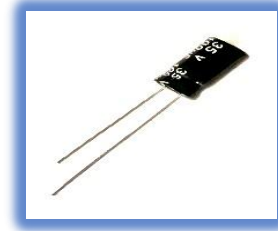


# Lumimax Optoelectronic Technology

## Aluminum Electrolytic Capacitor – General Purpose

### Product Features:

- 105°C for 2000 hours; standard products
- Products meet EU RoHS and China RoHS requirements
- 0.47uF ~2200uF, 25V ~50V, Radial type



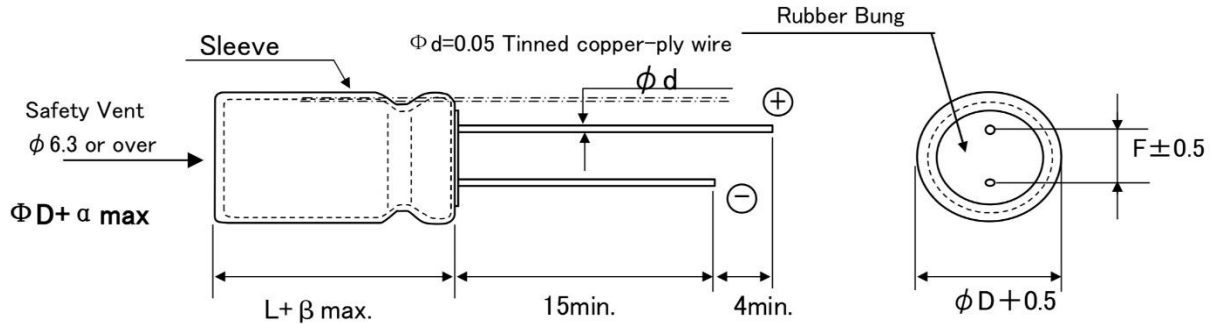
**Electrical Characteristics: Table 1**

Part Number	Capacitance	Tolerance	Voltage	Lifetime @ Temp.	Operating Temperature
AECR47M50V0511	0.47 $\mu$ F	$\pm$ 20%	50 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC1M50V0511	1 $\mu$ F	$\pm$ 20%	50 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC2R2M50V0511	2.2 $\mu$ F	$\pm$ 20%	50 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC4R7M50V0511	4.7 $\mu$ F	$\pm$ 20%	50 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC10M50V0511	10 $\mu$ F	$\pm$ 20%	50 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC22M50V0511	22 $\mu$ F	$\pm$ 20%	50 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC47M50V6R311	47 $\mu$ F	$\pm$ 20%	50 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC100M35V6R311	100 $\mu$ F	$\pm$ 20%	35 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC220M25V6R311	220 $\mu$ F	$\pm$ 20%	25 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC470M25V0812	470 $\mu$ F	$\pm$ 20%	25 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC1000M35V1320	1000 $\mu$ F	$\pm$ 20%	35 V	2000 Hrs @ 105°C	-40°C ~ 105°C
AEC2200M25V1320	2200 $\mu$ F	$\pm$ 20%	25 V	2000 Hrs @ 105°C	-40°C ~ 105°C

**Table 2**

Part Number	Capacitance	Surge Volt. VDC	Dissipation Factor (tan $\delta$ ) Max 20°C 120Hz	Leakage Current 2min. 20°C ( $\mu$ A)Max	Permissible Ripple Current (mArms) Max 105°C 120Hz
AECR47M50V0511	0.47 $\mu$ F	63	0.1	0.235	10
AEC1M50V0511	1 $\mu$ F	63	0.1	3	12
AEC2R2M50V0511	2.2 $\mu$ F	63	0.1	3	20
AEC4R7M50V0511	4.7 $\mu$ F	63	0.12	3	35
AEC10M50V0511	10 $\mu$ F	63	0.12	5	50
AEC22M50V0511	22 $\mu$ F	63	0.12	11	70
AEC47M50V6R311	47 $\mu$ F	63	0.12	23.5	100
AEC100M35V6R311	100 $\mu$ F	44	0.12	35	170
AEC220M25V6R311	220 $\mu$ F	32	0.12	55	125
AEC470M25V0812	470 $\mu$ F	32	0.14	117.5	395
AEC1000M35V1320	1000 $\mu$ F	44	0.14	350	950
AEC2200M25V1320	2200 $\mu$ F	32	0.14	250	1250

