

NZR Series

- 105°C 2,000Hrs assured.

- Non-solvent proof
- High ripple and High surge voltage
- For LED TV Power , SMPS
- **RoHS compliant.**
- Halogen-free capacitors are also available.

NZH

NZR

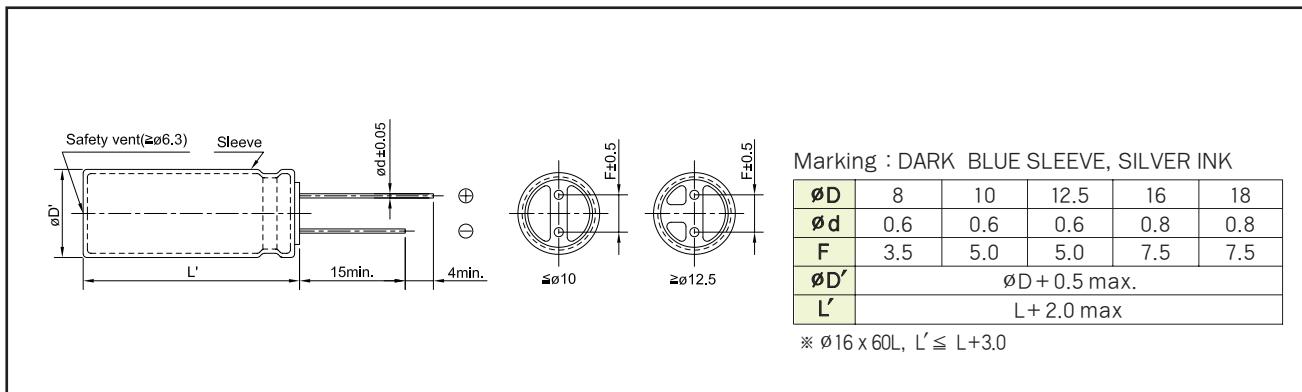
High Ripple

**SPECIFICATIONS**

Item	Characteristics															
Rated Voltage	450 V _{DC}															
Surge Voltage	550 V _{DC}															
Operating Temperature Range	-25 ~ +105°C															
Capacitance Tolerance	$\pm 20\%$ (M) (at 20°C, 120Hz)															
Leakage Current	<table border="1"> <thead> <tr> <th>CV</th> <th>Time</th> <th>After 1 minute</th> <th>After 5 minutes</th> </tr> </thead> <tbody> <tr> <td>≤ 1000</td> <td></td> <td>$I = 0.01CV + 40$</td> <td>$I = 0.03CV + 15$</td> </tr> <tr> <td>> 1000</td> <td></td> <td>$I = 0.04CV + 100$</td> <td>$I = 0.02CV + 25$</td> </tr> </tbody> </table> <p>Where, I : Max. Leakage current(μA) C : Nominal capacitance(μF) V : Rated voltage(V_{DC}) (at 20°C)</p>				CV	Time	After 1 minute	After 5 minutes	≤ 1000		$I = 0.01CV + 40$	$I = 0.03CV + 15$	> 1000		$I = 0.04CV + 100$	$I = 0.02CV + 25$
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Dissipation Factor(Tan δ)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>450</td> <td colspan="2" style="text-align: right;">(at 20°C, 120Hz)</td></tr> <tr> <td>Tanδ(Max.)</td> <td>0.24</td> <td colspan="2" rowspan="2"></td></tr> </table>				Rated Voltage(V _{DC})	450	(at 20°C, 120Hz)		Tan δ (Max.)	0.24						
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Temperature Characteristics (Max. Impedance ratio)	<table border="1"> <tr> <td>Rated Voltage(V_{DC})</td> <td>450</td> <td colspan="2" style="text-align: right;">(at 120Hz)</td></tr> <tr> <td>$Z(-25^{\circ}\text{C})/Z(20^{\circ}\text{C})$</td> <td>6</td> <td colspan="2" rowspan="4"></td></tr> </table>				Rated Voltage(V _{DC})	450	(at 120Hz)		$Z(-25^{\circ}\text{C})/Z(20^{\circ}\text{C})$	6						
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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 for 2,000 hours at 105°C.</p> <p>Capacitance change $\leq \pm 20\%$ of the initial value $\tan \delta \leq 200\%$ of the initial specified value Leakage current \leq The initial specified value</p>															
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 $\leq \pm 20\%$ of the initial value $\tan \delta \leq 200\%$ of the initial specified value Leakage current $\leq 500\%$ of the initial specified value</p>															
Others	Satisfied characteristics KS C IEC 60384-4															

DIMENSIONS OF NZR Series

Unit(mm)





MINIATURE ALUMINUM ELECTROLYTIC CAPACITORS

RATINGS OF NZR Series

V _{DC}	450	
Items μF	ØD × L(mm)	Rated Ripple Current (mA rms/105°C, 120Hz)
23	8 X 50	300
39	10 X 50	450
51		480
62	10 X 60	570
68	12.5 X 50	750
	16 X 35.5	750
	18 X 31.5	750
82	12.5 X 60	800
	16 X 40	800
	18 X 31.5	800
100	16 X 45	900
	18 X 35.5	900
120	16 X 50	1,000
	18 X 40	1,000
150	16 X 60	1,400
	18 X 50	1,400

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Cap.(μF)\Freq.(Hz)	120	1k	10k	50k	100k
23 ~ 150	1.00	1.25	1.50	1.75	2.00