

# LMU

## +105°C Long Life Snap-Mount Aluminum Electrolytic Capacitors



For all Long Life High CV Applications

### FEATURES

- Rugged design
- Large case size selection
- Capacitance range: 47μF to 47,000μF
- High voltage range: 10 WVDC to 450 WVDC
- High ripple currents ratings
- Extended Life

### SPECIFICATIONS

Capacitance Tolerance		±20% at 120Hz, 20°C																		
Operating Temperature Range		-40°C to +105°C														-25°C to +105°C				
Dissipation Factor 120Hz, 20°C	WVDC					10	16	25	35	50	63	80	100	160	180	200	250	350	400	450
	tan δ	C ≤ 2200μf								.2	.15	.15	.15	.1	.1	.1	.1	.2	.2	.2
		3300μf ≤ C ≤ 6800μf						.3	.25	.25	.2	.2	.2							
		C ≥ 10000μf				.7	.7	.4	.35	.3	.3									
Impedance Ratio 120Hz	WVDC	10	16	25	35	50	63	80	100	160	180	200	250	350	400	450				
	-25°C/20°C	4	4	3	3	3	3	3	3	3	3	3	3	8	8	8				
	-40°C/20°C	12	12	6	6	6	6	6	6	8	8	8	8	-	-	-				
Leakage Current	WVDC	≤450 WVDC																		
	Time	5 minutes																		
		.02CV or 2000μA whichever is less																		
Load Life	2,000 hours at 105°C with rated WVDC and ripple current																			
	Capacitance change Dissipation factor Leakage current									≤ 20% of initial measured value ≤200% of initial specified value < Initial specified value										
Shelf life	500 hours at +105°C with no voltage applied. Units will meet load life specifications																			
Ripple Current Multipliers	WVDC	Frequency (Hz)						Temperature (C°)												
		50	120	400	1k	10k	100k	45	60	70	85	105								
	≤100	.8	1.0	1.1	1.15	1.2	1.25	2.4	2.2	2.0	1.7	1.0								
	160 to 250V	.8	1.0	1.1	1.2	1.4	1.5	2.4	2.2	2.0	1.7	1.0								
>250V	.8	1.0	1.1	1.15	1.2	1.3	2.4	2.2	2.0	1.7	1.0									

### SPECIAL ORDER OPTIONS

(See Page 33 to 37)

- Special tolerances: ±10% (K), -10% + 30% (Q)
- Epoxy end seal



3757 W. Touhy Ave., Lincolnwood, IL 60712 • (847) 675-1760 • Fax (847) 673-2850 • www.illcap.com

## PHYSICAL DIMENSIONS

WVDC (V) μF	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	80 (100)	100 (125)	160 (200)	180 (220)	200 (250)	250 (300)	350 (400)	400 (450)	450 (500)
47															22x25
68													22x25	22x25	22x30 25x25
100											22x20		22x30 25x25	22x30 22x35 25x25 25x30 30x25	22x40 25x30 30x25
150												22x25	22x35 25x30 30x25	22x40 25x35 30x25	25x40 30x30 35x25
220											22x25	22x30 25x25	22x50 25x40 30x30 35x25	25x45 30x35 35x30	25x50 30x40 35x30 40x25
330									22x25		25x25	22x35 22x40 25x30 30x25	25x50 30x40 35x30 35x35 40x30	30x45 35x35 35x40	30x50 35x40 40x35
470								22x35 25x25			22x40 25x30 25x35 30x25	22x50 25x40 30x30 30x35 35x25	35x40 40x35	35x45 35x50	35x50 40x40
560											22x45 25x35 25x40	25x45 30x35 35x25	35x45	35x50	
680							25x25	25x35 30x25			22x50 25x40 30x30 30x35	25x50 30x35 30x40 30x45 35x30			
820											25x45 30x35 30x40 35x30	30x45 30x35 35x35 35x40			
1,000							22x30 25x25	22x40 25x30 30x25	25x45 30x35 35x30		25x50 30x40 30x45 35x35	35x40 35x45			
1,200											30x45 30x50 35x35 35x45	35x45			
1,500					25x25	30x25	35x25	35x35			35x45 35x50	35x50			
1,800											35x50				
2,200				22x30 25x25	25x30 30x25	30x35 35x25	30x40 35x35 40x30			35x50					
3,300			22x30 25x25	22x35 25x30 30x25	22x50 25x40 30x30 35x25	30x30 35x25	35x35	35x45 40x35							
4,700		22x30	22x35 25x25	22x50 25x40 30x30 35x25	30x40 35x30	35x45									
6,800	22x25	22x35 25x25	22x45 25x35 30x25	30x40 35x30 40x25	35x40										
10,000	22x35 25x25	25x40 30x30 35x25	25x45 30x35 35x30	30x50 35x40 40x35	35x50 40x40										
15,000	25x25	25x35 30x30 35x25	30x40 35x30	30x45 35x35											
22,000	25x35	30x35 35x30	35x35	35x45											
33,000	30x35	35x35	35x50												
39,000	35x30	35x40													
47,000	35x35	35x45													

