

ULTRA MINIATURE ALUMINUM ELECTROLYTIC

ULM SERIES

5mm ULTRA MINIATURE (Radial Lead, 105°C Max)

NTE's ULM series of ultra miniature aluminum electrolytic capacitors are designed for use in general purpose applications. These high temperature, radial lead capacitors are especially suitable for applications that require small-size, extended life, and higher temperature operation.

RATINGS

Capacitance Range: 0.1 μ f to 470 μ f

Tolerance: $\pm 20\%$

Voltage Range: 6.3V to 50 Volts

PERFORMANCE SPECIFICATIONS

Operating Temperature Range:

6.3V to 50V: -40 °C to +105 °C (-40 °F to +220.9 °F)

Leakage Current:

6.3V to 50V: $\leq 0.01CV$ (+3 μ A)

Capacitance Tolerance: $\pm 20\%$ (M)
measured at +20 °C (+68 °F), 120Hz

Dissipation Factor: measured at +20 °C (+68 °F), 120Hz

Working Voltage (VDC)	6.3	16	35	50
0.1 μ f to 470 μ f	28	20	14	12

Impedance Ratio at Low Temperature: 120Hz

Working Voltage (VDC)	6.3	16	35	50
Z @ -25 °C (-13 °F)/ Z @ +20 °C (+68 °F)	4	2	2	2
Z @ -40 °C (-40 °F)/ Z @ +20 °C (+68 °F)	8	4	4	4

Ripple Current:

The ripple current multipliers (See Table) adjust the current to make the capacitors operating temperature the same for different ambient temperatures and ripple frequencies.

CAP (μ F)/Hz		50 (60)	120	1K	10K
Multiplier	0.1 to 47	0.8	1.0	1.30	1.50
	56 and up	0.8	1.0	1.15	1.20

Temperature	40 °C	65 °C	85 °C	105 °C
Multiplier	2.0	1.6	1.25	1.00

Load Life: 1000 Hrs @ +105 °C (+220.9 °F),
at Rated DC voltage applied

Shelf Life: 1000 Hrs @ +105 °C (+220.9 °F),
no voltage applied

MECHANICAL SPECIFICATIONS

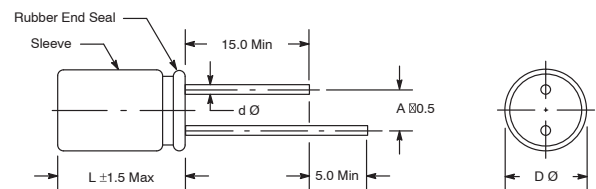
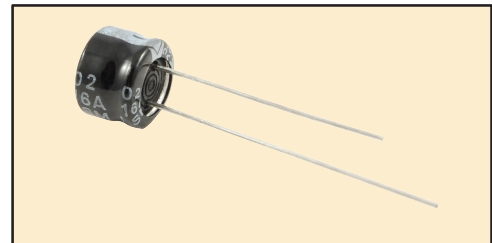
Marking:

Consists of series type, nominal capacitance, rated voltage, temperature range, anode and/or cathode identification, vendor identification.

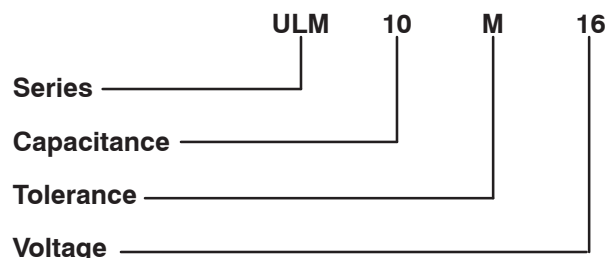
Recommended Cleaning Solvents:

Methanol, isopropanol ethanol, isobutanol, petroleum ether, propanol and/or commercial detergents. Halogenated hydrocarbon cleaning agents such as Freon (MF, TF, or TC), trichloroethylene, trichloroethane, or methylchloride are not recommended as they may damage the capacitor.

CASE SIZE AND DIMENSIONS:



ORDERING INFORMATION



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ULM Series Dimensions: Diameter (D Ø) x Length (L): mm

WV Cap (µf)	6.3	16	35	50
0.1				3 x 5
0.22				3 x 5
0.33				3 x 5
0.47				3 x 5
1.0				3 x 5
2.2				3 x 5
3.3				4 x 5
4.7				4 x 5
10		3 x 5	5 x 5	6 x 5
22		4 x 5	6 x 5	6 x 5
33	4 x 5	5 x 5	6 x 5	8 x 5
47	4 x 5	5 x 5	6 x 5	
68	5 x 5	6 x 5		
100	5 x 5	6 x 5		
220	6 x 5	8 x 5		
330	8 x 5			
470	8 x 5			

* These dimensions are for reference only, please consult the factory for actual size.

ULM Mechanical Specs: Dimensions (mm)

Outside Diameter	D Ø	3.0	4.0	5.0	6.0	8.0
Lead Spacing	A	1.0 ±0.5	1.5 ±0.5	2.0 ±0.5	2.5 ±0.5	3.5 ±0.5
Lead Wire	d Ø	0.45	0.45	0.45	0.45	0.45

* These dimensions are for reference only, please consult the factory for actual size.