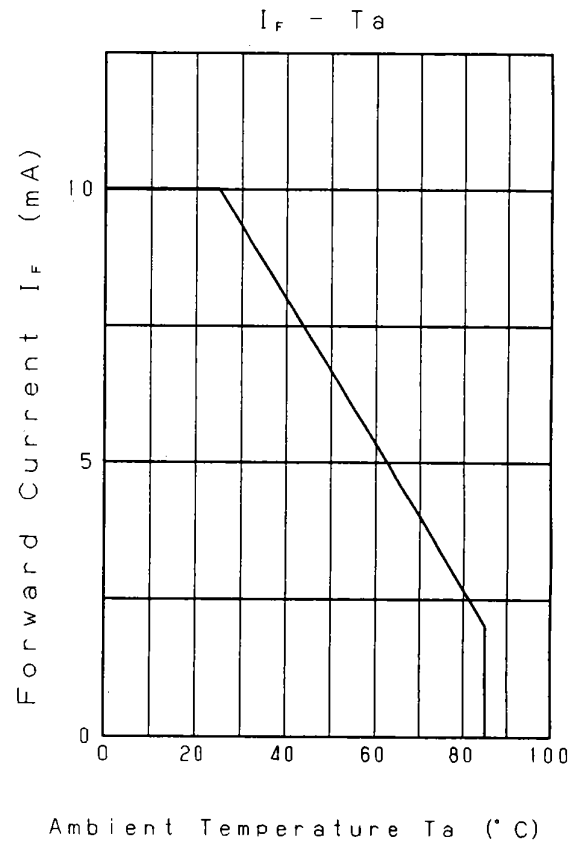
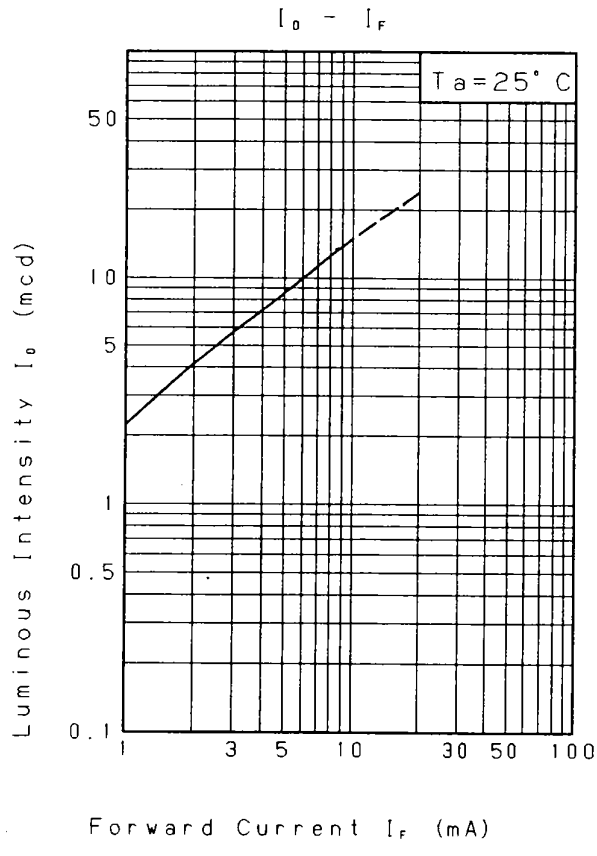
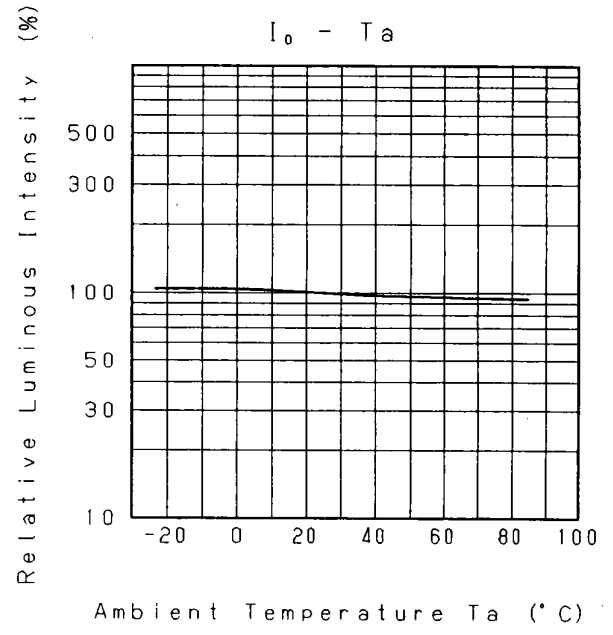
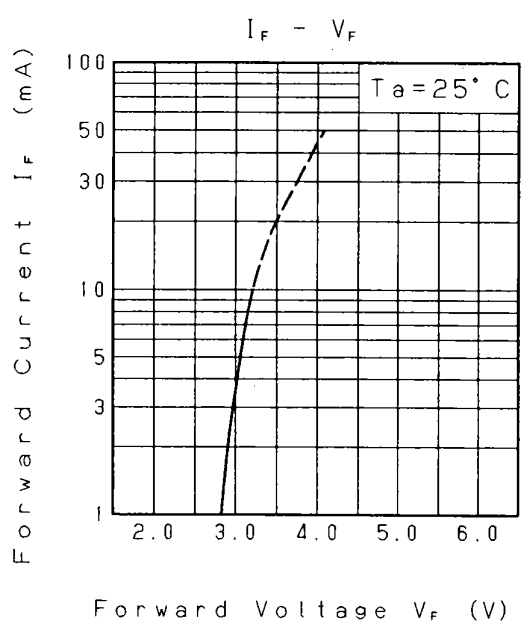


