

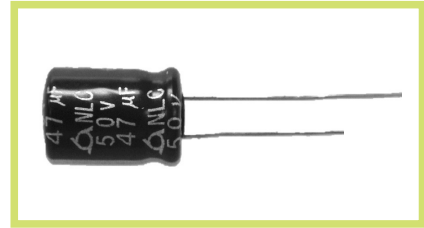
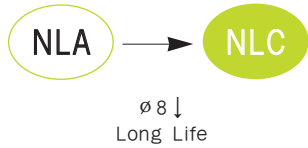
NLC Series

• 105°C 10,000Hrs assured.

- Low impedance.
- Long Life.
- For SMPS, IP-Board, Adaptor.
- RoHS compliant.
- Halogen-free capacitors are also available.

Solvent-proof

WV ≤ 50V_{DC}



SPECIFICATIONS

| Item | Characteristics | | | | | | | | | | | | | | | | | | |
|--|---|---------------------------------|------|-------|--------|-------|--------|-------------------|----|-----|------------|------|------|-------------------|------|------|------|------|------|
| Rated Voltage Range | 6.3 ~ 100 V _{DC} | | | | | | | | | | | | | | | | | | |
| Operating Temperature Range | -40 ~ +105°C | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20%(M) (at 20°C, 120Hz) | | | | | | | | | | | | | | | | | | |
| Leakage Current | I=0.01CV(μA) or 3μA, whichever is greater. Where, I: Max.Leakage current(μA) C: Nominal capacitance (μF) V: Rated voltage (V _{DC}) (at 20°C, 2 minutes) | | | | | | | | | | | | | | | | | | |
| Dissipation Factor(Tanδ) | <table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.17</td> <td>0.15</td> </tr> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. (at 20°C, 120Hz)</p> | Rated Voltage(V _{DC}) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | Tanδ(Max.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.17 | 0.15 |
| Rated Voltage(V _{DC}) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | | | | | | | | | | | |
| Tanδ(Max.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.17 | 0.15 | | | | | | | | | | | |
| Temperature Characteristics (Max. Impedance ratio) | <table border="1"> <tr> <td>Rated voltage(V_{DC})</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25~35</td> <td>50~100</td> </tr> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>4</td> </tr> </table> <p>(at 120Hz)</p> | Rated voltage(V _{DC}) | 6.3 | 10 | 16 | 25~35 | 50~100 | Z(-25°C)/Z(+20°C) | 4 | 3 | 2 | 2 | 2 | Z(-40°C)/Z(+20°C) | 8 | 6 | 4 | 3 | 4 |
| Rated voltage(V _{DC}) | 6.3 | 10 | 16 | 25~35 | 50~100 | | | | | | | | | | | | | | |
| Z(-25°C)/Z(+20°C) | 4 | 3 | 2 | 2 | 2 | | | | | | | | | | | | | | |
| Z(-40°C)/Z(+20°C) | 8 | 6 | 4 | 3 | 4 | | | | | | | | | | | | | | |
| Load Life | 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) for 10,000 hours at 105°C. Capacitance change ≤ ±25% of the initial value Tanδ ≤ 200% of the initial specified value Leakage current ≤ The initial specified value | | | | | | | | | | | | | | | | | | |
| Shelf Life | 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. Capacitance change ≤ ±25% of the initial value Tanδ ≤ 200% of the initial specified value(when, 300% for ≥WV63VDC) Leakage current ≤ The initial specified value | | | | | | | | | | | | | | | | | | |
| Others | Satisfied characteristics KS C IEC 60384-4 | | | | | | | | | | | | | | | | | | |

DIMENSIONS OF NLC Series

Unit(mm)

Marking : DARK BROWN SLEEVE, SILVER INK

| | | | |
|-----|---------------|-----|-----|
| øD | 5 | 6.3 | 8 |
| ød | 0.5 | 0.5 | 0.6 |
| F | 2.0 | 2.5 | 3.5 |
| øD' | øD + 0.5 max. | | |
| L' | L + 1.5 max. | | |

RATINGS OF NLC Series

| V _{DC} ∅ D × L (mm) | 6.3 | | | 10 | | | 16 | | |
|---------------------------------|-----|------|--------|-----|------|--------|-----|------|--------|
| | μF | IMP. | Ripple | μF | IMP. | Ripple | μF | IMP. | Ripple |
| 5 × 11 | 150 | 0.70 | 175 | 100 | 0.70 | 175 | 47 | 0.70 | 175 |
| 6.3 × 11 | 330 | 0.50 | 252 | 220 | 0.50 | 250 | 100 | 0.50 | 252 |
| 8 × 11.5 | 680 | 0.24 | 400 | 470 | 0.24 | 400 | 330 | 0.24 | 400 |

| V _{DC} ∅ D × L (mm) | 25 | | | 35 | | | 50 | | |
|---------------------------------|-----|------|--------|-----|------|--------|-----|------|--------|
| | μF | IMP. | Ripple | μF | IMP. | Ripple | μF | IMP. | Ripple |
| 5 × 11 | | | | | | | 1 | 4.0 | 32 |
| 5 × 11 | | | | | | | 2.2 | 3.0 | 43 |
| 5 × 11 | | | | | | | 3.3 | 2.5 | 84 |
| 5 × 11 | | | | | | | 4.7 | 2.5 | 100 |
| 5 × 11 | 47 | 0.70 | 175 | 33 | 0.70 | 175 | 10 | 2.0 | 110 |
| 6.3 × 11 | 100 | 0.50 | 252 | 47 | 0.60 | 252 | 22 | 1.6 | 228 |
| 6.3 × 11 | | | | 56 | 0.50 | 252 | 33 | 1.6 | 228 |
| 8 × 11.5 | 220 | 0.24 | 400 | 150 | 0.24 | 400 | 47 | 0.80 | 330 |
| 8 × 15 | | | | 220 | 0.18 | 520 | 100 | 0.50 | 400 |

Impedance (Ω max./20°C, 100kHz)

| V _{DC} ∅ D × L (mm) | 63 | | 100 | |
|---------------------------------|----|--------|-----|--------|
| | μF | Ripple | μF | Ripple |
| 8 × 11.5 | 47 | 270 | 33 | 240 |

Rated Ripple Current (mA rms/105°C, 100kHz)

Nominal Capacitance (μF)

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

| Cap. (μF) \ Freq. (Hz) | 120 | 1k | 10k | 50k | 100k |
|------------------------|------|------|------|------|------|
| 1 ~ 150 | 0.40 | 0.75 | 0.90 | 0.93 | 1.00 |
| 220 ~ 470 | 0.50 | 0.85 | 0.94 | 0.96 | 1.00 |
| 680 | 0.60 | 0.87 | 0.95 | 0.97 | 1.00 |