



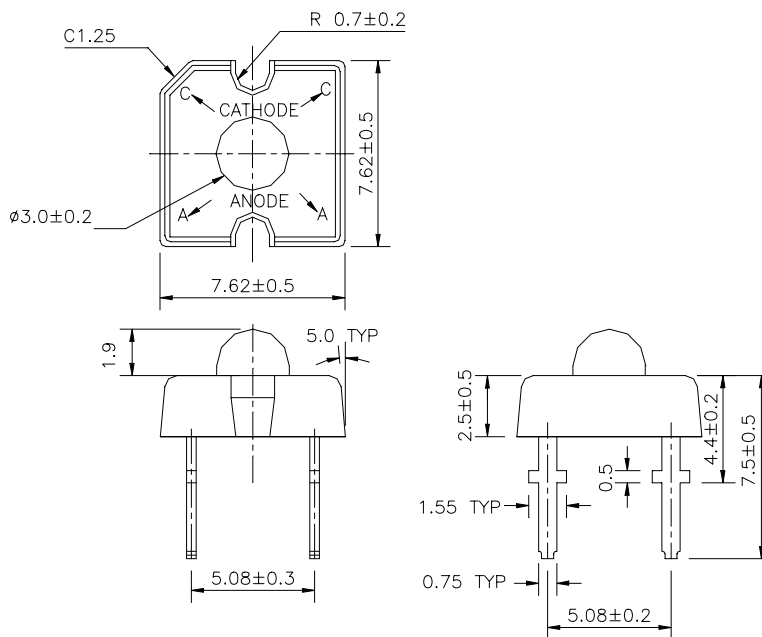
White Power LED

MODEL NO: 31-01UWC/1B

Device Number:DLE-301-014 REV: 1.0

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■ Package Dimensions



NOTES:

1. All dimensions are in millimeters.
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under flange 1.5mm (0.59") Max.
4. Static Electricity and surge damages the LED.
It is recommend to use a wrist band or anti-electrostatic glove when handing the LED. All devices, equipment and Machine must be properly grounded.

■ **Notes:** All dimensions are in millimeters.

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■ Features

- Fluorescence Type
- High Luminous Intensity
- High Efficiency
- Emission Color: $x=0.29, y=0.30$

■ Descriptions

The white LED which was fabricated using a blue LED and a phosphor, and the phosphor is excited by blue light and emits yellow fluorescence. The mixture of blue light and yellow light results in a white emission.

■ Applications

- OA Equipment
- Backlighting of LCD
- Automotive Equipment
- Replacement of Conventional Light Bulbs and Fluorescent Lamps



White Power LED

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■ Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Rating | Units |
|-------------------------------------|------------------|------------|-------|
| Forward Current | I _F | 30 | mA |
| Pulse Forward Current ^{*1} | I _{FP} | 100 | mA |
| Reverse Voltage | V _R | 5 | V |
| Power Dissipation | P _D | 120 | mW |
| Operating Temperature | T _{opr} | -30 ~ +80 | °C |
| Storage Temperature | T _{stg} | -40 ~ +100 | °C |
| Soldering Temperature ^{*2} | T _{sol} | 260 | °C |

*1:I_{FP} Conditions--Pulse Width ≤ 10msec and Duty ≤ 1/10.

*2:Soldering time ≤ 5 seconds.

■ Electro-Optical Characteristics (Ta=25°C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Units |
|----------------------------|----------------|----------------------|------|------|------|-------|
| Forward Voltage | V _F | I _F =20mA | -- | 3.6 | 4.0 | V |
| Reverse Current | I _R | V _R =5V | -- | -- | 10 | μA |
| Total Flux | Φ _v | I _F =20mA | 740 | 1120 | -- | mcd |
| Viewing Angle | 2θ 1/2 | I _F =20mA | -- | 30 | -- | deg |
| Chromaticity ^{*1} | x | I _F =20mA | -- | 0.29 | -- | |
| | y | | -- | 0.30 | -- | |

*The C.I.E. 1931 chromaticity diagram.

*The products are sensitive to static electricity and care must be fully taken when handling products.