| Approved   | Checked        | Designed                 | DEVELOPMENT SPECIFICATION |                    |                  |                |         |          |  |  |
|--|----------------|--------------------------|---------------------------|--------------------|------------------|----------------|---------|----------|--|--|
| <i>T. Akada</i>  | <i>M. Hori</i> | <i>T. Tabata</i>         | P/N: LNJ911W8BRA          |                    |                  |                |         |          |  |  |
| T Y P E  |                |                          | Blue Light Emitting Diode |                    |                  |                |         |          |  |  |
| APPLICATION  |                |                          | Indicators                |                    |                  |                |         |          |  |  |
| MATERIAL   |                |                          | GaN                       |                    |                  |                |         |          |  |  |
| OUTLINE  |                |                          | Attached                  |                    |                  |                |         |          |  |  |
| ABSOLUTE   |                |                          | P                         | *1 I <sub>FP</sub> | I <sub>FDC</sub> | V <sub>R</sub> | Topr    | Tstg     |  |  |
| MAXIMUM  |                |                          | 40                        | 50                 | 10               | 5              | -25~+85 | -30~+100 |  |  |
| RATINGS  |                |                          | mW                        | mA                 | mA               | V              | °C      | °C       |  |  |
| CONDITION  |                |                          | T <sub>a</sub> = 25 ± 3°C |                    |                  |                |         |          |  |  |
| Test Specification   |                |                          |                           |                    |                  |                |         |          |  |  |
| Item   | Symbol         | Condition                | Typ                       | Limit              |                  | Unit           |         |          |  |  |
|  |                |                          |                           | Min                | Max              |                |         |          |  |  |
| Forward Voltage  | V <sub>F</sub> | I <sub>F</sub> = 5 mA    | 3.2                       |                    | 3.7              | V              |         |          |  |  |
| Reverse Leakage Current  | I <sub>R</sub> | V <sub>R</sub> = 5 V     |                           |                    | 10               | μA             |         |          |  |  |
| Luminous Intensity *2  | I <sub>O</sub> | I <sub>F</sub> = 5 mA DC | 8.5                       | 4.5                |                  | mcd            |         |          |  |  |
| Peak Emission Wavelength   | λ <sub>p</sub> | I <sub>F</sub> = 5 mA DC | 470                       |                    |                  | nm             |         |          |  |  |
| Spectral Line Half Width   | Δλ             | I <sub>F</sub> = 5 mA DC | 30                        |                    |                  | nm             |         |          |  |  |
| <p>*1. The Condition of pulse current I<sub>FP</sub> is 1ms pulse width, 10 % duty cycle.</p> <p>*2. Tolerance of luminous intensity ±20%.</p> <p>· Please contact the Panasonic local office if you design at low current (below 1 mA DC) or pulse current operation and have any questions.</p>  |                |                          |                           |                    |                  |                |         |          |  |  |
| NOTE   |                |                          |                           |                    |                  |                |         |          |  |  |
| <p>★1. Soldering conditions.<br/>Refer to Handling note.</p> <p>★2. Care should be taken that soldering is done within 3-days after opening the dry package and reel.</p> <p>★3. Compositions of the lead ..... Cu/Ni/Au plating</p> <p>★4. This LED is sensitive to static electricity and care should be fully taken in handling it. Particularly, when an overvoltage is applied, which exceeds the absolute maximum rating of the LED, its energy damages the LED. Therefore, take utmost proactive measures against static electricity and surge as to building an assembly line and handling the LED halfway the process.</p> <p>(1) Check the entire drive circuit including the power source. For example, a surge current, etc., generated at power-on/off must not exceed the absolute maximum rating of the LED. Also, insert an appropriate protective circuit into the LED drive circuit.</p> <p>(2) Beware of destruction by static electricity in handling the LED. As proactive measures against static electricity, it is effective to earth your body (via 1MΩ), spread conductive mat on the floor, wear semiconductive work uniform and shoes, and use semiconductive containers. Also, be sure to earth the nose of a soldering iron. It is recommended to use an ionizer, etc., in the facility or environment where static electricity may be generated easily.</p> |                |                          |                           |                    |                  |                |         |          |  |  |
| Sep. 1. 1999   |                |                          |                           |                    |                  |                |         |          |  |  |

