



# LLB Long Life for Ballast



## Features

- Used in electronic ballast, switching power supply,
- Industrial measuring instruments, automotive applications ,etc
- Load life 5000Hrs at 105°C
- Safety vent construction design

## Specifications

Item	Performance Characteristics						
Operating Temperature Range	-25 to +105°C						
Rated voltage Range	160 to 450 VDC						
Capacitance Range	10 to 220 μF						
Capacitance Tolerance	±20%(120Hz, +20°C)						
Leakage Current (+20°C, max.)	1 ≤ 0.04 CV + 100 (μA) After 1 minute with rated working voltage applied.						
Dissipation Factor (tanδ) (+20°C, at 120Hz)	Working Voltage (VDC)	160	200	250	350	400	450
	D.F.(%)max	15	15	15	20	20	22
Low Temperature Characteristics (at 120Hz)	Impedance ratio max.						
	Working Voltage (VDC)	160	200	250	350	400	450
	Z (-25°C)/Z(+20°C)	3	3	3	6	6	6
Load Life	Test conditions Duration time :5000Hrs 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 :1000Hrs Ambient temperature:+105°C Applied voltage: None After test requirements at +20°C: Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.					

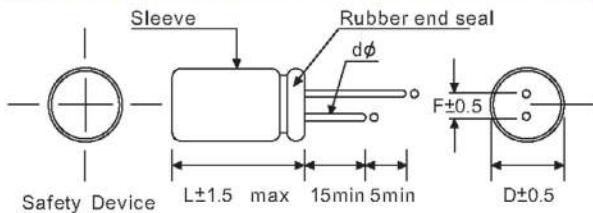
## Multiplier for Ripple Current VS, Frequency

Frequency (Hz)	120	1K	10K	10K ≤
Multiplier	1.0	1.5	1.7	1.9

## Multiplier for Ripple Current VS, Temperature

Temperature (°C)	65	85	105
Multiplier	2.0	1.65	1.0

## Diagram of Dimensions: (Unit: mm)



Dφ	10	13	16	18	22
F	5.0	5.0	7.5	7.5	10
dφ	0.6		0.8		

## Case Size

μF	W.V. {S.V.}	φD x L (mm)											
		160 {200}		200 {250}		250 {300}		350 {400}		400 {450}		450 {500}	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
10		10X15	115	10X20	210	10X20	200	13X21	180	13X21	180	13X26	130
22		10X20	195	10X20	255	13X21	350	13X21	250	13X26	320	16X26	170
33		13X21	250	13X21	350	13X26	400	16X21	320	16X26	350	16X31	215
47		13X21	300	13X21	490	13X26	500	16X31	440	16X31	450	-	-
68		13X26	390	13X26	530	16X26	600	16X36	450	-	-	-	-
100		16X26	560	16X26	810	18X31	660	-	-	-	-	-	-
220		16X31	730	18X31	970	22X42	750	-	-	-	-	-	-

Ripple Current (mA, rms) at 105°C 120Hz

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