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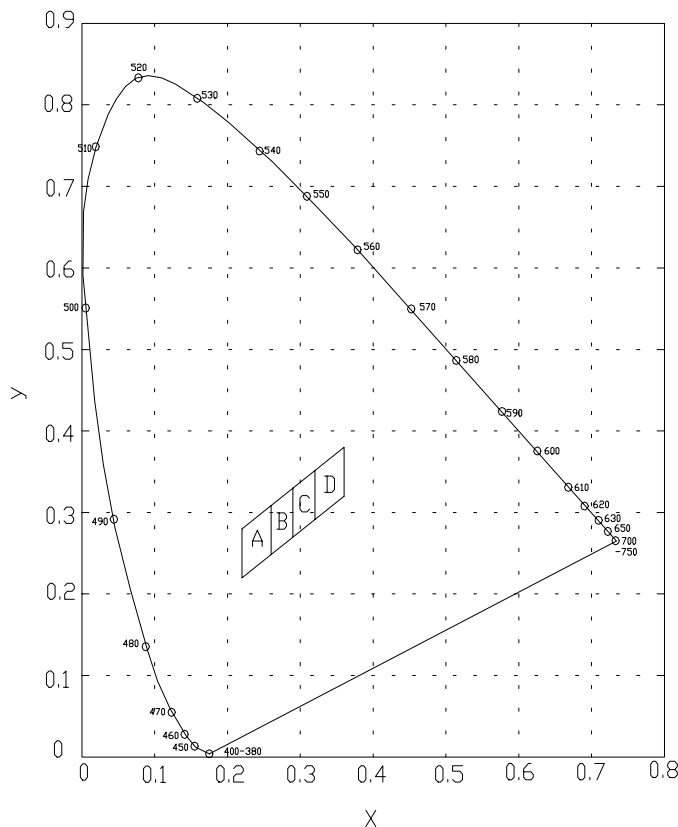
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■ Chromaticity Coordinates Specifications for Bin Grading

| Rank | Chromaticity Coordinates | | | | |
|-------------|--------------------------|--------------|-------|--------------|-------|
| | | x | y | z | u |
| A | x | 0.220 | 0.220 | 0.260 | 0.260 |
| | y | 0.220 | 0.280 | 0.310 | 0.250 |
| B | x | 0.260 | 0.260 | 0.290 | 0.290 |
| | y | 0.250 | 0.310 | 0.330 | 0.270 |
| C | x | 0.290 | 0.290 | 0.320 | 0.320 |
| | y | 0.270 | 0.330 | 0.350 | 0.290 |
| D | x | 0.320 | 0.320 | 0.360 | 0.360 |
| | y | 0.290 | 0.350 | 0.380 | 0.320 |
| * Tolerance | | $x \pm 0.02$ | | $y \pm 0.02$ | |

■ CIE Chromaticity Diagram





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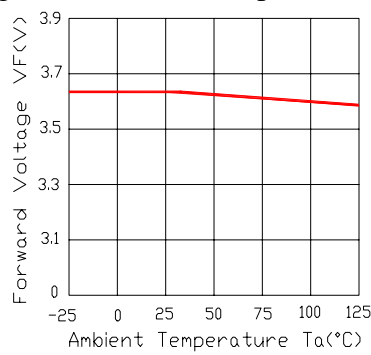
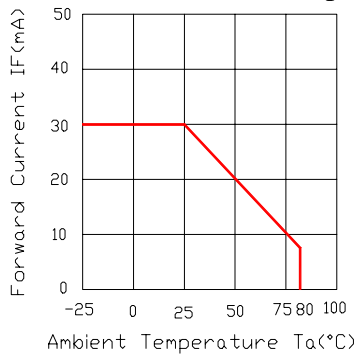
MODEL NO: **31-01UWC/1B**

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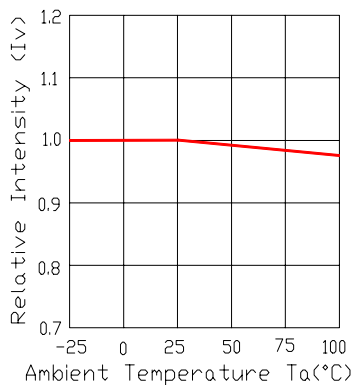
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■ Typical Electro-Optical Characteristics Curves

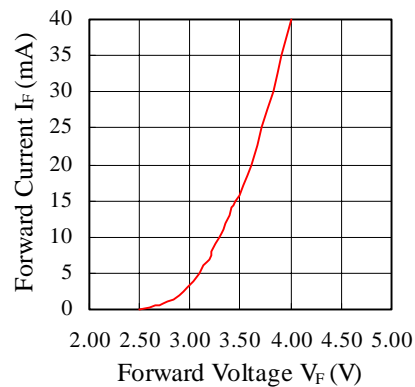
● Forward Current vs. Ambient Temperature ● Forward Voltage vs. Ambient Temperature



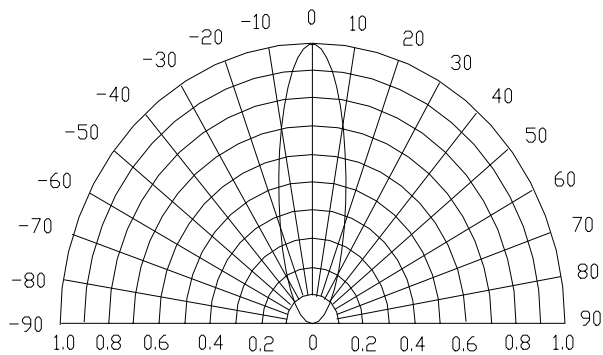
● Relative Intensity vs. Ambient Temperature



● Forward Current vs. Forward Voltage



● Directivity Radiation Angle: 30 degree (Typ.)



● Luminous Spectrum (Ta=25°C)

