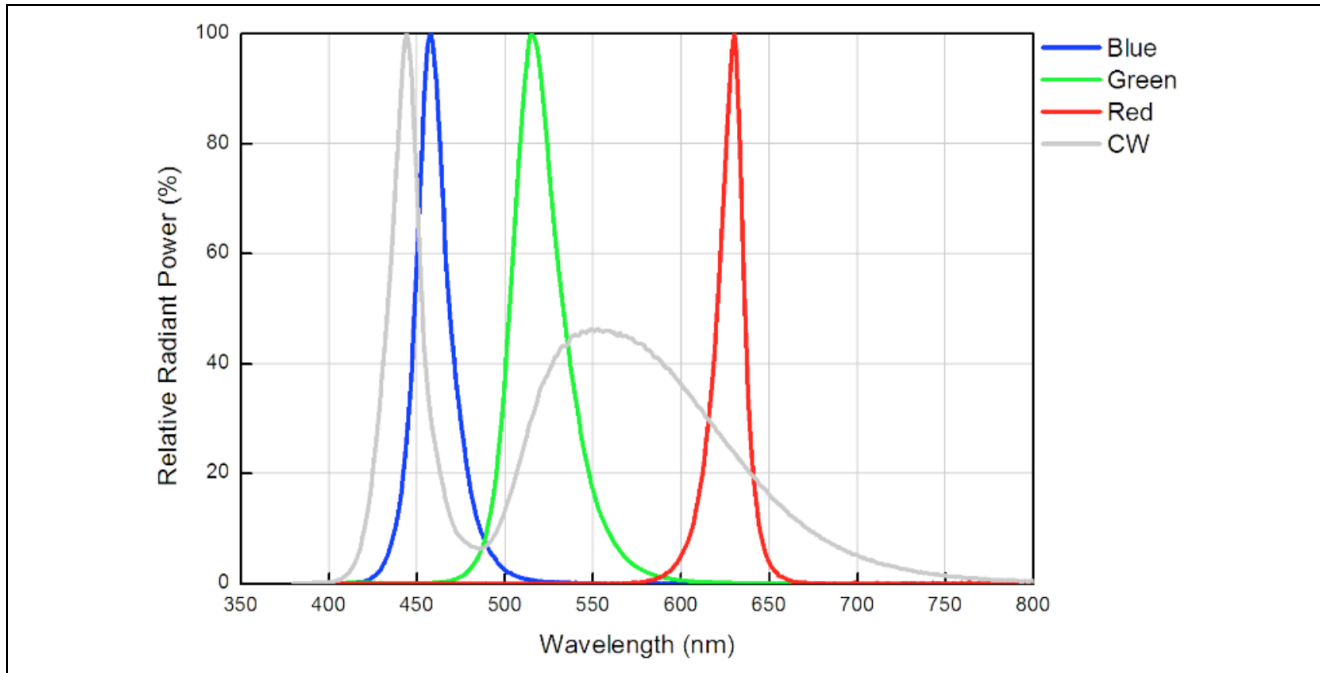
| | | |
|--|----------------------|----------------|
| Official Product | Product: IN-505FCHWV | Data Sheet No. |
| Tentative Product | ***** | IN-505FCHWV |
| Specifications are subject to change without notice. Data and drawings herein are copyrighted. | Oct. 03, 2014 | Version of 1.0 |
| | | Page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

