



# LLM Series 105°C 低漏電迷你型製品系列

## 7mm, Low Leakage Current

### Features

- Low leakage current, height 7 mm

### Specifications

Item	Performance Characteristics																					
Operating Temperature Range	-40 to +105°C																					
Rated voltage Range	6.3 to 50 VDC																					
Capacitance Range	0.1 to 220uF																					
Capacitance Tolerance	±20%[120Hz +20 °C]																					
Leakage Current[+20°C.max.]	1 ≤ 0.002 CV or 0.4(uA) After 2 minutes whichever is greater measured with rated with rate working voltage applied																					
Dissipation Factor[tan δ]	<table border="1"> <tr> <td>Working Voltage [VDC]</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>D.F.[%]max</td> <td>24</td> <td>20</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> </tr> </table> [+20°C. At 120Hz]	Working Voltage [VDC]	6.3	10	16	25	35	50	D.F.[%]max	24	20	16	14	12	10							
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D.F.[%]max	24	20	16	14	12	10																
Low Temperature Characteristics [120Hz]	Impedance ratio max. <table border="1"> <tr> <td>Working Voltage[VDC]</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> </tr> </table>	Working Voltage[VDC]	6.3	10	16	25	35	50	Z-25°C/Z+20°C	4	3	2	2	2	2	Z-40°C/Z+20°C	8	6	4	4	3	3
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Z-40°C/Z+20°C	8	6	4	4	3	3																
Load Life	Duration time :1000Hrs Ambient temperature: +105 °C Applied voltage: Rated DC working voltage After test requirements at +20 °C Capacitance change : ≤ ± 20% of the initial measured value Dissipation factor: ≤ 200% of the initial specified value Leakage current: ≤ The initial specified value																					
Shelf Life	Test conditions Duration time :500 Hrs Ambient temperature :+105 °C Applied voltage: None After test requirements at +20 °C : Some limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																					

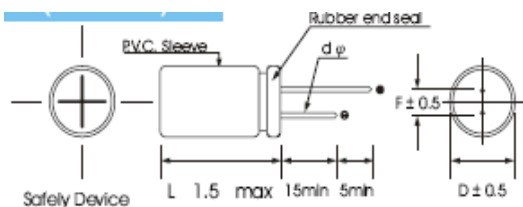
### Multiplier for Ripple Current vs. Frequency

Frequency\Hz	50	120	300	1K	≥10k
Coefficient	0.70	1.00	1.17	1.36	1.50

### Multiplier for ripple current vs. Temperature

Teperature°C	85	105
Multier	1.00	0.90

### Diagram of Dimensions:(Unit;mm)



Dφ	4	5	6.3	8
F	1.5	2.0	2.5	3.5
dφ	0.45	0.5	0.5	0.5

### Case Size

ΦDXL(mm)

W.V. uF.	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1	→				→	4×7
0.22	→				→	4×7
0.33	→				→	4×7
0.47	→				→	4×7
1	→				→	4×7
2.2	→				→	4×7
3.3	→				→	4×7
4.7	→			→	4×7	4×7
10	→	→	4×7	5×7	5×7	6×7
22	4×7	4×7	5×7	5×7	6×7	6×7
33	4×7	5×7	5×7	6×7	8×9	-
47	4×7	5×7	6×7	8×9	-	-
100	5×7	6×7	8×9	-	-	-
220	6×7	8×9	-	-	-	-

### Maximum Ripple Current

(mA. Rms. 120Hz 105°C)

W.V. uF.	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1	→				→	1.1
0.22	→				→	2.3
0.33	→				→	3.5
0.47	→				→	5.1
1	→				→	10
2.2	→				→	19
3.3	→				→	24
4.7	→			→	24	29
10	→	→	28	33	36	45
22	35	38	44	51	57	65
33	43	48	57	63	72	-
47	50	59	68	78	-	-
100	78	96	106	-	-	-
220	130	145	-	-	-	-