Convert to inches, divide by 25.4.

DxL(mm)

## STANDARD PART LISTING

Capacitance (µF)	WVDC	IC <sup>®</sup> PART NUMBER	Maximum ESR mΩ 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +105°C	Dimensions DxL (mm)
47	450	476LMU450M2BC	7054.740	0.32	22x25
68	350	686LMU350M2BC	4876.071	0.34	22x25
68	400	686LMU400M2BC	3657.053	0.51	22x25
68	450	686LMU450M2BD	4876.071	0.42	22x30
68	450	686LMU450M2CC	4876.071	0.42	25x25
100	200	107LMU200M2BA	1657.864	0.45	22x20
100	350	107LMU350M2BD	3315.728	0.44	22x30
100	350	107LMU350M2CC	3315.728	0.44	25x25
100	400	107LMU400M2BD	2486.796	0.64	22x30
100	400	107LMU400M2BE	3315.728	0.52	22x35
100	400	107LMU400M2CC	2486.796	0.67	25x25
100	400	107LMU400M2CD	3315.728	0.52	25x30
100	400	107LMU400M2DC	3315.728	0.54	30x25
100	450	107LMU450M2BF	3315.728	0.58	22x40
100	450	107LMU450M2CD	3315.728	0.55	25x30
100	450	107LMU450M2DC	3315.728	0.57	30x25
150	250	157LMU250M2BC	1105.243	0.7	22x25
150	350	157LMU350M2BE	1657.864	0.66	22x35
150	350	157LMU350M2CD	1657.864	0.83	25x30
150	350	157LMU350M2DC	1657.864	0.83	30x25
150	400	157LMU400M2BF	1657.864	0.82	22x40
150	400	157LMU400M2CE	1657.864	0.84	25x35
150	400	157LMU400M2DC	1657.864	0.84	30x25
150	450	157LMU450M2CF	1657.864	0.75	25x40
150	450	157LMU450M2DD	1657.864	0.74	30x30
150	450	157LMU450M2EC	1657.864	0.75	35x25
220	200	227LMU200M2BC	753.575	0.82	22x25
220	250	227LMU250M2BD	753.575	0.9	22x30
220	250	227LMU250M2CC	753.575	0.9	25x25
220	350	227LMU350M2BH	1130.362	1.05	22x50
220	350	227LMU350M2CF	1130.362	1.04	25x40
220	350	227LMU350M2DD	1507.149	0.78	30x30
220	350	227LMU350M2EC	1130.362	1.04	35x25
220	400	227LMU400M2CG	1130.362	1.07	25x45
220	400	227LMU400M2DE	1130.362	1.06	30x35
220	400	227LMU400M2ED	1130.362	1.08	35x30
220	450	227LMU450M2CH	1507.149	1.01	25x50
220	450	227LMU450M2DF	1507.149	1.02	30x40
220	450	227LMU450M2ED	1507.149	0.98	35x30
220	450	227LMU450M2FC	1507.149	0.98	40x25
330	160	337LMU160M2BC	502.383	1	22x25

