

**■Description**

- LED Kit contains Multi-voltage DC3-15V LEDs, mounting clips and heat shrink tubes
- 306pcs are supplied in a storage box for easy storage
- Wide input voltage range (3-15V)
- With built-in resistor, direct use
- Cost effective (save space and resistor cost)
- Supplied with accessories, user-friendly
- Widely applied to project design, Arduino/Pi Pico/ Steam kit, TTL/Cmos compatible applications

**■Features**

- 3mm/5mm/8mm round standard 30° directivity
- Red/Yellow/Blue/Pure Green/Warm White/Cool White
- Color transparent type
- Single part clips for LED mounting
- Fitted with heat shrink tubing(UL-E329530)

**■ Product Picture**

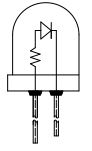
**306pcs/Box (Dimensions: 195\*130\*36mm)**



**■Kit Contents**

| Section | Contents                          | Pcs | P/N          | Spec   |
|---------|-----------------------------------|-----|--------------|--------|
| 1       | 3mm Multi-voltage LED, Red        | 12  | OSR53133A-VV | Page 2 |
| 2       | 3mm Multi-voltage LED, Yellow     | 12  | OSY53133A-VV |        |
| 3       | 3mm Multi-voltage LED, Blue       | 12  | OSB53133A-VV |        |
| 4       | 3mm Multi-voltage LED, Pure Green | 12  | OSG53133A-VV |        |
| 5       | 3mm Multi-voltage LED, Warm White | 12  | OSM53131A-VV |        |
| 6       | 3mm Multi-voltage LED, Cool White | 12  | OSW53131A-VV |        |
| 7       | 3mm LED Mounting Clip             | 12  | OESC-3       | Page5  |
| 8       | Φ1.5mm Red Heat Shrink Tubing     | 24  | OEHS1520RX   | Page6  |
|         | Φ1.5mm Black Heat Shrink Tubing   | 24  | OEHS1520BK   |        |
| 9       | 5mm Multi-voltage LED, Red        | 12  | OSR55133A-VV | Page3  |
| 10      | 5mm Multi-voltage LED, Yellow     | 12  | OSY55133A-VV |        |
| 11      | 5mm Multi-voltage LED, Blue       | 12  | OSB55133A-VV |        |
| 12      | 5mm Multi-voltage LED, Pure Green | 12  | OSG55133A-VV |        |
| 13      | 5mm Multi-voltage LED, Warm White | 12  | OSM55131A-VV |        |
| 14      | 5mm Multi-voltage LED, Cool White | 12  | OSW55131A-VV |        |
| 15      | 5mm LED Mounting Clip             | 12  | OESC-5       | Page5  |
| 16      | Φ1.5mm Yellow Heat Shrink Tubing  | 12  | OEHS1520YX   | Page6  |
|         | Φ1.5mm Green Heat Shrink Tubing   | 12  | OEHS1520GX   |        |
| 17      | 8mm Multi-voltage LED, Red        | 6   | OSR58133A-VV | Page4  |
| 18      | 8mm Multi-voltage LED, Yellow     | 6   | OSY58133A-VV |        |
| 19      | 8mm Multi-voltage LED, Blue       | 6   | OSB58133A-VV |        |
| 20      | 8mm Multi-voltage LED, Pure Green | 6   | OSG58133A-VV |        |
| 21      | 8mm Multi-voltage LED, Warm White | 6   | OSM58131A-VV |        |
| 22      | 8mm Multi-voltage LED, Cool White | 6   | OSW58131A-VV |        |
| 23      | 8mm LED Mounting Clip             | 6   | OESC-8       | Page5  |
| 24      | Φ1.5mm Blue Heat Shrink Tubing    | 12  | OEHS1520BX   | Page6  |
|         | Φ1.5mm White Heat Shrink Tubing   | 12  | OEHS1520WX   |        |

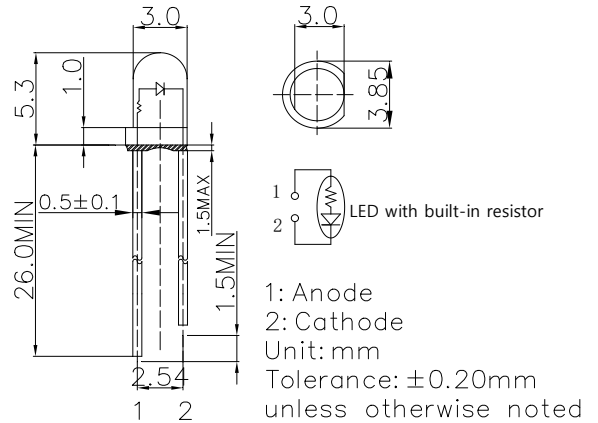




**■Description**

This LED builds with internal resistor to operate with wide operation voltage of DC3-15V.

