

ALUMINUM ELECTROLYTIC CAPACITORS

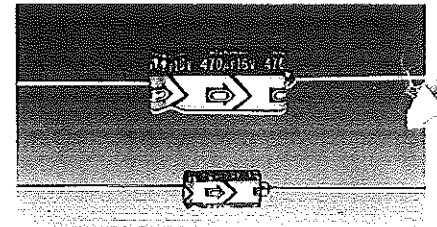


LB

Electrolytic Capacitor for General-Purpose

series Axial Lead Type T
Anti-Solvent Feature*

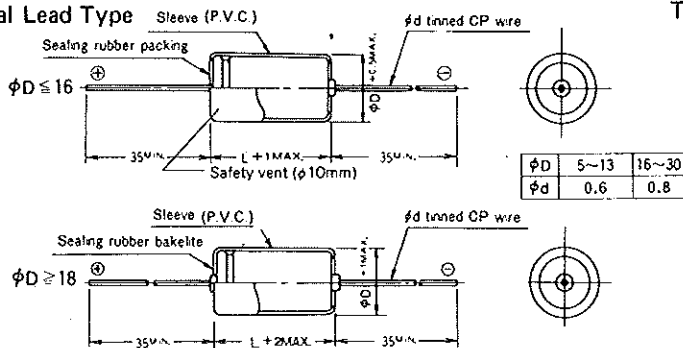
- The LB series is a highly reliable and economical series for use in a wide range of applications.
- The standard capacitance tolerance is $\pm 20\%$ (M).



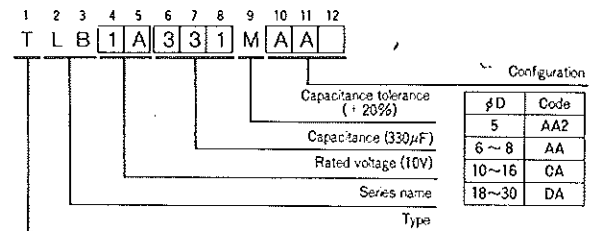
Specifications

Item	Performance Characteristics																														
Operating Temperature Range	-40 ~ +85°C																														
Voltage Range	6.3 ~ 100V																														
Capacitance Range	0.47 ~ 33000 μ F																														
Capacitance Tolerance	$\pm 20\%$ at 120 Hz, 20°C																														
Leakage Current	After 1 minute of application at rated voltage, leakage current will be no more than 0.03CV or 4 μ A, whichever is greater. After 5 minutes of application at rated voltage for axial lead types will be ≥ 8 mm, the leakage current will be no more than 0.03CV or 4 μ A, whichever is greater.																														
Dissipation Factor (tan δ)	For capacitance values of more than 1000 μ F, add 0.02 for every increase of 1000 μ F ($\phi D \leq 16$). This symbol (), applies to capacitance values of 10,000 μ F or more. <table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td rowspan="3">Measurement frequency: 120 Hz. Temperature: 20°C</td> </tr> <tr> <td>tan δ $\phi D \leq 16$</td> <td>0.22</td> <td>0.19</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> <tr> <td>(MAX.) $\phi D \geq 18$</td> <td>0.40(0.50)</td> <td>0.35(0.50)</td> <td>0.30(0.35)</td> <td>0.25(0.35)</td> <td>0.22(0.30)</td> <td>0.20</td> <td>0.20</td> <td>0.18</td> </tr> </table>	Rated voltage (V)	6.3	10	16	25	35	50	63	100	Measurement frequency: 120 Hz. Temperature: 20°C	tan δ $\phi D \leq 16$	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	(MAX.) $\phi D \geq 18$	0.40(0.50)	0.35(0.50)	0.30(0.35)	0.25(0.35)	0.22(0.30)	0.20	0.20	0.18		
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Low Temperature Characteristics	<table border="1"> <tr> <td colspan="2">Rated voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>100</td> <td rowspan="3">Measurement frequency: 120 Hz.</td> </tr> <tr> <td rowspan="2">Impedance ratio Z1/Z20 (MAX.)</td> <td>Z-25°C/Z+20°C</td> <td>4(6)</td> <td>3(4)</td> <td>2(3)</td> <td>2(2)</td> <td>2(2)</td> <td>2(2)</td> <td>2(2)</td> <td>2(2)</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>8(10)</td> <td>6(8)</td> <td>4(6)</td> <td>4(4)</td> <td>3(4)</td> <td>3(4)</td> <td>3(4)</td> <td>3(4)</td> </tr> </table> <p>This symbol (), applies to axial and radial lead types with diameters ≥ 10mm</p>	Rated voltage (V)		6.3	10	16	25	35	50	63	100	Measurement frequency: 120 Hz.	Impedance ratio Z1/Z20 (MAX.)	Z-25°C/Z+20°C	4(6)	3(4)	2(3)	2(2)	2(2)	2(2)	2(2)	2(2)	Z-40°C/Z+20°C	8(10)	6(8)	4(6)	4(4)	3(4)	3(4)	3(4)	3(4)
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	Z-40°C/Z+20°C	8(10)	6(8)	4(6)	4(4)	3(4)	3(4)	3(4)	3(4)																						
Load Life	<p>After the rated voltage has been applied for 1000 hours at a temperature of 85°C, the capacitors will meet the characteristic requirements listed.</p> <table border="1"> <tr> <td>Leakage current</td> <td>Initial specified value or less</td> </tr> <tr> <td>Capacitance change</td> <td>Within $\pm 20\%$ of initial value for capacitors of 16WV or less, and $\phi 6$ Within $\pm 15\%$ of initial value for capacitors of 25WV or more, and above $\phi 6$</td> </tr> <tr> <td>tan δ</td> <td>150% or less of initial specified value</td> </tr> <tr> <td>Appearance</td> <td>No excessive leak of electrolyte or abnormal deformity</td> </tr> </table>	Leakage current	Initial specified value or less	Capacitance change	Within $\pm 20\%$ of initial value for capacitors of 16WV or less, and $\phi 6$ Within $\pm 15\%$ of initial value for capacitors of 25WV or more, and above $\phi 6$	tan δ	150% or less of initial specified value	Appearance	No excessive leak of electrolyte or abnormal deformity																						
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Shelf Life	After capacitors have been stored without load at 85°C for 1000 hours and applying voltage according to JIS C-5102 4-3, capacitors will meet the specified value for load life characteristics listed above.																														
Marking	Printed with white letters on dark blue sleeve according to JIS C-5141.																														
Applicable Standards	Characteristics W of JIS C-5141 and JIS C-5102.																														

