



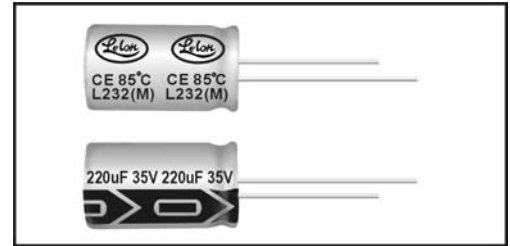
# Aluminum Electrolytic Capacitors

RL/RLA

CE04 Type

**Features**

- 85°C, standard low leakage current series



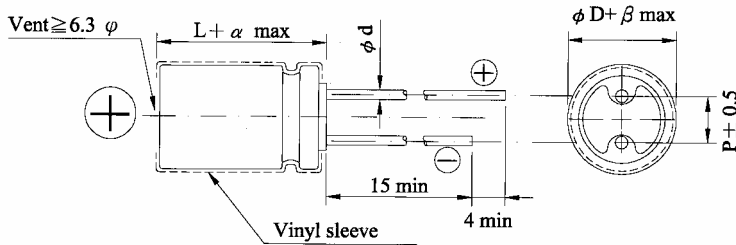
**SPECIFICATIONS**

Items	Performance																														
	RL	RLA																													
Life	At 85°C, 1000 Hrs	At 85°C, 2000 Hrs																													
Operating Temperature Range	-40°C ~ +85°C																														
Capacitance Tolerance	±20% (at 120Hz, 20°C)																														
Leakage Current (at 20°C)	I = 0.002CV or 0.4 (μA) whichever is greater (after 2 minutes) Where, C= rated capacitance in μF. V = rated DC working voltage in V.																														
Dissipation Factor (Tan δ at 120Hz, 20°C)	<table border="1"> <thead> <tr> <th>Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Tan δ (max)</td> <td>0.24</td> <td>0.21</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </tbody> </table> <p>When the capacitance exceeds 1000 μF, 0.02 shall be added every 1000 μF increase.</p>		Rated Voltage	6.3	10	16	25	35	50	63	100	Tan δ (max)	0.24	0.21	0.16	0.14	0.12	0.10	0.09	0.08											
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Low Temperature Characteristics (at 120Hz)	<p>Impedance ratio shall not exceed the values given in the table below.</p> <table border="1"> <thead> <tr> <th colspan="2">Rated Voltage</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Impedance Ratio</td> <td>Z(-25°C)/Z(+20°C)</td> <td>5</td> <td>4</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>10</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>		Rated Voltage		6.3	10	16	25	35	50	63	100	Impedance Ratio	Z(-25°C)/Z(+20°C)	5	4	2	2	2	2	2	2	Z(-40°C)/Z(+20°C)	10	8	6	4	4	3	3	3
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Other Standards	JIS C 5101-4																														

CE04 Type

DIAGRAM OF DIMENSIONS

Unit: mm



LEAD SPACING AND DIAMETER

$\phi D$	5	6.3	8	10	13	16	18
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
$\phi d$	0.5		0.6			0.8	
$\alpha$	1.0			1.5			
$\beta$	0.5						

Dimension:  $\phi D \times L$ (mm)

Ripple Current: mA/rms at 120 Hz, 85°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

$\mu F$	V.DC Contents	6.3V (0J)		10V (1A)		16V (1C)		25V (1E)		35V (1V)		50V (1H)		63V (1J)		100V (2A)	
		$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA	$\phi D \times L$	mA
0.1	0R1											5 × 11	1.3			5 × 11	2.6
0.22	R22											5 × 11	2.9			5 × 11	5.8
0.33	R33											5 × 11	4.4			5 × 11	8.8
0.47	R47											5 × 11	7			5 × 11	12
1	010											5 × 11	13			5 × 11	22
2.2	2R2											5 × 11	29			5 × 11	33
3.3	3R3											5 × 11	35			5 × 11	40
4.7	4R7							5 × 11	31	5 × 11	40	5 × 11	42	5 × 11	45	5 × 11	48
10	100					5 × 11	44	5 × 11	54	5 × 11	58	5 × 11	65	5 × 11	70	6.3 × 11	80
22	220			5 × 11	59	5 × 11	75	5 × 11	80	5 × 11	87	5 × 11	95	6.3 × 11	115	8 × 11.5	135
33	330	5 × 11	55	5 × 11	84	5 × 11	90	5 × 11	97	5 × 11	105	6.3 × 11	125	6.3 × 11	140	10 × 12.5	195
47	470	5 × 11	79	5 × 11	100	5 × 11	110	5 × 11	115	6.3 × 11	145	6.3 × 11	150	8 × 11.5	190	10 × 16	255
100	101	5 × 11	130	5 × 11	145	6.3 × 11	180	6.3 × 11	190	8 × 11.5	240	8 × 11.5	255	10 × 12.5	320	13 × 20	450
220	221	6.3 × 11	230	6.3 × 11	250	8 × 11.5	300	8 × 11.5	320	10 × 12.5	420	10 × 16	490	10 × 20	565	16 × 25	810
330	331	6.3 × 11	280	8 × 11.5	350	8 × 11.5	370	10 × 12.5	470	10 × 16	570	10 × 20	650	13 × 20	765	16 × 25	990
470	471	8 × 11.5	380	8 × 11.5	415	10 × 12.5	520	10 × 16	620	10 × 20	740	13 × 20	860	13 × 25	990	16 × 31.5	1250
1000	102	10 × 12.5	650	10 × 16	790	10 × 20	910	13 × 20	1090	13 × 25	1300	16 × 25	1530	16 × 31.5	1700		
2200	222	13 × 20	1150	13 × 20	1240	13 × 25	1420	16 × 25	1660	16 × 31.5	1890	18 × 35.5	2160				
3300	332	13 × 20	1380	13 × 25	1590	16 × 25	1840	16 × 31.5	2070	18 × 35.5	2340						
4700	472	16 × 25	1880	16 × 25	1980	16 × 31.5	2260	18 × 35.5	2520	18 × 40	2690						

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