**■Outline Dimension**



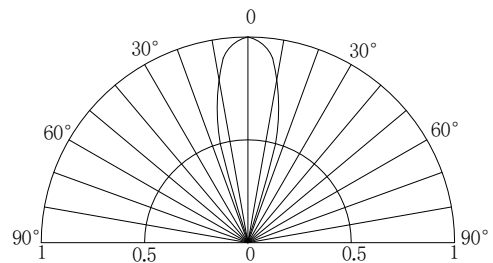
**■Features**

- Wide Input Voltage
- Cost Saving and Space Saving
- Color Transparent Type
- Single Color

**■Applications**

- Toys/Game/Audio
- TTL/Cmos Compatible
- Arduino/Pi Pico/Steam Kit
- Other Electronics Products

**■Directivity**

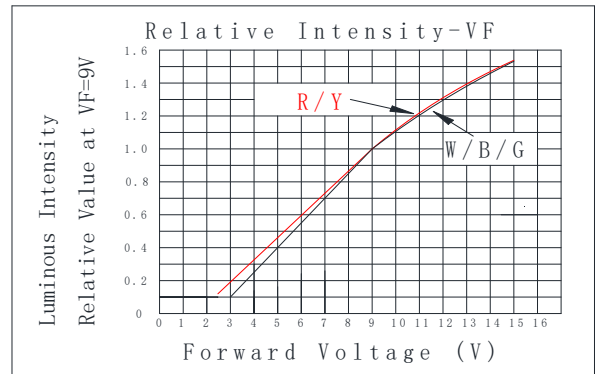


**■Absolute Maximum Rating**

(Ta=25°C)

| Item                       | Symbol           | Value      | Unit |
|----------------------------|------------------|------------|------|
| DC Forward Voltage         | V <sub>F</sub>   | 15         | V    |
| Reverse Voltage            | V <sub>R</sub>   | 12         | V    |
| Power Dissipation          | P <sub>D</sub>   | 190        | mW   |
| Operating Temperature      | T <sub>opr</sub> | -30 ~ +85  | °C   |
| Storage Temperature        | T <sub>stg</sub> | -40 ~ +100 | °C   |
| Lead Soldering Temperature | T <sub>sol</sub> | 260°C/5sec | -    |

**■Optical Characteristic Curves**



**■Electrical -Optical Characteristics**

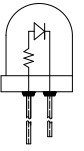
(Ta=25°C)

| 3mm Multi-Voltage LED                   |                 |                    |                  |                   |              |              |
|---|-----------------|--------------------|------------------|-------------------|--------------|--------------|
| <b>LED P/N</b>                          | OSR53133A-VV    | OSY53133A-VV       | OSB53133A-VV     | OSG53133A-VV      | OSM53131A-VV | OSW53131A-VV |
| <b>Light Color</b>                      | Red             | Yellow             | Blue             | Pure Green        | Warm White   | Cool White   |
| <b>Lens Color</b>                       | Red Transparent | Yellow Transparent | Blue Transparent | Green Transparent | Water Clear  | Water Clear  |
| <b>Wavelength*1/Color Temperature*2</b> | 620-630nm       | 585-595nm          | 465-475nm        | 520-530nm         | 2700-3300K   | 8500-18000K  |
| <b>Luminous Intensity(typ.)*3</b>       | 2180mcd         | 2180mcd            | 1560mcd          | 4200mcd           | 4200mcd      | 4200mcd      |
| <b>Forward Voltage(typ.)</b>            | 9V              | 9V                 | 9V               | 9V                | 9V           | 9V           |
| <b>Forward Current(typ.)</b>            | 8mA             | 8mA                | 7.5mA            | 7.5mA             | 7.5mA        | 7.5mA        |
| <b>Viewing Angle(typ.)</b>              | 30°             | 30°                | 30°              | 30°               | 30°          | 30°          |
| <b>Quantity(pcs)/Box</b>                | 12              | 12                 | 12               | 12                | 12           | 12           |

