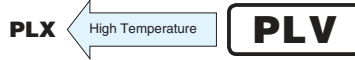


**PLV**

Radial Lead Type,  
Long Life Assurance



- High voltage (to 100V), Low ESR, High ripple current.
- Long life of 3000 hours at 105°C.
- Radial lead type:  
Lead free flow soldering condition correspondence.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).
- AEC-Q200 compliant. Please contact us for details.



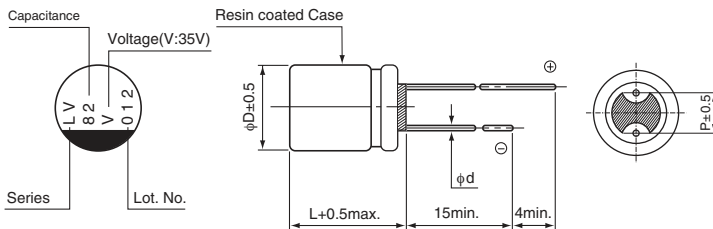
Products which are scheduled to be discontinued.  
Not recommended for new designs.

■ Specifications

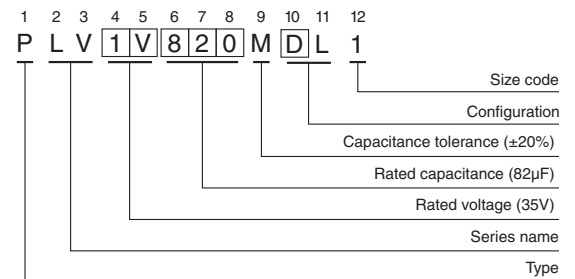
Item	Performance Characteristics								
Category Temperature Range	-55 to +105°C								
Rated Voltage Range	16 to 100V								
Rated Capacitance Range	6.8 to 470µF								
Capacitance Tolerance	±20% at 120Hz, 20°C								
Tangent of loss angle (tan δ)	Less than or equal to the specified value at 120Hz, 20°C								
ESR (※ 1)	Less than or equal to the specified value at 100kHz, 20°C								
Leakage Current (※ 2)	Less than or equal to the specified value. After 2 minutes' application of rated voltage at 20°C								
Temperature Characteristics (Max.Impedance Ratio)	Z(+105°C) / Z(+20°C) ≤ 1.25 (100kHz) Z(-55°C) / Z(+20°C) ≤ 1.25								
Endurance	<p>The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 3000 hours at 105°C.</p> <table border="1"> <tr><td>Capacitance change</td><td>Within ± 20% of the initial capacitance value (※3)</td></tr> <tr><td>tan δ</td><td>150% or less than the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>150% or less than the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Less than or equal to the initial specified value</td></tr> </table>	Capacitance change	Within ± 20% of the initial capacitance value (※3)	tan δ	150% or less than the initial specified value	ESR (※ 1)	150% or less than the initial specified value	Leakage current (※ 2)	Less than or equal to the initial specified value
Capacitance change	Within ± 20% of the initial capacitance value (※3)								
tan δ	150% or less than the initial specified value								
ESR (※ 1)	150% or less than the initial specified value								
Leakage current (※ 2)	Less than or equal to the initial specified value								
Damp Heat (Steady State)	<p>The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 1000 hours at 60°C, 90% RH.</p> <table border="1"> <tr><td>Capacitance change</td><td>Within ± 20% of the initial capacitance value (※3)</td></tr> <tr><td>tan δ</td><td>150% or less than the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>150% or less than the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Less than or equal to the initial specified value</td></tr> </table>	Capacitance change	Within ± 20% of the initial capacitance value (※3)	tan δ	150% or less than the initial specified value	ESR (※ 1)	150% or less than the initial specified value	Leakage current (※ 2)	Less than or equal to the initial specified value
Capacitance change	Within ± 20% of the initial capacitance value (※3)								
tan δ	150% or less than the initial specified value								
ESR (※ 1)	150% or less than the initial specified value								
Leakage current (※ 2)	Less than or equal to the initial specified value								
Resistance to Soldering Heat	<p>After soldering the capacitor under the soldering conditions prescribed here as preheat at 150 to 200°C for 60 to 180 seconds and peak temperature at 265°C for 10 seconds or less, the capacitor shall meet the specifications listed at right, provided that its temperature profile is measured at both of terminal ends facing the soldering side.</p> <table border="1"> <tr><td>Capacitance change</td><td>Within ± 10% of the initial capacitance value (※3)</td></tr> <tr><td>tan δ</td><td>130% or less than the initial specified value</td></tr> <tr><td>ESR (※ 1)</td><td>130% or less than the initial specified value</td></tr> <tr><td>Leakage current (※ 2)</td><td>Less than or equal to the initial specified value</td></tr> </table>	Capacitance change	Within ± 10% of the initial capacitance value (※3)	tan δ	130% or less than the initial specified value	ESR (※ 1)	130% or less than the initial specified value	Leakage current (※ 2)	Less than or equal to the initial specified value
Capacitance change	Within ± 10% of the initial capacitance value (※3)								
tan δ	130% or less than the initial specified value								
ESR (※ 1)	130% or less than the initial specified value								
Leakage current (※ 2)	Less than or equal to the initial specified value								
Marking	Navy blue print on the case top								

