

**NXG Series**

- 105°C 3,000~4,000Hrs assured.

- Non-solvent proof.
- Ultra Low Impedance/ESR, High Ripple, Long Life.
- For LED TV BLU Inverter, SMPS, IP-Board, Adaptor.
- RoHS compliant.
- Halogen-free capacitors are also available.

NXE

NXG

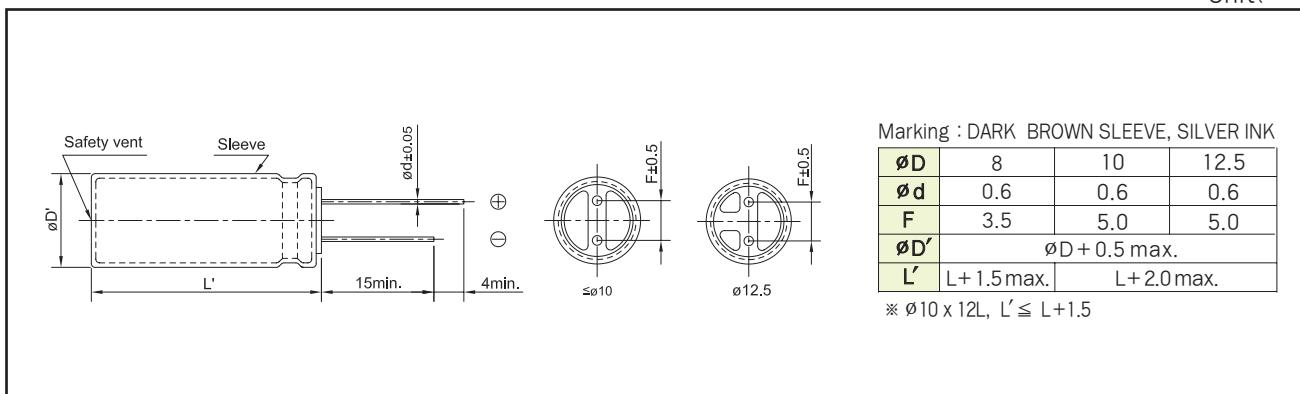
High Ripple

**SPECIFICATIONS**

| Item  | Characteristics  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
|---|--|------|------|------|------|--|---------------------------------|-----------|---------------------|-------------|-------|-------------|---------------------|------|------|------|------|------|
| Rated Voltage Range                                   | 6.3 ~ 35 V <sub>DC</sub>   |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Operating Temperature Range                           | -40 ~ + 105°C  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Capacitance Tolerance                                 | $\pm 20\%$ (M) (at 20°C, 120Hz)  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Leakage Current                                       | <p>I = 0.03CV(<math>\mu</math>A) or 4<math>\mu</math>A, Whichever is greater.<br/>           Where, I:Max. Leakage current(<math>\mu</math>A), C:Nominal capacitance(<math>\mu</math>F), V:Rated voltage(V<sub>DC</sub>)<br/>           (at 20°C, 2 minutes)</p>   |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Dissipation Factor(Tan $\delta$ )                     | <table border="1"> <tr> <td>Rated Voltage(V<sub>DC</sub>)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td></tr> <tr> <td>Tan<math>\delta</math>(Max.)</td><td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td></tr> </table> <p>When the capacitance exceeds 1,000<math>\mu</math>F, 0.02 shall be added every 1,000<math>\mu</math>F increase. (at 20°C, 120Hz)</p>  |      |      |      |      |  | Rated Voltage(V <sub>DC</sub> ) | 6.3       | 10                  | 16          | 25    | 35          | Tan $\delta$ (Max.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 |
| Rated Voltage(V <sub>DC</sub> )                       | 6.3  | 10   | 16   | 25   | 35   |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Tan $\delta$ (Max.)                                   | 0.22   | 0.19 | 0.16 | 0.14 | 0.12 |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Temperature Characteristics<br>(Max. Impedance ratio) | <table border="1"> <tr> <td>Z(-25°C) / Z(+20°C)</td><td>2</td></tr> <tr> <td>Z(-40°C) / Z(+20°C)</td><td>3</td></tr> </table> <p>(at 120Hz)</p>  |      |      |      |      |  | Z(-25°C) / Z(+20°C)             | 2         | Z(-40°C) / Z(+20°C) | 3           |       |             |                     |      |      |      |      |      |
| Z(-25°C) / Z(+20°C)                                   | 2  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Z(-40°C) / Z(+20°C)                                   | 3  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Load Life   | <p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) at 105°C for the specified period of time.</p> <table border="1"> <tr> <td>Ø D</td><td>Life Time</td></tr> <tr> <td>Ø 8</td><td>3,000 hours</td></tr> <tr> <td>Ø 10~</td><td>4,000 hours</td></tr> </table> <p>Capacitance change <math>\leq \pm 25\%</math> of the initial value<br/>           Tan<math>\delta</math> <math>\leq 200\%</math> of the initial specified value<br/>           Leakage current <math>\leq</math> The initial specified value</p> |      |      |      |      |  | Ø D                             | Life Time | Ø 8                 | 3,000 hours | Ø 10~ | 4,000 hours |                     |      |      |      |      |      |
| Ø D   | Life Time  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Ø 8   | 3,000 hours  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Ø 10~   | 4,000 hours  |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Shelf Life  | <p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.</p> <p>Capacitance change <math>\leq \pm 25\%</math> of the initial value<br/>           Tan<math>\delta</math> <math>\leq 200\%</math> of the initial specified value<br/>           Leakage current <math>\leq 200\%</math> of the initial specified value</p>   |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |
| Others  | Satisfied characteristics KS C IEC 60384-4   |      |      |      |      |  |                                 |           |                     |             |       |             |                     |      |      |      |      |      |