Axial Lead Type



Type numbering system (Example: 10V 330 μ F)



Nominal Dimensions

Cap. (μ F)	W. V. Code	D x L (mm)									
		6.3	10	16	25	35	50	63	100		
0.47	R47	0 J	1 A	1 C	1 E	1 V	1 H	1 J	2 A		
1	010						5X12		5X12		
2.2	2R2						5X12		5X12		
3.3	3R3						5X12		5X12		
4.7	4R7						5X12		5X12		
10	100				5X12	5X12	6X12	6X12	8X16		
22	220			5X12	6X12	6X12	6X16	8X16	8X16		
33	330		6X12	6X12	6X12	6X16	8X16	8X16	8X16	8X20	
47	470		6X12	6X12	6X16	8X16	8X16	8X16	8X16	10X21	
100	101	6X12	6X16	8X16	8X16	8X20	8X20	10X21	10X21	13X26	
220	221	8X16	8X16	8X16	8X20	10X21	10X26	13X26	13X26	13X31.5	
330	331	8X16	8X16	8X20	10X21	10X26	13X26	13X26	13X26	16X41.5	
470	471	8X20	8X20	10X21	10X26	13X26	13X26	13X26	13X31.5	16X41.5	
1000	102	10X26	10X26	13X26	13X26	13X31.5	16X31.5	16X31.5	16X41.5	22X40	
2200	222	13X26	13X31.5	16X31.5	16X41.5	16X41.5	22X40	22X40	22X40	25.4X61	
3300	332	16X31.5	16X31.5	16X41.5	18X40	22X40	22X40	22X52	25.4X52		
4700	472	16X31.5	16X41.5	18X40	22X40	22X40	22X52	25.4X52	30X61		
6800	682	16X41.5	18X40	22X40	25.4X52	25.4X61	25.4X61	30X61			
10000	103	22X40	22X40	22X52	25.4X61	30X61					
15000	153	22X52	25.4X52	25.4X61							
22000	223	25.4X52	25.4X61	30X61							
33000	333	30X61									

Capacitance values of .68, 1.5, 68, 150, 680 are available in the LB Series upon request.
*On 18mm and larger confirm Anti-Solvent Feature with factory.

For mm to inch conversions, refer to Inside Back Cover or multiply by .03937.