

# ALUMINUM ELECTROLYTIC CAPACITORS

# LNU

Screw Terminal Type, 105°C  
High Voltage, Smaller Sized.



- Suited for use in industrial power supplies for inverter circuitry, etc.
- Rated voltage range up to DC525V.
- Load life of 5000 hours application of ripple current at 105°C.
- High voltage / Smaller sized than LNT.
- Coped with loading of high speed charge-discharge.
- Suited for high frequency regenerative voltage for AC servomotor, general inverter.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

## Specifications

Item	Performance Characteristics	
Category Temperature Range	- 40 to +105°C	
Rated Voltage Range	400 to 525V	
Rated Capacitance Range	680 to 18000μF	
Capacitance Tolerance	±20% (120Hz, 20°C)	
Leakage Current	After 5 minutes' application of rated voltage, leakage current is not more than $3\sqrt{CV}$ (μA) or 5 mA, whichever is smaller. (at 20°C) [C: Rated Capacitance(μF), V: Voltage (V)]	
Tangent of loss angle (tan δ)	See refer to next page (Measurement frequency : 120Hz at 20°C)	
Stability at Low Temperature	Rated voltage(V)	400 to 525
	Impedance ratio ZT/Z20(MAX.)	$Z - 40^{\circ}\text{C} / Z + 20^{\circ}\text{C}$ 8
Measurement frequency : 120Hz		
Insulation Resistance	The insulation resistance shall be more than 100MΩ at DC 500V application between terminal and bracket.	
Voltage proof	There is no abnormality during AC 2500V 1 minute's application between terminal and bracket.	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 5000 hours at 105°C, the peak voltage shall not exceed the rated voltage.	
	Capacitance change	Within ±20% of the initial capacitance value
	tan δ	200% or less than the initial specified value
Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the requirements listed at right.	
	Capacitance change	Within ±20% of the initial capacitance value
	tan δ	200% or less than the initial specified value
Endurance of charge - discharge behavior	After an application of charge-discharge voltage for 50million times (charge-discharge voltage difference(ΔV) = rated voltage × 0.3, cycle 3Hz) capacitors shall meet the characteristics requirement listed at right.	
	Capacitance change	Within ±20% of the initial capacitance value
	tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value	
Marking	Printed with white color letter on black sleeve	

## Drawing



Note) The brackets will be supplied in the separate box.

### Dimension of terminal pitch (W) and length (ℓ) and Nominal dia. of bolt (mm)

φD	W	ℓ	α	Nominal dia. of bolt
51	22.0	6	3	M5
63.5	28.6	6	3	M5
76.2	31.8	6	3	M5
90	31.8	6	3	M5

About product of stud bolt  
 \* Nylon nut and nylon washer attachment become the standard specifications. (cf. P.348)  
 \* It is not attached to the bracket.  
 \* Field 13 and 14 become blank in Type number system.

## Type numbering system (Example : 500V 4700μF)



Please refer to page 348 for schematic of dimensions.  
 ※ Please contact to us if PVC less products are required.

## Dimensions of mounting bracket (mm)

Leg shape	Symbol	3-Leg				2-Leg			
		51	63.5	76.2	90	51	63.5	76.2	90
P		32.5	38.1	44.5	50.8	33.2	40.5	46.5	53
A		38.5	43	49.2	58.5	40	46.5	53	59
T		7.5	8.0	7.0	8.0	6.0	7.0	6.0	6.0
S		5.0	5.0	5.0	5.0	4.5	4.5	4.5	4.5
U		12	14	14	18	14	14	14	14
θ°		60	60	60	60	30	30	30	30
H		20	25	30	35	25	35	35	35
h		15	20	24	25	15	20	20	20

● Dimension table in next page.

## LNU

### ■ Dimensions

400V (2G)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
2700	63.5 × 80	11.9	0.20	3.12	LNU2G272MSEG
3300	63.5 × 95	13.6	0.20	3.45	LNU2G332MSEG
	76.2 × 75	13.1	0.20	3.45	LNU2G332MSEH
3900	63.5 × 100	14.6	0.20	3.75	LNU2G392MSEG
	76.2 × 85	14.3	0.20	3.75	LNU2G392MSEH
4700	63.5 × 120	16.1	0.20	4.11	LNU2G472MSEG
	76.2 × 95	15.8	0.20	4.11	LNU2G472MSEH
5600	63.5 × 135	17.7	0.20	4.49	LNU2G562MSEG
	76.2 × 105	17.1	0.20	4.49	LNU2G562MSEH
6800	76.2 × 125	19.5	0.20	4.95	LNU2G682MSEH
	90 × 105	18.8	0.20	4.95	LNU2G682MSEJ
8200	76.2 × 170	24.2	0.20	5.00	LNU2G822MSEH
	90 × 125	23.1	0.20	5.00	LNU2G822MSEJ
10000	90 × 145	25.9	0.20	5.00	LNU2G103MSEJ
12000	90 × 165	30.1	0.20	5.00	LNU2G123MSEJ
15000	90 × 195	33.5	0.20	5.00	LNU2G153MSEJ
18000	90 × 235	38.0	0.20	5.00	LNU2G183MSEJ

