

Koshin

KLE Miniature Aluminum Electrolytic Capacitors

105°C ,Small Size, High Reliability and Long Life Capacitors, Series KLE

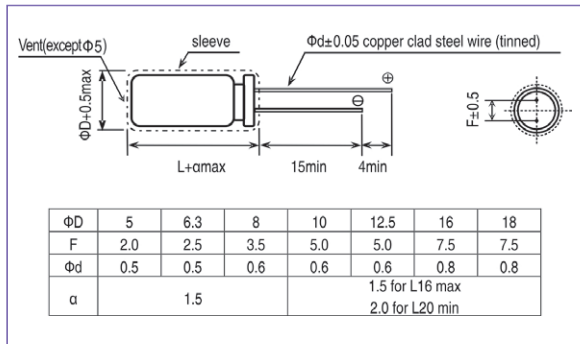
Long life:6000 hours at 105°C

Suitable For LED Lighting, LED Drive.

RoHS Compliance.

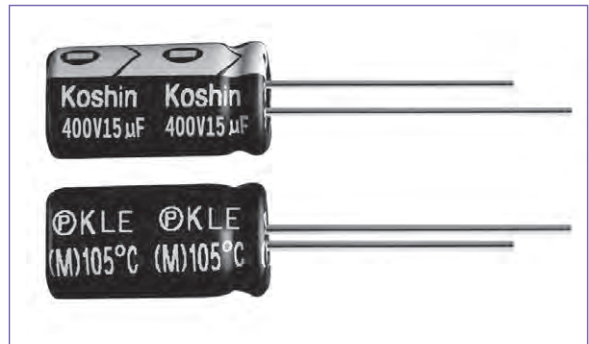
Outline Drawing

Unit: mm



Photo

RoHS



Marking color: white print on black sleeve

Specifications

No.	Item	Performance																	
1	Temperature range (°C)	-40 to +105																	
2	Leakage current (μ A)	Less than 0.03CV or 3 whichever is larger (after one minutes)																	
		C: Rated Capacitance (μ F). V: Rated voltage (V) 20°C																	
3	Capacitance tolerance (%)	±20 (20°C ,120Hz)																	
4	Tangent of the loss angle (Tan δ)	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>450</td> <td>500</td> <td rowspan="2">20°C ,120Hz</td> </tr> <tr> <td>Tan δ (max)</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> </tr> </table>	Rated voltage (V)	160	200	250	350	400	450	500	20°C ,120Hz	Tan δ (max)	0.15	0.15	0.15	0.15	0.15	0.15	0.15
		Rated voltage (V)	160	200	250	350	400	450	500	20°C ,120Hz									
Tan δ (max)	0.15	0.15	0.15	0.15	0.15	0.15	0.15												
		0.02 is added to every 1000 μ F increase over 1000Mf																	
5	Low temperature characteristics	Rated voltage (V)	160	250	350	400	450	500	120Hz										
		Impedance ratio (max) Z _(-40°C) /Z _(+20°C)	6	6	6	6	-	-											
6	Endurance (105°C) (Applied ripple current)	Test time	6000 hours																
		Leakage current	The initial specified value or less																
		Percentage of capacitance change	Within ±20% of initial value																
		Tangent of the loss angle	200% or less of the initial specified value																
7	Shelf life (105°C)	Test time	1000hours																
		Leakage current	The initial specified value or less																
		Percentage of capacitance change	Within ±20% of initial value																
		Tangent of the loss angle	500% or less of the initial specified value																
8	Applicable standards	JIS-C-5102 and JIS-C-5141																	

Coefficient of Frequency for Ripple Current

Frequency (Hz)	120	1K	10K	100K ~
Coefficient	0.50	0.80	0.85	1.00

Coefficient of Temperature for Ripple Current

Temperature(°C)	60 or less	85	105
Coefficient	2.00	1.40	1.00

For LED

Dimension: Φ DXL(mm)

Ripple Current: mA/rms at 100KHz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	160V		200V		250V	
	Φ D×L	mA	Φ D×L	mA	Φ D×L	mA
1	6.3X11	40	6.3X11	42	6.3X11	45
2.2	6.3X11	50	6.3X11	54	6.3X11	58
3.3	6.3X11	60	6.3X11	65	6.3X11	68
4.7	6.3X11	66	6.3X11	70	8x12	72
5.6	8X12	76	8X12	82	8x12	88
6.8	8X12	95	8X16	106	8x16	110
8.2	8X12	104	8X16	118	8x16	120
10	8X12	115	8X16	135	8x16	138
	8X16	130				
15	8X16	160	8X16	160	8X20	178
			8X20	176		
22	8X20	210	8X20	215	10X16	230
	10X16	220	10X16	226		
33	10X20	300	10X20	310	12.5X20	336
47	10X20	350	12.5X20	400	12.5X20	410
					12.5X25	440
68	12.5X20	480	12.5X25	530	16X25	610
100	12.5X25	640	16X25	740	16X31.5	820
	16X20	670				
150	16X25	900	16X31.5	1000	16X35.5	1060

Dimension: Φ D×L(mm)

Ripple Current: mA/rms at 100KHz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	350V		400V	
	Φ D×L	mA	Φ D×L	mA
1	6.3X11	48	6.3X11	50
1.5	6.3X11	50	8X12	54
2.2	6.3X11	54	8X12	60
3.3	8X12	66	8X12	70
			8X16	75
4.7	8X12	79	8X12	82
			8X16	90
5.6	8X16	98	8X20	108
			10X16	110
6.8	8X20	120	8X20	122
			10X16	122
8.2	8X20	130	10X16	134
			10X20	148
10	8X20	144	10X16	148
			10X20	163
15	10X20	200	12.5X20	226
22	12.5X20	274	12.5X25	300
			16X20	316
33	12.5X25	370	16X25	425
			16X31.5	470
47	16X20	460	12.5X40	548
			16X31.5	560
68	18X20	600	18X31.5	720
82	18X25	718	18X35.5	835
100	18X31.5	875	18X40	974

Dimension: Φ D \times L(mm)

Ripple Current: mA/rms at 100KHz, 105°C

DIMENSION & PERMISSIBLE RIPPLE CURRENT

V.DC Contents μ F	450V		500V	
	Φ D \times L	mA	Φ D \times L	mA
1	8X12	50		
1.5	8X12	56		
2.2	8X16	60		
3.3	8X16	80		
4.7	8X20	100		
5.6	10X16	110		
6.8	10X20	135		
8.2	10X20	148		
10	10X20	163	12.5X20	185
			12.5X25	204
15	12.5X20	226	12.5X25	250
			16X20	260
22	12.5X25	250	12.5X35	350
			16X25	350
33	10X45	430	18X25	455
	16X25	425		
47	12.5X45	580	18X31.5	600
	16X35	590		
68	18X30	800	22X35.5	850
82	18X35.5	835		
100	18X40	970	22X35.5	1030