## Dimension Specification



Part Number	Lead Spacing $F \pm 0.5$ mm	Diameter $\phi D + \alpha$ (max)	Height $L + \beta$ (Max)	$\phi d \pm 0.05$ mm
AEC470M25V0812	0.138" (3.50mm)	0.315" (8.00mm)	0.472" (12.00mm)	0.5mm
AECR47M50V0511	0.079" (2.00mm)	0.197" (5.00mm)	0.433" (11.00mm)	0.5mm
AEC100M35V6R311	0.098" (2.50mm)	0.248" (6.30mm)	0.433" (11.00mm)	0.5mm
AEC1000M35V1320	0.197" (5.00mm)	0.518" (13.00mm)	0.787" (20.00mm)	0.6mm
AEC220M25V6R311	0.098" (2.50mm)	0.248" (6.30mm)	0.433" (11.00mm)	0.5mm
AEC4R7M50V0511	0.079" (2.00mm)	0.197" (5.00mm)	0.433" (11.00mm)	0.5mm
AEC2R2M50V0511	0.079" (2.00mm)	0.197" (5.00mm)	0.433" (11.00mm)	0.5mm
AEC22M50V0511	0.079" (2.00mm)	0.197" (5.00mm)	0.433" (11.00mm)	0.5mm
AEC1M50V0511	0.079" (2.00mm)	0.197" (5.00mm)	0.433" (11.00mm)	0.5mm
AEC47M50V6R311	0.098" (2.50mm)	0.248" (6.30mm)	0.433" (11.00mm)	0.5mm
AEC10M50V0511	0.079" (2.00mm)	0.197" (5.00mm)	0.433" (11.00mm)	0.5mm
AEC2200M25V1320	0.197" (5.00mm)	0.518" (13.00mm)	0.787" (20.00mm)	0.5mm

## Frequency Coefficient of Permissible Ripple Current

### ①. Frequency Coefficient

Freq.(Hz)	60 (50)	120	300	1K	10K
Cap( $\mu F$ )					
0.1-47	0.75	1.00	1.35	1.55	2.00
68-680	0.80	1.00	1.25	1.34	1.50
1000-22000	0.85	1.00	1.10	1.13	1.15

### ②. Temperature Coefficient

Ambient Temperature( $^{\circ}C$ )	40	60	70	85	105
Coefficient	2.40	2.10	1.78	1.65	1.00

## Characteristics and Storage Conditions

### High temperature. Load characteristics:

Leakage current  $\leq$  the value specified in Table 1  
Capacitance change  $\leq \pm 20\%$  of initial value  
Dissipation Factor  $\leq 200\%$  of value specified in Table 1  
Appearance: No remarkable abnormality.  
Test temperature:  $105 \pm 2$  °C; Applied voltage is the rated voltage  
Test time: 2000 hours. +72, -0 hours

### High temperature. No load characteristics:

Leakage current  $\leq$  the value specified in Table 1  
Capacitance change  $\leq \pm 20\%$  of initial value  
Dissipation Factor  $\leq 200\%$  of value specified in Table 1  
Appearance: No remarkable abnormality.  
Test temperature:  $105 \pm 2$  °C; Applied voltage is the rated voltage  
Test time: 1000 hours. +24, -0 hours

### Terminal strength:

Tensile strength: 45N (4.5kg), Keeping time 1~5 sec.  
Bending strength: 25N (2.5kg), Keep time  $30 \pm 5$  sec.

**Reflow Soldering temperature:**  $260$  °C  $\pm 5$  °C. Solder dipping temperature: 2~4 sec.  
Preheat: PCB surface temperature:  $120$  °C  $\pm 5$  °C

### Vibration resistance:

<b>Capacitance:</b>	Stability required
<b>Capacitance Change:</b>	$\leq \pm 5\%$ of the initial specified value
<b>Appearance:</b>	No remarkable abnormality
<b>Test methods:</b>	Frequency 10~55 Hz/1 min. Width of vibration. 1.5mm direction and duration X, Y, and Z directions. Each for 2 hours (Total 9 hours)

### Storage Conditions:

1. Temperature range must be between  $5$  °C ~  $35$  °C
2. Relative humidity must be less than 75%.
3. Must be stored indoor and free from water, oil or salt water.
4. Must be free from toxic gasses (hydrogen sulfide, sulfurous acid, chlorine, etc.)
5. Keep the capacitor in the original package.

**Country of Origin: China**

## Part Number System (for general purpose series)

<b>AEC</b>	<b>100M</b>	<b>35V</b>	<b>6R311</b>
Aluminum Electrolytic Capacitor	Capacitance	Rated Voltage	Diameter x seated body length (mm)
	100M = 100uF	25V	6.3 dia x 11 mm
	R47 = 0.47uF	50V	