**DIMENSIONS OF NXG Series**

Unit(mm)





# MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

## RATINGS OF NXG series

| VDC<br>μF | Items | Ø D × L(mm) | Rated Ripple Current<br>(mA rms/105°C, 100kHz) | 6.3                   |                        |
|-----------|-------|-------------|--|-----------------------|------------------------|
|           |       |             |  | (Ω max./20°C, 100kHz) | (Ω max./-10°C, 100kHz) |
| 820       |       | 8 × 11.5    | 1,700  | 0.036                 | 0.11                   |
| 1,200     |       | 8 × 15      | 2,300  | 0.028                 | 0.085                  |
| 1,800     |       | 8 × 20      | 2,600  | 0.019                 | 0.057                  |
| 1,500     |       | 10 × 12     | 2,200  | 0.030                 | 0.091                  |
| 1,500     |       | 10 × 12.5   | 2,200  | 0.030                 | 0.091                  |
| 1,800     |       | 10 × 16     | 2,800  | 0.019                 | 0.057                  |
| 2,200     |       | 10 × 20     | 3,000  | 0.013                 | 0.039                  |
| 3,300     |       | 10 × 25     | 3,270  | 0.012                 | 0.036                  |

| VDC<br>μF | Items | Ø D × L(mm) | Rated Ripple Current<br>(mA rms/105°C, 100kHz) | 10                    |                        |
|-----------|-------|-------------|--|-----------------------|------------------------|
|           |       |             |  | (Ω max./20°C, 100kHz) | (Ω max./-10°C, 100kHz) |
| 680       |       | 8 × 11.5    | 1,700  | 0.036                 | 0.11                   |
| 1,000     |       | 8 × 15      | 2,300  | 0.028                 | 0.085                  |
| 1,500     |       | 8 × 20      | 2,600  | 0.019                 | 0.057                  |
| 1,000     |       | 10 × 12     | 2,200  | 0.030                 | 0.091                  |
| 1,000     |       | 10 × 12.5   | 2,200  | 0.030                 | 0.091                  |
| 1,200     |       | 10 × 16     | 2,800  | 0.019                 | 0.057                  |
| 1,500     |       | 10 × 16     | 2,800  | 0.019                 | 0.057                  |
| 1,800     |       | 10 × 20     | 3,000  | 0.013                 | 0.039                  |
| 2,200     |       | 10 × 25     | 3,270  | 0.012                 | 0.036                  |