Capacitance (µF)	WVDC	IC <sup>®</sup> PART NUMBER	Maximum ESR mΩ 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +105°C	Dimensions DxL (mm)
330	200	337LMU200M2CC	502.383	1.1	25x25
330	250	337LMU250M2BE	753.575	1.19	22x35
330	250	337LMU250M2BF	502.383	1.2	22x40
330	250	337LMU250M2CD	753.575	1.2	25x30
330	250	337LMU250M2DC	502.383	1.2	30x25
330	350	337LMU350M2CH	753.575	1.23	25x50
330	350	337LMU350M2DF	753.575	1.34	30x40
330	350	337LMU350M2ED	753.575	1.33	35x30
330	350	337LMU350M2EE	1004.766	1.11	35x35
330	350	337LMU350M2FD	1004.766	1.12	40x30
330	400	337LMU400M2DG	753.575	1.39	30x45
330	400	337LMU400M2EE	753.575	1.35	35x35
330	400	337LMU400M2EF	1004.766	1.28	35x40
330	400	337LMU400M2FD	1004.766	1.21	40x30
330	450	337LMU450M2DH	1004.766	1.37	30x50
330	450	337LMU450M2EF	1004.766	1.35	35x40
330	450	337LMU450M2FE	1004.766	1.37	40x35
470	160	477LMU160M2BE	352.737	1.3	22x35
470	160	477LMU160M2CC	352.737	1.3	25x25
470	200	477LMU200M2BF	352.737	1.4	22x40
470	200	477LMU200M2CD	352.737	1.4	25x30
470	200	477LMU200M2CE	352.737	1.47	25x35
470	200	477LMU200M2DC	529.106	1.5	30x25
470	250	477LMU250M2BH	529.106	1.66	22x50
470	250	477LMU250M2CF	352.737	1.4	25x40
470	250	477LMU250M2DD	352.737	1.4	30x30
470	250	477LMU250M2DE	352.737	1.86	30x35
470	250	477LMU250M2EC	352.737	1.4	35x25
470	350	477LMU350M2EF	529.106	1.69	35x40
470	350	477LMU350M2FE	705.474	1.41	40x35
470	400	477LMU400M2EG	529.106	1.74	35x45
470	400	477LMU400M2EH	705.474	1.67	35x50
470	450	477LMU450M2EH	705.474	1.76	35x50
470	450	477LMU450M2FF	705.474	1.71	40x40
560	200	567LMU200M2BG	444.071	1.75	22x45
560	200	567LMU200M2CE	444.071	1.68	25x35
560	200	567LMU200M2CF	296.047	1.67	25x40
560	250	567LMU250M2CG	444.071	1.85	25x45
560	250	567LMU250M2DE	444.071	1.85	30x35
560	250	567LMU250M2EC	444.071	1.78	35x25
560	350	567LMU350M2EG	444.071	1.9	35x45