\*1 Tolerance of measurements of dominant wavelength is ±1nm

\*2 Tolerance of measurements of color temperature is ±10%

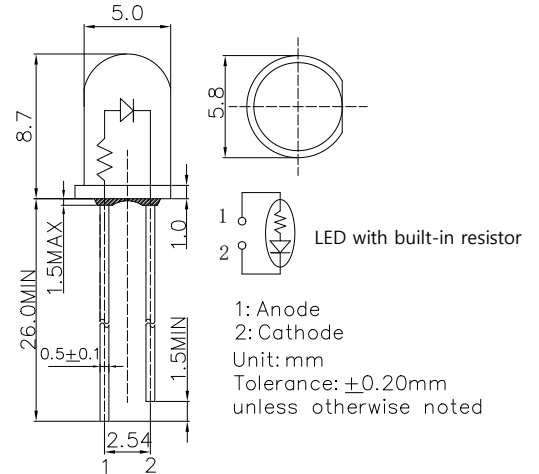
\*3 Tolerance of measurements of luminous intensity is ±15%



**■Description**

This LED builds with internal resistor to operate with wide operation voltage of DC3-15V.

**■Outline Dimension**



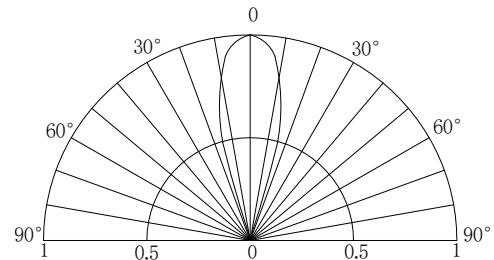
**■Features**

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- Other Electronics Products

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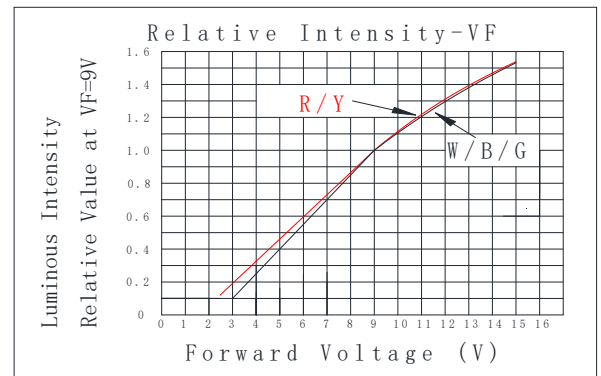


**■Absolute Maximum Rating**

(Ta=25°C)

| Item                       | Symbol         | Value      | Unit |
|----------------------------|----------------|------------|------|
| DC Forward Voltage         | V <sub>F</sub> | 15         | V    |
| Reverse Voltage            | V <sub>R</sub> | 12         | V    |
| Power Dissipation          | P <sub>D</sub> | 190        | mW   |
| Operating Temperature      | Topr           | -30 ~ +85  | °C   |
| Storage Temperature        | Tstg           | -40 ~ +100 | °C   |
| Lead Soldering Temperature | Tsol           | 260°C/5sec | -    |

**■Optical Characteristic Curves**



**■Electrical -Optical Characteristics**

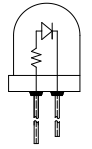
(Ta=25°C)

| 5mm Multi-Voltage LED                   |                 |                    |                  |                   |              |              |
|---|-----------------|--------------------|------------------|-------------------|--------------|--------------|
| <b>LED P/N</b>                          | OSR55133A-VV    | OSY55133A-VV       | OSB55133A-VV     | OSG55133A-VV      | OSM55131A-VV | OSW55131A-VV |
| <b>Light Color</b>                      | Red             | Yellow             | Blue             | Pure Green        | Warm White   | Cool White   |
| <b>Lens Color</b>                       | Red Transparent | Yellow Transparent | Blue Transparent | Green Transparent | Water Clear  | Water Clear  |
| <b>Wavelength*1/Color Temperature*2</b> | 620-630nm       | 585-595nm          | 465-475m         | 520-530nm         | 2700-3300K   | 8500-18000K  |
| <b>Luminous Intensity(typ.)*3</b>       | 3000mcd         | 3000mcd            | 2180mcd          | 5800mcd           | 5800mcd      | 5800mcd      |
| <b>Forward Voltage(typ.)</b>            | 9V              | 9V                 | 9V               | 9V                | 9V           | 9V           |
| <b>Forward Current(typ.)</b>            | 8mA             | 8mA                | 7.5mA            | 7.5mA             | 7.5mA        | 7.5mA        |
| <b>Viewing Angle(typ.)</b>              | 30°             | 30°                | 30°              | 30°               | 30°          | 30°          |
| <b>Quantity(pcs)/Box</b>                | 12              | 12                 | 12               | 12                | 12           | 12           |

