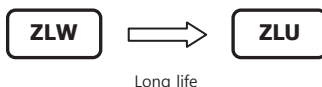




# ZLU series

- Low impedance
- High-Ripple current
- RoHS compliant
- Solvent proof

- 105°C 10,000Hrs assured.
- Low impedance, Long life
- For SMPS, IP-Board, Adaptor
- RoHS compliant
- Halogen-free capacitors are also available.

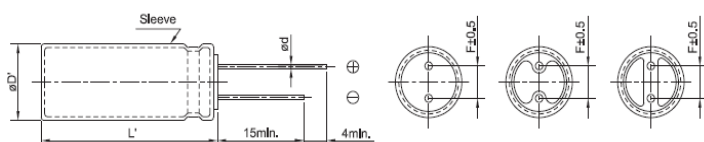


## Specifications

Item	Characteristics																					
Rated Voltage Range	6.3 ~ 50Vdc																					
Operating Temperature Range	-55 ~ +105°C																					
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)																					
Leakage Current	I=0.01CV(μA) or 3μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V: Rated voltage(Vdc)(at 20°C, 2 minutes)																					
Dissipation Factor(Tanδ)	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Rated 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>Tanδ(Max.)</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> </tr> </table> <p>If the capacitance exceeds 1,000uF, then Tanδ will be added 0.02 every 1000uF increase.(at 20°C, 120Hz)</p>	Rated Voltage(Vdc)	6.3	10	16	25	35	50	Tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10							
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Tanδ(Max.)	0.22	0.19	0.16	0.14	0.12	0.10																
Temperature characteristics (Max,impedance ratio)	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>Rated 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>3</td> <td>3</td> <td>4</td> </tr> </table> <p style="text-align: right;">(at ,120Hz)</p>	Rated 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	3	3	4
Rated 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	3	3	4																
Load life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 10,000hrs at 105°C.</p> <p>Capacitance change ≤±25% of the initial value                      Tan δ ≤200% of the initial specified value                      Leakage current ≤The initial specified value</p>																					
Shelf life	<p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes at least 24 hours and not more than 48 hours before the measurements.</p> <p>Capacitance change ≤±25% of the initial value                      Tanδ ≤200% of the initial specified value                      Leakage current ≤200%The initial specified value</p>																					

## Dimensions

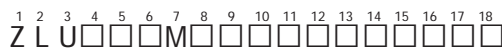
Unit(mm)



- Printed black color letter on PET yellow sleeve

ØD	5	6.3	8
Ød	0.5	0.5	0.6
F	2.0	2.5	3.5
ØD'	ØD+0.5max.		
L'	L+1.5max.		

## Code numbering system



- Taping, Cutting
- Terminal type
- Size (8X11.5: F11)
- Capacitance
- Capacitance tolerance(M:±20%, K:±10%, V :-10~20%)
- Working voltage(ex. 6.3V→6R3, 10V→010,63V→063)
- Series name

Ø5	D
Ø6.3	E
Ø8	F
Ø10	G
Ø12.5	X
Ø16	J
Ø18	K



ZLU series

Standard Ratings

Note1) Imp. =  $\Omega_{max} / 20^{\circ}C, 100kHz$  2) Ripple current =  $mArms / 105^{\circ}C, 100kHz$

WV (Vdc)	Cap (uF)	Size $\varnothing \times L (mm)$	Imp. <sup>1)</sup>	Ripple <sup>2)</sup>	Code No
6.3	150	5 x 11	0.70	178	ZLU6R3□151D11CS□□□
	330	6.3 x 11	0.50	220	ZLU6R3□331E11CS□□□
	680	8 x 11.5	0.24	410	ZLU6R3□681F12CS□□□
	1,000	8 x 16	0.18	540	ZLU6R3□102F16CS□□□
	1,200	8 x 20	0.14	620	ZLU6R3□122F20CS□□□
10	100	5 x 11	0.70	178	ZLU010□101D11CS□□□
	220	6.3 x 11	0.50	220	ZLU010□221E11CS□□□
	470	8 x 11.5	0.24	410	ZLU010□471F12CS□□□
	680	8 x 16	0.18	540	ZLU010□681F16CS□□□
	1,000	8 x 20	0.14	620	ZLU010□102F20CS□□□
16	47	5 x 11	0.70	178	ZLU016□470D11CS□□□
	100	6.3 x 11	0.50	220	ZLU016□101E11CS□□□
	330	8 x 11.5	0.24	410	ZLU016□331F12CS□□□
	470	8 x 16	0.18	540	ZLU016□471F16CS□□□
	560	8 x 20	0.14	620	ZLU016□561F20CS□□□
25	47	5 x 11	0.70	178	ZLU025□470D11CS□□□
	100	6.3 x 11	0.50	220	ZLU025□101E11CS□□□
	220	8 x 11.5	0.24	410	ZLU025□221F12CS□□□
	330	8 x 16	0.18	540	ZLU025□331F16CS□□□
	390	8 x 20	0.14	620	ZLU025□391F20CS□□□
35	33	5 x 11	0.70	178	ZLU035□330D11CS□□□
	47	6.3 x 11	0.50	220	ZLU035□470E11CS□□□
	56	6.3 x 11	0.50	410	ZLU035□560E11CS□□□
	150	8 x 11.5	0.24	410	ZLU035□151F12CS□□□
	220	8 x 16	0.18	540	ZLU035□221F16CS□□□
	270	8 x 20	0.14	620	ZLU035□271F20CS□□□
50	1.0	5 x 11	4.0	32	ZLU050□1R0D11CS□□□
	2.2	5 x 11	3.0	40	ZLU050□2R2D11CS□□□
	3.3	5 x 11	2.5	46	ZLU050□3R3D11CS□□□
	10	5 x 11	2.0	100	ZLU050□100D11CS□□□
	22	6.3 x 11	1.6	150	ZLU050□220E11CS□□□
	33	6.3 x 11	1.6	150	ZLU050□330E11CS□□□
	47	8 x 11.5	0.8	180	ZLU050□470F12CS□□□
	100	8 x 16	0.5	230	ZLU050□101F16CS□□□
	120	8 x 20	0.4	260	ZLU050□121F20CS□□□

Rated ripple current multipliers

Capacitance (uF)	Frequency (Hz)				
	120	1K	10K	50K	100K
~ 180	0.40	0.75	0.90	0.93	1.00
220 ~ 560	0.50	0.85	0.94	0.96	1.00
680 ~ 1,200	0.60	0.87	0.95	0.97	1.00