Package Outline Dimension
Recommended Soldering Pattern for Reflow Soldering

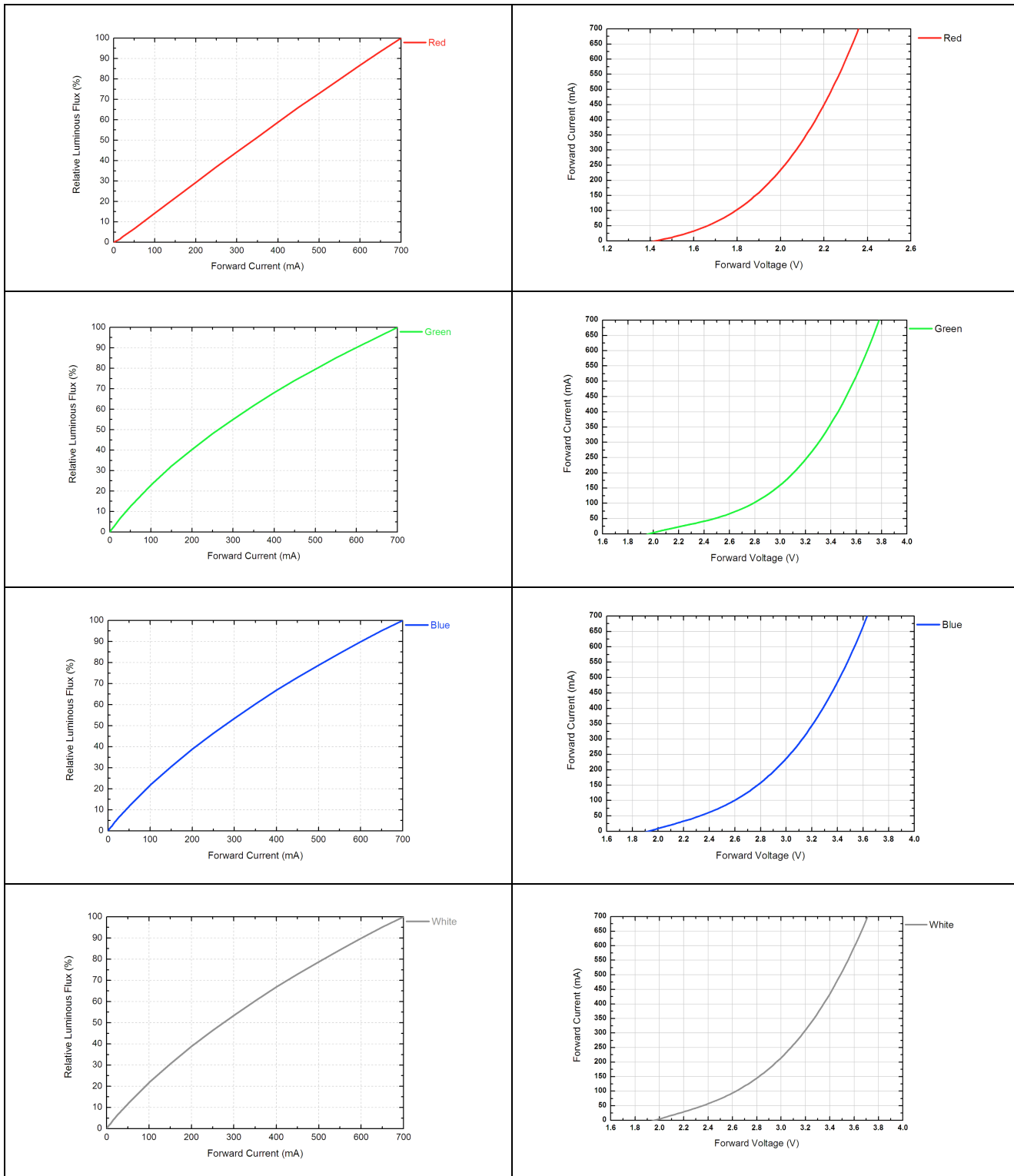
Unit: mm Tolerance: +/-0.13

| 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 | - | - |
| Chip | Color | | | | | | | | | | | | | | |
| A | Red | | | | | | | | | | | | | | |
| B | Green | | | | | | | | | | | | | | |
| C | Blue | | | | | | | | | | | | | | |
| D | White | | | | | | | | | | | | | | |
| - | - | | | | | | | | | | | | | | |
| | | <p>Soldering terminals may shift in the x, y direction.</p> | | | | | | | | | | | | | |
| | | Unit: mm | | | | | | | | | | | | | |

| | | |
|--|----------------------|----------------|
| 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


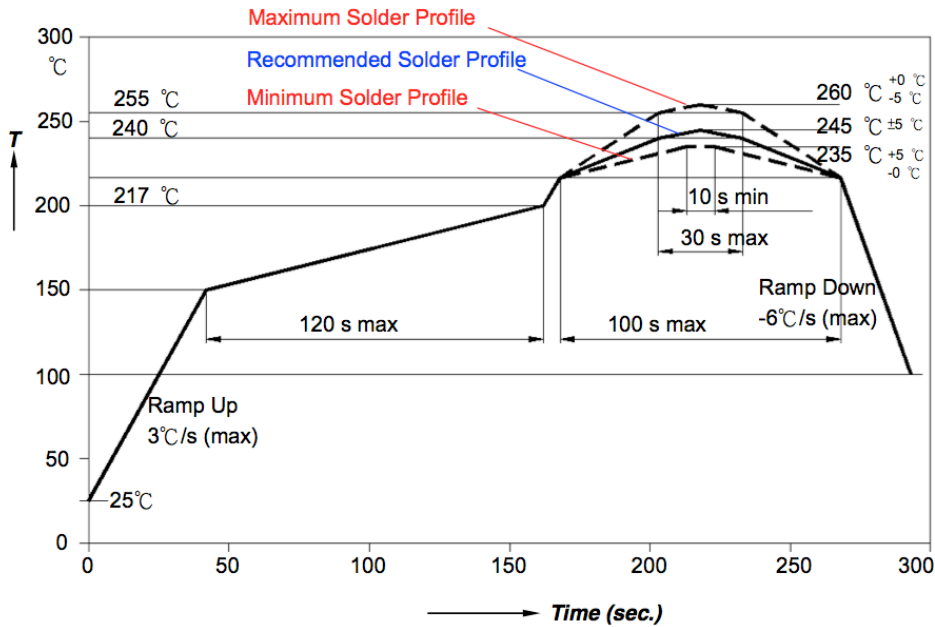
| | | | |
|--|----------------------|----------------|-----------|
| Official Product | Product: IN-505FCHWV | Data Sheet No. | |
| Tentative Product | ***** | IN-505FCHWV | |
| Specifications are subject to change without notice. Data and drawings herein are copyrighted. | Oct. 03, 2014 | Version of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