# LMU

+ 105°C Long Life  
Snap-Mount Aluminum  
Electrolytic Capacitors

## STANDARD PART LISTING

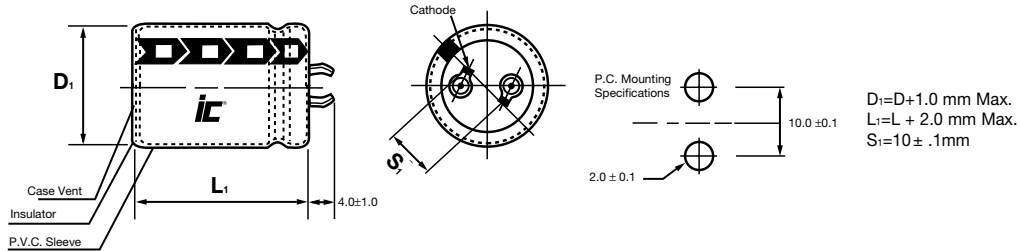
Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR mΩ 120Hz,+20°C	Maximum RMS Ripple Current (A) 120Hz,+105°C	Dimensions DxL (mm)
560	400	567LMU400M2EH	444.071	2.36	35x50
680	100	687LMU100M2CC	365.705	0.95	25x25
680	160	687LMU160M2CE	243.804	1.7	25x35
680	160	687LMU160M2DC	243.804	1.7	30x25
680	200	687LMU200M2BH	365.705	2.02	22x50
680	200	687LMU200M2CF	243.804	1.7	25x40
680	200	687LMU200M2DD	365.705	1.94	30x30
680	200	687LMU200M2DE	243.804	1.88	30x35
680	250	687LMU250M2CH	365.705	2.14	25x50
680	250	687LMU250M2DE	365.705	2.04	30x35
680	250	687LMU250M2DF	243.804	1.9	30x40
680	250	687LMU250M2DG	243.804	2.25	30x45
680	250	687LMU250M2ED	365.705	2.1	35x30
820	200	827LMU200M2CG	303.268	2.27	25x45
820	200	827LMU200M2DE	303.268	2.26	30x35
820	200	827LMU200M2DF	202.179	2.08	30x40
820	200	827LMU200M2ED	303.268	2.33	35x30
820	250	827LMU250M2DG	303.268	2.49	30x45
820	250	827LMU250M2EE	303.268	2.45	35x35
820	250	827LMU250M2EF	202.179	2.33	35x40
1000	80	108LMU080M2BD	248.680	1.26	22x30
1000	80	108LMU080M2CC	248.680	1.21	25x25
1000	100	108LMU100M2BF	248.680	1.76	22x40
1000	100	108LMU100M2CD	248.680	1.71	25x30
1000	100	108LMU100M2DC	248.680	1.65	30x25
1000	160	108LMU160M2CG	165.786	2.1	25x45
1000	160	108LMU160M2DE	165.786	2.1	30x35
1000	160	108LMU160M2ED	165.786	2.1	35x30
1000	200	108LMU200M2CH	248.680	2.63	25x50
1000	200	108LMU200M2DF	248.680	2.64	30x40
1000	200	108LMU200M2DG	165.786	2.35	30x45
1000	200	108LMU200M2EE	165.786	2.28	35x35
1000	250	108LMU250M2EF	165.786	2.3	35x40
1000	250	108LMU250M2EG	165.786	2.48	35x45
1200	200	128LMU200M2DG	207.233	3.04	30x45
1200	200	128LMU200M2DH	138.155	2.65	30x50
1200	200	128LMU200M2EE	207.233	3	35x35
1200	200	128LMU200M2EG	138.155	2.58	35x45
1200	250	128LMU250M2EG	207.233	3.29	35x45
1500	63	158LMU063M2CC	165.786	1.4	25x25
1500	80	158LMU080M2DC	165.786	1.5	30x25
1500	100	158LMU100M2EC	165.786	2.05	35x25

Capacitance (µF)	WVDC	IC PART NUMBER	Maximum ESR mΩ 120Hz,+20°C	Maximum RMS Ripple Current (A) 120Hz,+105°C	Dimensions DxL (mm)
1500	160	158LMU160M2EE	110.524	2.84	35x35
1500	200	158LMU200M2EG	110.524	2.8	35x45
1500	200	158LMU200M2EH	110.524	3.18	35x50
1500	250	158LMU250M2EH	165.786	3.68	35x50
1800	200	188LMU200M2EH	92.104	3.3	35x50
2200	50	228LMU050M2BD	150.715	1.4	22x30
2200	50	228LMU050M2CC	150.715	1.35	25x25
2200	63	228LMU063M2CD	113.036	1.76	25x30
2200	63	228LMU063M2DC	113.036	1.7	30x25
2200	80	228LMU080M2DE	113.036	2.1	30x35
2200	80	228LMU080M2EC	113.036	2.03	35x25
2200	100	228LMU100M2DF	113.036	2.85	30x40
2200	100	228LMU100M2EE	113.036	2.78	35x35
2200	100	228LMU100M2FD	113.036	2.7	40x30
2200	180	228LMU180M2EH	75.357	3.6	35x50
3300	35	338LMU035M2BD	125.596	1.55	22x30
3300	35	338LMU035M2CC	125.596	1.5	25x25
3300	50	338LMU050M2BE	125.596	2.11	22x35
3300	50	338LMU050M2CD	125.596	2.06	25x30
3300	50	338LMU050M2DC	125.596	2	30x25
3300	63	338LMU063M2DD	100.477	2.22	30x30
3300	63	338LMU063M2EC	100.477	2.15	35x25
3300	80	338LMU080M2EE	100.477	2.58	35x35
3300	100	338LMU100M2EG	100.477	2.98	35x45
3300	100	338LMU100M2FE	100.477	2.9	40x35
4700	25	478LMU025M2BD	105.821	1.6	22x30
4700	35	478LMU035M2BE	88.184	1.88	22x35
4700	35	478LMU035M2CC	88.184	1.83	25x25
4700	50	478LMU050M2BH	88.184	2.5	22x50
4700	50	478LMU050M2CF	88.184	2.45	25x40
4700	50	478LMU050M2DD	88.184	2.39	30x30
4700	50	478LMU050M2EC	88.184	2.32	35x25
4700	63	478LMU063M2DF	70.547	2.94	30x40
4700	63	478LMU063M2ED	70.547	2.87	35x30
4700	80	478LMU080M2EG	70.547	3.38	35x45
6800	16	688LMU016M2BC	73.141	1.56	22x25
6800	25	688LMU025M2BE	73.141	2.14	22x35
6800	25	688LMU025M2CC	73.141	2.09	25x25
6800	35	688LMU035M2BG	60.951	2.53	22x45
6800	35	688LMU035M2CE	60.951	2.48	25x35
6800	35	688LMU035M2DC	60.951	2.42	30x25
6800	50	688LMU050M2DF	60.951	3.26	30x40

