NZL Series

• 105℃ 3,000Hrs assured.

- Non-solvent proof.
- Downsized, High Ripple, Long life.
- For SMPS, IP-Board, Adaptor.
- **RoHS compliant.**
- **Halogen-free capacitors are also available.**

NZE → NZL

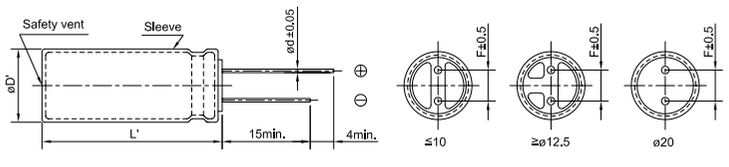
Long Life

SPECIFICATIONS

Item	Characteristics	
Rated Voltage Range	400 V_{DC}	420 ~ 500 V_{DC}
Operating Temperature Range	-40 ~ + 105℃	-25 ~ +105℃
Capacitance Tolerance	±20%(M) (at 20℃, 120Hz)	
Leakage Current	C·V \ Time: After 1 minute / After 5 minutes ≦ 1000: I=0.1CV+40 / I=0.03CV+15 〉1000: I=0.04CV+100 / I=0.02CV+25 Where, I:Max. Leakage current(μA) C:Nominal capacitance(μF) V:Rated voltage(V_{DC}) (at 20℃)	
Dissipation Factor(Tanδ)	Rated Voltage(V_{DC}): 400~500 Tanδ(Max.): 0.24 (at 20℃, 120Hz)	
Temperature Characteristics (Max. Impedance ratio)	Rated Voltage(V_{DC}): 400 / 420~500 Z(-25℃)/Z(+20℃): 5 / 6 Z(-40℃)/Z(+20℃): 6 / - (at 120Hz)	
Load Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 3,000 hours at 105℃. Capacitance change ≦ ±20% 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℃ after exposing them for 1,000 hours at 105℃ 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 ≦ ±20% of the initial value Tanδ ≦ 200% of the initial specified value Leakage current ≦ 500% of the initial specified value	
Others	Satisfied characteristics KS C IEC 60384-4	

DIMENSIONS OF NZL Series

Unit(mm)



Marking : DARK BROWN SLEEVE, SILVER INK

øD	10	12.5	16	18	20
ød	0.6	0.6	0.8	0.8	0.8
F	5.0	5.0	7.5	7.5	7.5
øD'	øD+0.5 max.				
L'	L+2.0 max.				

RATINGS OF NZL Series

VDC	400		420		450	
Items / μF	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)
10	10 × 16	118	10 × 20	129	10 × 20	129
15	10×20	169	12.5 × 16	161	12.5 × 20	173
22	10 × 25	228	12.5 × 20	207	12.5 × 25	263
33	12.5 × 25	304	16 × 20	265	16 × 25	306
47	16 × 25	400	16 × 25	374	16 × 25	374
56	16 × 25	437	16 × 31.5	440	16 × 31.5	440
68	16 × 31.5	550	18 × 25	492	16 × 35.5	514
			18 × 31.5	520	18 × 31.5	520
82	16 × 35.5	582	18 x 31.5	640	16 × 40	640
	18 × 31.5	590			18 × 31.5	
100	16 × 40	645	16 x 40	710	16 x 40	710
	18 × 35.5	786	18 × 35.5	750	18 × 35.5	750
120	18 × 40	801	16 x 45	780	16 × 50	819
			18 × 40	819	18 × 40	
150	18 × 40	872	18 × 45	840	18 × 45	840
			20 × 40	845	20 × 40	845

VDC	500	
Items / μF	ØD×L(mm)	Rated Ripple Current (mArms/105℃, 120Hz)
22	12.5 × 30	238
33	18 × 25	310
47	16 × 35.5	385
56	16 × 40	452
68	16 × 45	567
	18 × 35.5	546
82	16 × 50	599
	18 × 40	588
100	18 × 45	700
	20 × 40	
120	18 × 50	800

RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Freq.(Hz)	120	1k	10k	50k	100k
Factor	1.00	1.25	1.50	1.75	2.00