\*1 Tolerance of measurements of dominant wavelength is ±1nm

\*2 Tolerance of measurements of color temperature is ±10%

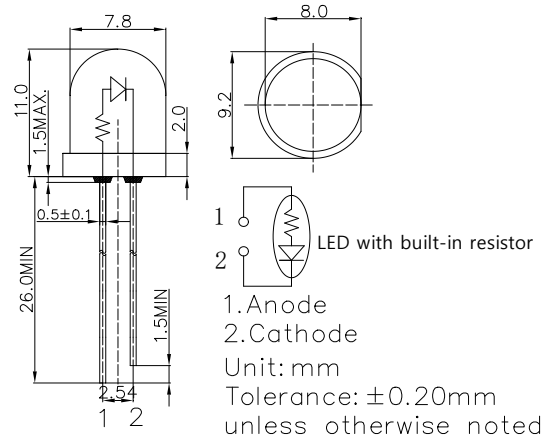
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This LED builds with internal resistor to operate with wide operation voltage of DC3-15V.

**■Outline Dimension**



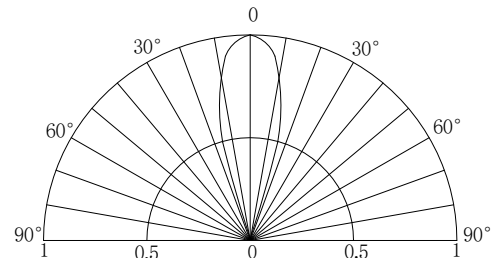
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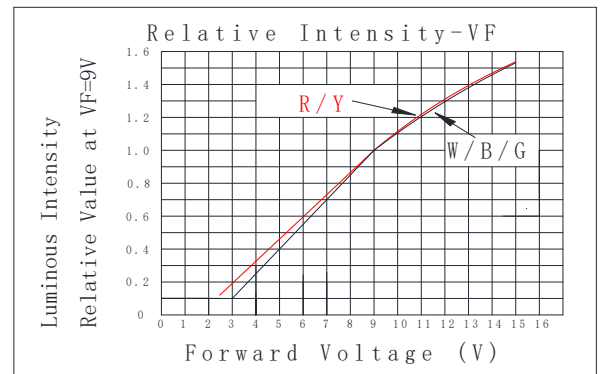


**■Absolute Maximum Rating**

(Ta=25°C)

| Item                       | Symbol         | Value      | Unit |
|----------------------------|----------------|------------|------|
| DC Forward Voltage         | V <sub>F</sub> | 15         | V    |
| Reverse Voltage            | V <sub>R</sub> | 12         | V    |
| Power Dissipation          | P <sub>D</sub> | 190        | mW   |
| Operating Temperature      | Topr           | -30 ~ +85  | °C   |
| Storage Temperature        | Tstg           | -40 ~ +100 | °C   |
| Lead Soldering Temperature | Tsol           | 260°C/5sec | -    |

**■Optical Characteristic Curves**



**■Electrical -Optical Characteristics**

(Ta=25°C)

| 8mm Multi-Voltage LED                   |                 |                    |                  |                   |              |              |
|---|-----------------|--------------------|------------------|-------------------|--------------|--------------|
| <b>LED P/N</b>                          | OSR58133A-VV    | OSY58133A-VV       | OSB58133A-VV     | OSG58133A-VV      | OSM58131A-VV | OSW58131A-VV |
| <b>Light Color</b>                      | Red             | Yellow             | Blue             | Pure Green        | Warm White   | Cool White   |
| <b>Lens Color</b>                       | Red Transparent | Yellow Transparent | Blue Transparent | Green Transparent | Water Clear  | Water Clear  |
| <b>Wavelength*1/Color Temperature*2</b> | 620-630nm       | 585-595nm          | 465-475m         | 520-530nm         | 2700-3300K   | 8500-18000K  |
| <b>Luminous Intensity(typ.)*3</b>       | 4200mcd         | 4200mcd            | 2500mcd          | 7000mcd           | 7000mcd      | 7000mcd      |
| <b>Forward Voltage(typ.)</b>            | 9V              | 9V                 | 9V               | 9V                | 9V           | 9V           |
| <b>Forward Current(typ.)</b>            | 8mA             | 8mA                | 7.5mA            | 7.5mA             | 7.5mA        | 7.5mA        |
| <b>Viewing Angle(typ.)</b>              | 30°             | 30°                | 30°              | 30°               | 30°          | 30°          |
| <b>Quantity(pcs)/Box</b>                | 6               | 6                  | 6                | 6                 | 6            | 6            |


