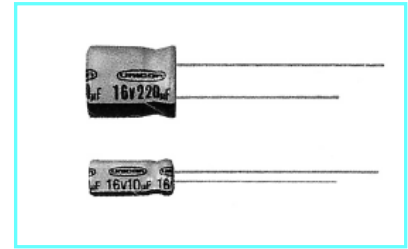


LLM シリーズ 低漏れ電流品
Series, 85°C, Low Leakage Current

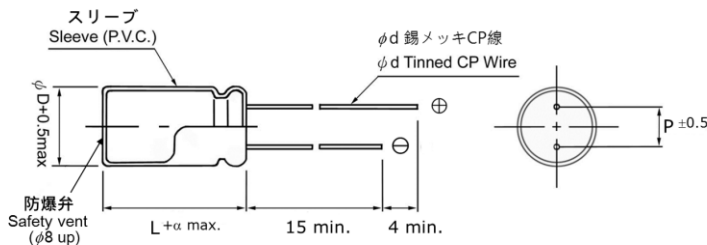
- 低漏れ電流標準品
Standard for low leakage current
- 85°C 2,000時間保証
Load life: 2,000 hours
- 定格電圧範囲 Rated voltage range : 6.3 ~ 50V
- 静電容量範囲 Capacitance range : 0.1 ~ 1,000 μ F
- RoHS指令対応済/RoHS Compliant



■ 仕様 SPECIFICATIONS

項目 Items	特性 Characteristics						
カテゴリ温度範囲 Operating Temperature Range	-40 ~ +85°C						
定格電圧範囲 Rated Voltage Range	6.3V ~ 50V						
静電容量範囲 Nominal Capacitance Range	0.1 ~ 1,000 μ F						
静電容量許容差 Capacitance Tolerance	\pm 20% (120Hz, 20°C)						
漏れ電流 Leakage Current	$I \leq 0.002CV$ 又は $0.4 \mu A$ のいずれか大きい値以下(2分値) $I \leq 0.002CV$ or $0.4 \mu A$ whichever is greater, after 2 minutes application of rated voltage.						
損失角の正接 Dissipation Factor	定格電圧(V) Rated voltage	10	16	25	35	50	120 Hz, 20°C
	$\tan \delta$ (max.)	0.20	0.16	0.14	0.12	0.10	
温度特性 Temperature Characteristics	インピーダンス比 Impedance Ratio						
	定格電圧(V) Rated voltage	10	16	25	35	50	120 Hz
	$Z(-25^\circ C) / Z(+20^\circ C)$	3	2	2	2	2	
$Z(-40^\circ C) / Z(+20^\circ C)$	6	4	4	3	3		
高温負荷特性 Load Life	85°C 2,000 時間定格電圧連続印加後、20°Cに戻し測定を行ったとき、下記項目を満足する After 2,000 hours application of rated voltage at 85°C, capacitor meet the characteristic requirements as below.						
	静電容量変化率 Capacitance change	初期値の \pm 20%以内 Within \pm 20% of initial value					
	損失角の正接 Dissipation Factor	初期規格値の 200%以下 200% or less of initial specified value					
	漏れ電流 Leakage current	初期規格値以下 Initial specified value or less					
高温無負荷特性 Shelf Life	85°C 1,000 時間無負荷放置後、下記規格を満足する。(但し、JIS C-5102 4.4 項の電圧処理後) After storing the capacitors under no load at 85°C for 1,000 hours, capacitors meet the characteristic requirements as below. Be sure to apply voltage to the capacitors before test according to JIS-C-5101-4 4.1						
	静電容量変化率 Capacitance change	初期値の \pm 20%以内 Within \pm 20% of initial value					
	損失角の正接 Dissipation Factor	初期規格値の 200%以下 200% or less of initial specified value					
	漏れ電流 Leakage current	初期規格値以下 Initial specified value or less					
表示 Marking	橙色チューブに黒色印刷 Black print on orange sleeve						
関連規格 Applicable standard	JIS C-5141 特性W Characteristics W of JIS C-5141						

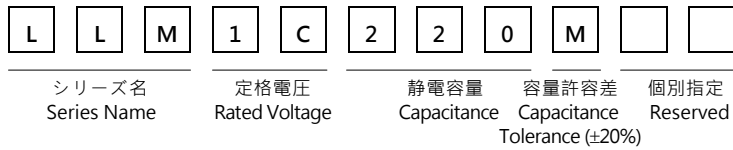
■ 寸法図 Dimensions



unit: mm

ϕD	5	6.3	8	10	12.5
P	2.0	2.5	3.5	5.0	5.0
ϕd	0.5	0.5	0.6	0.6	0.6
α	L < 20 : 1.5, L \geq 20 : 2.0				

■ 品名コード体系 Part Numbering (例 example: 16V 1000 μF)



■ 寸法表 Standard Products Table

Cap. (μF)	W.V. Code	10 (1A)		16 (1C)		25 (1E)		35 (1V)		50 (1H)	
0.1	0R1									5 x 11	1.1
0.15	R15									5 x 11	1.6
0.22	R22									5 x 11	2.3
0.33	R33									5 x 11	3.5
0.47	R47									5 x 11	5.0
0.68	R68									5 x 11	7.3
1	1R0									5 x 11	10
1.5	1R5									5 x 11	16
2.2	2R2									5 x 11	23
3.3	3R3									5 x 11	35
4.7	4R7									5 x 11	45
6.8	6R8									5 x 11	50
10	100									5 x 11	60
15	150							5 x 11	70	6.3 x 11	85
22	220					5 x 11	80	6.3 x 11	95	6.3 x 11	100
33	330			5 x 11	90	6.3 x 11	105	6.3 x 11	115	8 x 11.5	145
47	470	5 x 11	100	6.3 x 11	120	6.3 x 11	130	8 x 11.5	160	8 x 11.5	175
68	680	6.3 x 11	130	6.3 x 11	145	8 x 11.5	180	8 x 11.5	160	10 x 12.5	225
100	101	6.3 x 11	155	8 x 11.5	200	8 x 11.5	215	10 x 12.5	250	10 x 16	295
150	151	8 x 11.5	220	8 x 11.5	250	10 x 12.5	280	10 x 16	330	10 x 20	395
220	221	8 x 11.5	270	10 x 12.5	320	10 x 16	370	10 x 20	435	12.5 x 20	530
330	331	10 x 12.5	350	10 x 16	425	10 x 20	495	12.5 x 20	590	12.5 x 20	650
470	471	10 x 16	455	10 x 20	495	12.5 x 20	655	12.5 x 25	780		
680	681	10 x 20	595	12.5 x 20	735						
1000	102	12.5 x 20	800							Size (mm)	R.C.

Allowable Ripple Current/定格リップル電流 (mArms) at 85°C 120Hz

● 許容リップル電流の周波数補正係数 Frequency coefficient of allowable ripple current

Cap (μF)	Frequency	50 Hz	120 Hz	300 Hz	1 KHz	10 KHz~
0.1 ~ 47		0.75	1.00	1.35	1.57	2.00
68 ~ 470		0.80	1.00	1.23	1.34	1.50
680 ~ 1000		0.85	1.00	1.10	1.13	1.15