## STANDARD PART LISTING

Capacitance (μF)	WVDC	IC PART NUMBER	Maximum ESR mΩ 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +105°C	Dimensions DxL (mm)
6800	50	688LMU050M2ED	60.951	3.19	35x30
6800	50	688LMU050M2FC	60.951	2.78	40x25
6800	63	688LMU063M2EF	60.951	3.68	35x40
10000	16	109LMU016M2BE	116.050	2.19	22x35
10000	16	109LMU016M2CC	116.050	1.94	25x25
10000	25	109LMU025M2CF	66.315	2.83	25x40
10000	25	109LMU025M2DD	66.315	2.72	30x30
10000	25	109LMU025M2EC	66.315	2.65	35x25
10000	35	109LMU035M2CG	58.025	3.4	25x45
10000	35	109LMU035M2DE	58.025	3.34	30x35
10000	35	109LMU035M2ED	58.025	3.27	35x30
10000	50	109LMU050M2DH	49.736	4.05	30x50
10000	50	109LMU050M2EF	49.736	3.98	35x40
10000	50	109LMU050M2FE	49.736	3.9	40x35
10000	63	109LMU063M2EH	49.736	4.48	35x50
10000	63	109LMU063M2FF	49.736	4.4	40x40
15000	10	159LMU010M2CC	77.367	1.92	25x25
15000	16	159LMU016M2CE	77.367	2.8	25x35

Capacitance (μF)	WVDC	IC PART NUMBER	Maximum ESR mΩ 120Hz, +20°C	Maximum RMS Ripple Current (A) 120Hz, +105°C	Dimensions DxL (mm)
15000	16	159LMU016M2DD	77.367	2.8	30x30
15000	16	159LMU016M2EC	77.367	2.67	35x25
15000	25	159LMU025M2DF	44.210	3.13	30x40
15000	25	159LMU025M2ED	44.210	3.06	35x30
15000	35	159LMU035M2DG	38.683	4	30x45
15000	35	159LMU035M2EE	38.683	3.93	35x35
22000	10	229LMU010M2CE	52.750	2.46	25x35
22000	16	229LMU016M2DE	52.750	3.48	30x35
22000	16	229LMU016M2ED	52.750	3.35	35x30
22000	25	229LMU025M2EE	30.143	4.07	35x35
22000	35	229LMU035M2EG	26.375	5.12	35x45
33000	10	339LMU010M2DE	35.167	3.05	30x35
33000	16	339LMU016M2EE	35.167	4.06	35x35
33000	25	339LMU025M2EH	20.095	4.78	35x50
39000	10	399LMU010M2ED	29.757	3.09	35x30
39000	16	399LMU016M2EF	29.757	4.08	35x40
47000	10	479LMU010M2EE	24.692	3.51	35x35
47000	16	479LMU016M2EG	24.692	4.45	35x45



3 and 4 pin mounting styles available on special order. Contact I.C. for details