|                   |              |                  |                           |  |  |  |
|-------------------|--------------|------------------|---------------------------|--|--|--|
| Approved          | Checked      | Designed         | DEVELOPMENT SPECIFICATION |  |  |  |
| <i>T. Chikada</i> | <i>M. Ni</i> | <i>T. Tabata</i> | P/N: <u>LNJ911W8BRA</u>   |  |  |  |
|                   |              |                  |                           |  |  |  |

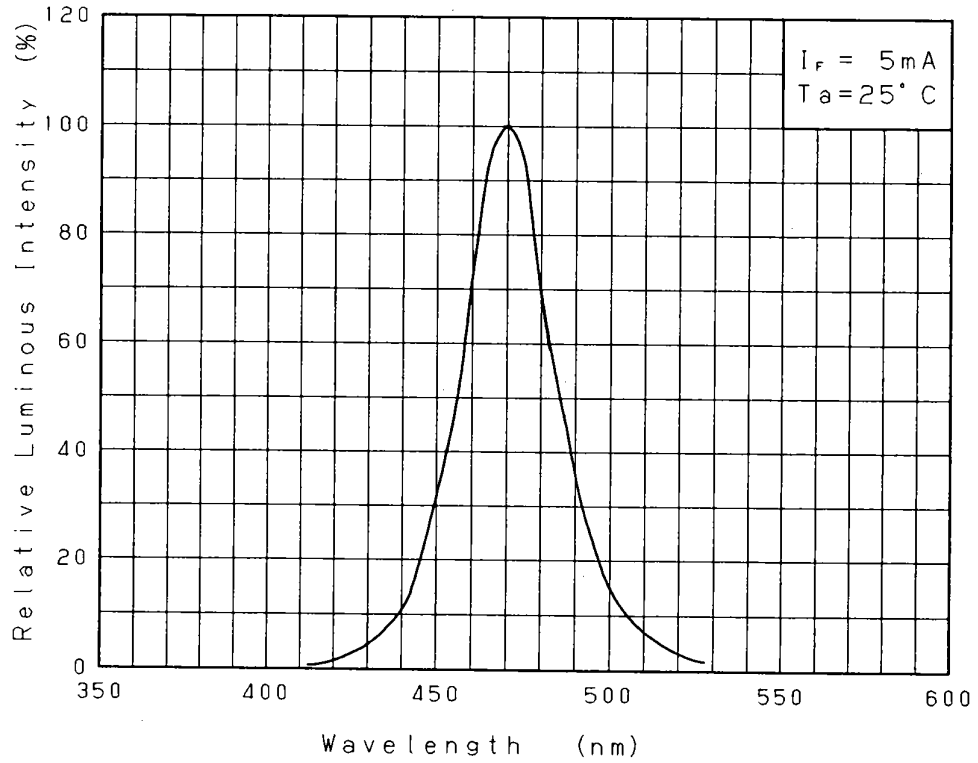


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| Sep. 1.1999 |  |  |  |
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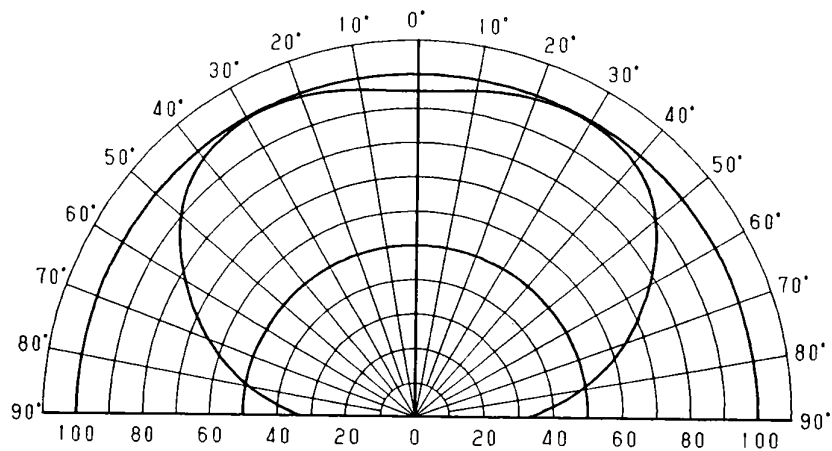
Downloaded from Elcodis.com electronic components distributor

|          |         |           |                           |                  |  |  |
|----------|---------|-----------|---------------------------|------------------|--|--|
| Approved | Checked | Designed  | DEVELOPMENT SPECIFICATION |                  |  |  |
| T. Akeda | M. Imai | T. Takata |                           | P/N: LNJ911W8BRA |  |  |