- ※ 1 ESR should be measured at both of the terminal ends closest to the capacitor body.
- ※ 2 Conditioning : If any doubt arises, measure the leakage current after the voltage treatment of applying DC rated voltage continuously to the capacitor for 120 minutes at 105°C.
- ※ 3 Initial value : The value before test of examination of resistance to soldering.

■ Dimensions



Type numbering system (Example : 35V 82µF)



Size	φ8 × 9L	φ8 × 12L	φ10 × 13L
φD	8.0	8.0	10.0
L	8.5	11.5	12.5
P	3.5	3.5	5.0
φd	0.6	0.6	0.6

Voltage	16	20	25	35	50	63	80	100
Code	C	D	E	V	H	J	K	2A

Frequency	120Hz	1kHz	10kHz	100kHz or more
Coefficient	0.05	0.30	0.70	1.00

Please refer to the Guidelines for Aluminum Electrolytic Capacitors for end seal configuration information.

• Dimension table in next page.

# PLV

■ Dimensions

Rated Voltage (V) code	Surge Voltage (V)	Rated Capacitance (μF)	Case Size φD × L (mm)	tan δ	Leakage Current (μA) (at 20°C after 2 minutes)	ESR (mΩ) (20°C/100kHz)	Rated Ripple (mA <sub>rms</sub> ) (105°C/100kHz)	Part Number
16 (1C)	18.4	220	8 × 9	0.12	704	26	2100	PLV1C221MCL1
		270	8 × 12	0.12	864	24	2500	PLV1C271MDL1
		470	10 × 13	0.12	1504	23	2900	PLV1C471MDL1
20 (1D)	23.0	150	8 × 9	0.12	600	27	2000	PLV1D151MCL1
		220	8 × 12	0.12	880	25	2400	PLV1D221MDL1
		330	10 × 13	0.12	1320	24	2800	PLV1D331MDL1
25 (1E)	28.7	120	8 × 9	0.12	600	28	2000	PLV1E121MCL1
		150	8 × 12	0.12	750	26	2400	PLV1E151MDL1
		270	10 × 13	0.12	1350	25	2800	PLV1E271MDL1
35 (1V)	40.2	56	8 × 9	0.12	392	29	1900	PLV1V560MCL1
		82	8 × 12	0.12	574	27	2300	PLV1V820MDL1
		150	10 × 13	0.12	1050	26	2700	PLV1V151MDL1
50 (1H)	57.5	33	8 × 9	0.12	330	32	1900	PLV1H330MCL1
		39	8 × 12	0.12	390	29	2200	PLV1H390MDL1
		68	10 × 13	0.12	680	28	2600	PLV1H680MDL1
63 (1J)	72.4	22	8 × 9	0.12	277	35	1800	PLV1J220MCL1
		27	8 × 12	0.12	340	33	2100	PLV1J270MDL1
		47	10 × 13	0.12	592	29	2600	PLV1J470MDL1
80 (1K)	92	10	8 × 9	0.12	160	40	1700	PLV1K100MCL1
		12	8 × 12	0.12	192	38	1900	PLV1K120MDL1
		22	10 × 13	0.12	352	35	2300	PLV1K220MDL1
100 (2A)	115	6.8	8 × 9	0.12	136	45	1600	PLV2A6R8MCL1
		10	8 × 12	0.12	200	42	1800	PLV2A100MDL1
		18	10 × 13	0.12	360	38	2200	PLV2A180MDL1

• For formed lead or taped product specifications and minimum order quantity, please refer to the Guidelines for Aluminum Electrolytic Capacitors.