| VDC<br>μF | Items | Ø D × L(mm) | Rated Ripple Current<br>(mA rms/105°C, 100kHz) | 16                    |                        |
|-----------|-------|-------------|--|-----------------------|------------------------|
|           |       |             |  | (Ω max./20°C, 100kHz) | (Ω max./-10°C, 100kHz) |
| 470       |       | 8 × 11.5    | 1,700  | 0.036                 | 0.11                   |
| 680       |       | 8 × 15      | 2,300  | 0.028                 | 0.085                  |
| 1,000     |       | 8 × 20      | 2,600  | 0.019                 | 0.057                  |
| 680       |       | 10 × 12     | 2,200  | 0.030                 | 0.091                  |
| 680       |       | 10 × 12.5   | 2,200  | 0.030                 | 0.091                  |
| 1,000     |       | 10 × 16     | 2,800  | 0.019                 | 0.057                  |
| 1,500     |       | 10 × 20     | 3,000  | 0.013                 | 0.039                  |
| 1,800     |       | 10 × 25     | 3,270  | 0.012                 | 0.036                  |

| VDC<br>μF | Items | Ø D × L(mm) | Rated Ripple Current<br>(mA rms/105°C, 100kHz) | 25                    |                        |
|-----------|-------|-------------|--|-----------------------|------------------------|
|           |       |             |  | (Ω max./20°C, 100kHz) | (Ω max./-10°C, 100kHz) |
| 220       |       | 8 × 11.5    | 1,700  | 0.036                 | 0.11                   |
| 390       |       | 8 × 15      | 2,300  | 0.028                 | 0.085                  |
| 560       |       | 8 × 20      | 2,600  | 0.019                 | 0.057                  |
| 470       |       | 10 × 12     | 2,200  | 0.030                 | 0.091                  |
| 470       |       | 10 × 12.5   | 2,200  | 0.030                 | 0.091                  |
| 680       |       | 10 × 16     | 2,800  | 0.019                 | 0.057                  |
| 820       |       | 10 × 20     | 3,000  | 0.013                 | 0.039                  |
| 1,000     |       | 10 × 25     | 3,270  | 0.012                 | 0.036                  |
| 1,200     |       | 12.5 × 20   | 3,510  | 0.014                 | 0.042                  |

| VDC<br>μF | Items | Ø D × L(mm) | Rated Ripple Current<br>(mA rms/105°C, 100kHz) | 35                    |                        |
|-----------|-------|-------------|--|-----------------------|------------------------|
|           |       |             |  | (Ω max./20°C, 100kHz) | (Ω max./-10°C, 100kHz) |
| 150       |       | 8 × 11.5    | 1,700  | 0.036                 | 0.11                   |
| 270       |       | 8 × 15      | 2,300  | 0.028                 | 0.085                  |
| 390       |       | 8 × 20      | 2,600  | 0.019                 | 0.057                  |
| 330       |       | 10 × 12     | 2,200  | 0.030                 | 0.091                  |
| 330       |       | 10 × 12.5   | 2,200  | 0.030                 | 0.091                  |
| 470       |       | 10 × 16     | 2,800  | 0.019                 | 0.057                  |
| 560       |       | 10 × 20     | 3,000  | 0.013                 | 0.039                  |
| 680       |       | 10 × 25     | 3,270  | 0.012                 | 0.036                  |

## RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

| Cap.(μF)      | Freq.(Hz) | 120       | 1k          | 10k           | 50k  | 100k |
|---------------|-----------|-----------|-------------|---------------|------|------|
|               |           | 150 ~ 560 | 680 ~ 1,800 | 2,200 ~ 3,300 | 0.50 | 0.60 |
| 150 ~ 560     |           | 0.50      | 0.85        | 0.94          | 0.96 | 1.00 |
| 680 ~ 1,800   |           | 0.60      | 0.87        | 0.95          | 0.97 | 1.00 |
| 2,200 ~ 3,300 |           | 0.75      | 0.90        | 0.95          | 0.97 | 1.00 |