

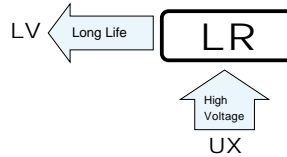
# ALUMINUM ELECTROLYTIC CAPACITORS



**LR** series Chip Type, High Voltage.



- Chip Type, high Voltage.
- Applicable to automatic mounting machine using carrier tape.
- Adapted to the RoHS directive (2011/65/EU).



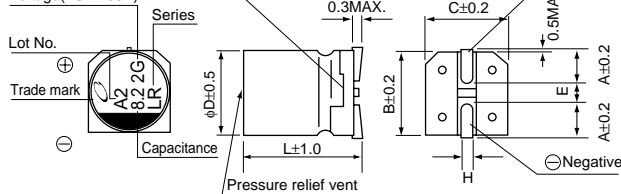
## Specifications

Item	Performance Characteristics							
Category Temperature Range	-40 to +105°C							
Rated Voltage Range	160 to 500V							
Rated Capacitance Range	2.7 to 39μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.04CV +100(μA).							
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C							
	Rated voltage (V)	160	200	250	400	450	500	
Stability at Low Temperature	Measurement frequency: 120Hz							
	Rated voltage (V)		160	200	250	400	450	500
	Impedance ratio ZT / Z20 (MAX.)	Z-40°C / Z+20°C	6	6	10	10	15	15
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 3000 hours at 105°C.							
	Capacitance change	Within ±20% of the initial capacitance 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 specified values for the endurance characteristics listed above.							
	tan δ	200% or less than the initial specified value						
Resistance to soldering heat	The capacitors are kept on a hot plate for 30 seconds, which is maintained at 250°C and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the characteristic requirements listed at right when they are removed from the plate.							
	Leakage current	Less than or equal to the initial specified value						
Marking	Black print on the case top.							

## Chip Type

(φ8 × 10L, φ10)

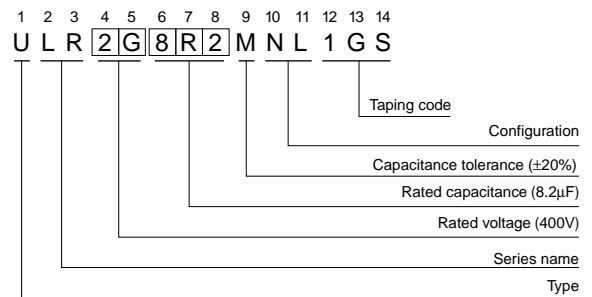
Voltage(2G : 400V)



φD×L (mm)	8×10	10×10	10×13.5
A	2.9	3.2	3.2
B	8.3	10.3	10.3
C	8.3	10.3	10.3
E	3.1	4.5	4.5
L	10	10	13.5
H	0.8 to 1.1	0.8 to 1.1	0.8 to 1.1

Voltage	V	160	200	250	400	450	500
Code		2C	2D	2E	2G	2W	2H

## Type numbering system (Example : 400V 8.2μF)



## Dimensions

Cap. (μF)	Code	160		200		250		400		450		500	
		2C	2D	2E	2G	2W	2H						
2.7	2R7												
3.9	3R9												
4.7	4R7												
5.6	5R6												
6.8	6R8												
8.2	8R2												
10	100												
12	120												
15	150	8×10	50	8×10	50	10×10	50	10×13.5	55				
22	220												
27	270	10×10	65	10×10	65	10×13.5	55						
33	330												
39	390	10×13.5	70										

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

## Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10kHz or more
Coefficient	0.80	1.00	1.25	1.40	1.60

- Taping specifications are given in page 23.
- Recommended land size, soldering by reflow are given in page 18, 19.
- Please refer to page 3 for the minimum order quantity.