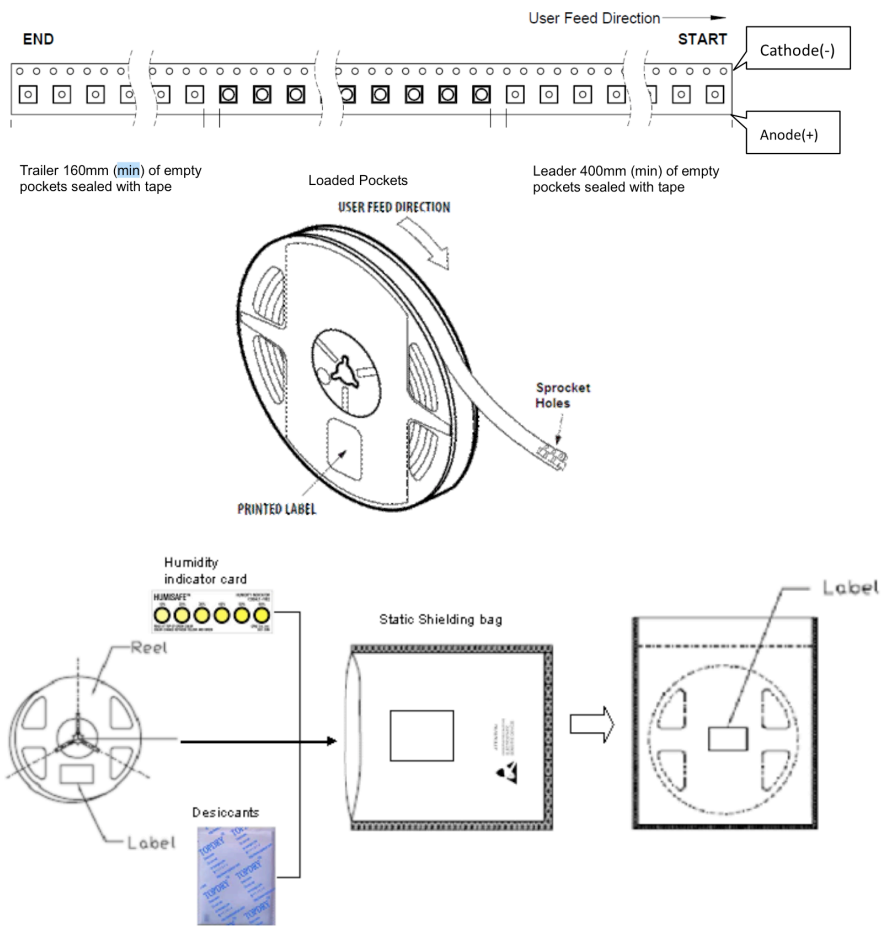
The LEDs can be soldered using the parameter listed below. As a general guideline, the users are suggested to follow the recommended soldering profile provided by the manufacturer of the solder paste. Although the recommended soldering conditions are specified in the list, reflow soldering at the lowest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



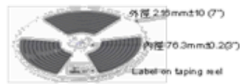
| Profile Feature | Sn-Pb Eutectic Assembly | Pb-Free Assembly |
|---|-------------------------|------------------|
| Average Ramp-up Rate (Ts _{max} to Tp) | 3°C/second max. | 3°C/second max. |
| Preheat | | |
| - Temperature Min(Ts _{min}) | 100°C | 150°C |
| - Temperature Max(Ts _{max}) | 150°C | 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 |

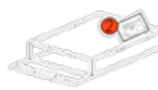
Packing Information



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 |

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: ocean@oceanchips.ru

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А