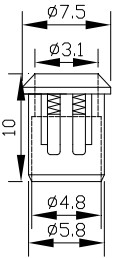

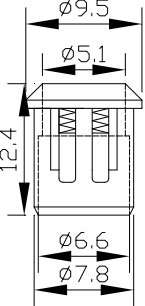

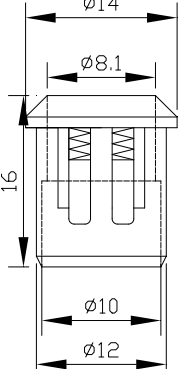
\*1 Tolerance of measurements of dominant wavelength is ±1nm

\*2 Tolerance of measurements of color temperature is ±10%

\*3 Tolerance of measurements of luminous intensity is ±15%

|                    |         |
|--------------------|---------|
| Material           | NYLON66 |
| Color              | Black   |
| Fireproofing Grade | 94V-2   |

■ **Product Information & Outline Dimension:**

| Item                  | Clip P/N | Product Picture   | Outline Dimension   |
|-----------------------|----------|---|---|
| 3mm LED Mounting Clip | OESC-3   |    |  <p>Unit: mm<br/>Tolerance: ±0.30mm<br/>unless otherwise noted</p>   |
| 5mm LED Mounting Clip | OESC-5   |   |  <p>Unit: mm<br/>Tolerance: ±0.30mm<br/>unless otherwise noted</p>  |
| 8mm LED Mounting Clip | OESC-8   |  |  <p>Unit: mm<br/>Tolerance: ±0.30mm<br/>unless otherwise noted</p> |

Heat shrink tubing is a flexible, flame retardant and halogen-free polyolefin tubing used for electrical insulation. Heat shrink is UL recognised at 600V and is free of Lead, Cadmium, Mercury, Hexavalent Chromium, Polybrominated biphenyl and Polybrominated diphenyl ethers.

It has an operating temperature of 125°C and a shrink temperature of 90°C. Can be used in any enclosed area where a flame-retardant, halogen-free environment is required.

### Features

- Flame retardant
- Halogen free

### Technical Information

**Material:** Polyolefin heat shrink

**Colour:** Yellow/Green, Black, White, Blue, Red, Clear



| Technical Data                       |                     | Units | Value                 |
|--------------------------------------|---------------------|-------|-----------------------|
| Radial shrinking ratios              |                     | %     | ≥50                   |
| Longitudinal change                  |                     | %     | ≥1±5                  |
| Tensile strength                     |                     | MPa   | ≥10.4                 |
| Elongation break                     |                     | %     | ≥200                  |
| Aging in circular-air oven           |                     | °C    | 158.0°C±1.0°C, 168hrs |
| After aging                          | Tensile strength    | MPa   | ≥7.3                  |
|                                      | Elongation at break | %     | ≥100                  |
| Volume resistivity                   |                     | Ω.cm  | ≥1014                 |
| Dielectric strength at 1min, AC2500V |                     | -     | No breakdown          |
| Heat shock                           |                     | -     | No cracking           |
| Flammability                         |                     | -     | VW-1                  |
| Concentricity                        |                     | %     | ≥70                   |
| UL NO.                               |                     | -     | E329530               |

### Applications

- Electrical insulation
- Wire protection
- Other fields requiring protection in harsh environments

| Heat Shrink Tubing |             |             |             |             |             |             |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| P/N                | OEHS1520RX  | OEHS1520YX  | OEHS1520BX  | OEHS1520GX  | OEHS1520WX  | OEHS1520BK  |
| Color              | Red         | Yellow      | Blue        | Green       | White       | Black       |
| Size               | Φ1.5x20±3mm | Φ1.5x20±3mm | Φ1.5x20±3mm | Φ1.5x20±3mm | Φ1.5x20±3mm | Φ1.5x20±3mm |
| Quantity(pcs)/Box  | 24          | 12          | 12          | 12          | 12          | 24          |