Relative Luminous Intensity  
Wavelength Characteristics



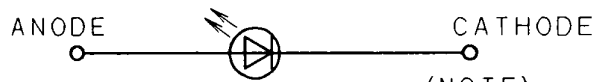
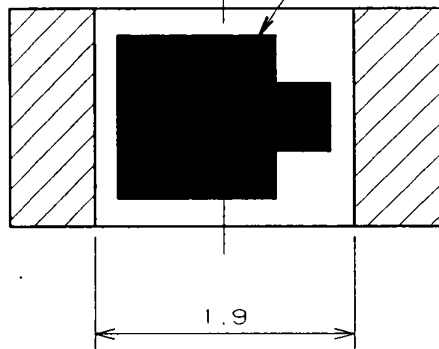
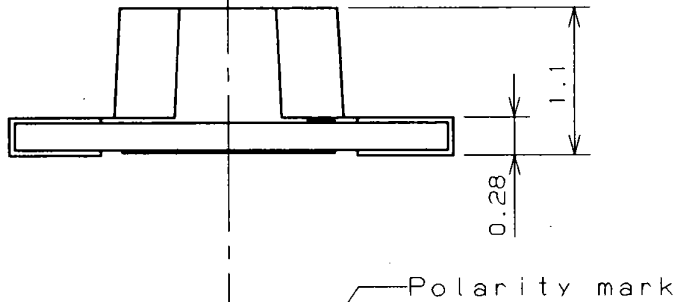
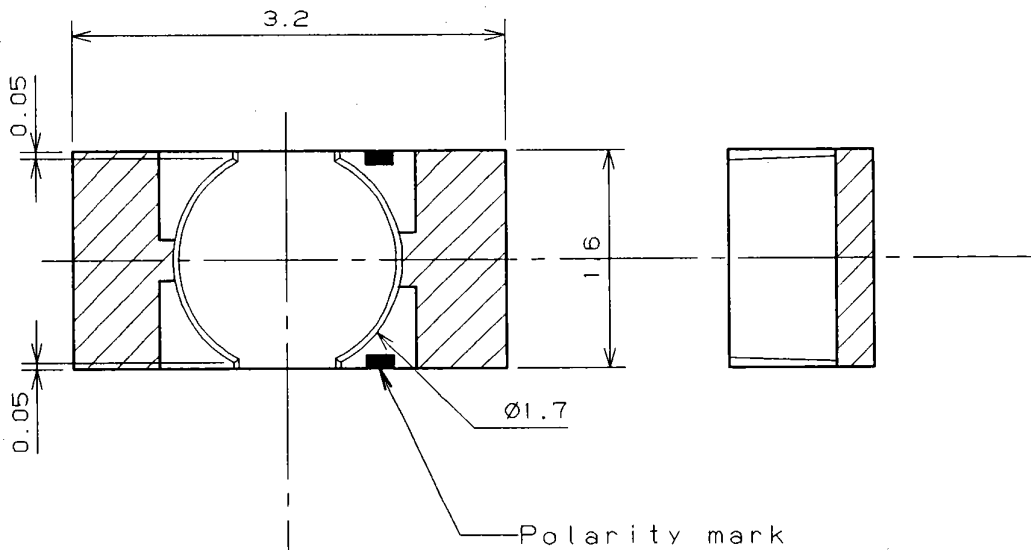
Directive Characteristics




Relative Luminous Intensity (%)

|              |  |  |  |
|--------------|--|--|--|
| Sep. 1. 1999 |  |  |  |
|              |  |  |  |

|           |         |           |  |  |  |
|-----------|---------|-----------|--|--|--|
| Approved  | Checked | Designed  | DEVELOPMENT SPECIFICATION<br>(TEMPORARY OUTLINE)<br>P/N: LNJ911W8BRA |  |  |
| T. Shioda | M. Imai | T. Tabata |  |  |  |



(NOTE)  
 1. Unit: mm  
 2. Tolerance unless specified is  $\pm 0.15$ .  
 3.  indicate Au terminal.

|              |  |  |  |
|--------------|--|--|--|
| Sep. 1. 1999 |  |  |  |
|--------------|--|--|--|