450V (2W)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
2700	63.5 × 100	13.1	0.20	3.31	LNU2W272MSEG
3300	63.5 × 120	15.0	0.20	3.66	LNU2W332MSEG
	76.2 × 95	14.4	0.20	3.66	LNU2W332MSEH
3900	63.5 × 135	16.3	0.20	3.97	LNU2W392MSEG
	76.2 × 105	15.4	0.20	3.97	LNU2W392MSEH
4700	63.5 × 165	18.5	0.20	4.36	LNU2W472MSEG
	76.2 × 130	17.9	0.20	4.36	LNU2W472MSEH
5600	76.2 × 150	20.5	0.20	4.76	LNU2W562MSEH
	90 × 105	19.6	0.20	4.76	LNU2W562MSEJ
6800	76.2 × 170	23.4	0.20	5.00	LNU2W682MSEH
	90 × 125	22.5	0.20	5.00	LNU2W682MSEJ
8200	76.2 × 195	25.7	0.20	5.00	LNU2W822MSEH
	90 × 145	24.7	0.20	5.00	LNU2W822MSEJ
10000	90 × 165	27.3	0.20	5.00	LNU2W103MSEJ
12000	90 × 195	29.9	0.20	5.00	LNU2W123MSEJ
15000	90 × 235	34.5	0.20	5.00	LNU2W153MSEJ

500V (2H)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
680	51 × 75	4.0	0.20	1.75	LNU2H681MSEF
1000	51 × 90	5.0	0.20	2.12	LNU2H102MSEF
1200	51 × 115	5.7	0.20	2.32	LNU2H122MSEF
	63.5 × 80	5.7	0.20	2.32	LNU2H122MSEG
1500	51 × 135	6.6	0.20	2.60	LNU2H152MSEF
	63.5 × 90	6.6	0.20	2.60	LNU2H152MSEG
1800	63.5 × 100	7.4	0.20	2.85	LNU2H182MSEG
	76.2 × 70	7.4	0.20	2.85	LNU2H182MSEH
2200	63.5 × 120	8.5	0.20	3.15	LNU2H222MSEG
	76.2 × 95	8.5	0.20	3.15	LNU2H222MSEH
2700	63.5 × 135	9.6	0.20	3.49	LNU2H272MSEG
	76.2 × 105	9.6	0.20	3.49	LNU2H272MSEH
3300	63.5 × 165	10.9	0.20	3.85	LNU2H332MSEG
	76.2 × 130	10.9	0.20	3.85	LNU2H332MSEH
3900	76.2 × 145	12.4	0.20	4.19	LNU2H392MSEH
	90 × 105	12.4	0.20	4.19	LNU2H392MSEJ
4700	76.2 × 165	13.9	0.20	4.60	LNU2H472MSEH
	90 × 125	13.9	0.20	4.60	LNU2H472MSEJ
5600	90 × 145	15.8	0.20	5.00	LNU2H562MSEJ
6800	90 × 165	18.5	0.20	5.00	LNU2H682MSEJ
8200	90 × 205	20.2	0.20	5.00	LNU2H822MSEJ

525V (N7)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
680	51 × 85	4.4	0.20	1.75	LNUN7681MSEF
1000	51 × 95	5.4	0.20	2.12	LNUN7102MSEF
1500	63.5 × 95	7.2	0.20	2.60	LNUN7152MSEG
1800	63.5 × 105	8.0	0.20	2.85	LNUN7182MSEG
2200	63.5 × 135	9.2	0.20	3.15	LNUN7222MSEG
	76.2 × 100	9.2	0.20	3.15	LNUN7222MSEH
2700	76.2 × 115	10.6	0.20	3.49	LNUN7272MSEH
3300	76.2 × 140	12.1	0.20	3.85	LNUN7332MSEH
4700	76.2 × 185	15.2	0.20	4.60	LNUN7472MSEH
	90 × 135	15.2	0.20	4.60	LNUN7472MSEJ
5600	90 × 155	17.5	0.20	5.00	LNUN7562MSEJ

Rated ripple current (Arms) at 105°C 120Hz

### ● Frequency coefficient of rated ripple current

Frequency (Hz)	50	60	120	360	1k	10k or more
Coefficient	0.80	0.82	1.00	1.20	1.30	1.40

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