

## *Data Sheet*

Customer: \_\_\_\_\_

Product: Aluminum Electrolytic Capacitors – ELP Series

Size : 22x25mm ~ 40x70mm

Issued Date: 5-May.-2016

Edition: Ver. 1

### Record of change

Date	Ver.	Description	Page
5-May-2016	1		
22-Jan-2019	2	680UF/450V Size &R.C. Update	5
16-Apr-2020	3	ELP 1000UF/400V A SIZE=35X65mm	5
5-May-2022	4	1500UF/400V SIZE Update	5

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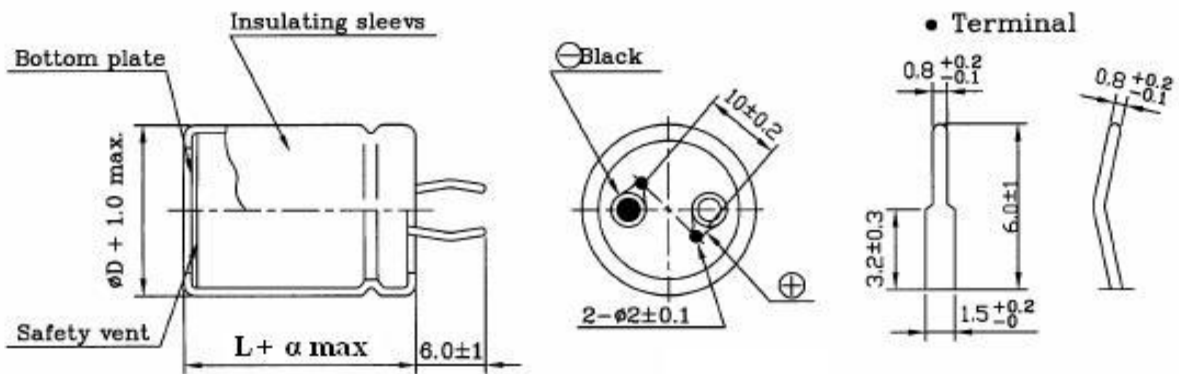
Prepared by	Checked by	Approved by	Accepted by (customer)
5-May.-2016	5-May.-2016	5-May.-2016	
<i>Andy Hsu</i>	<i>Hwa Wu</i>	<i>Hwa Wu</i>	

- Directly mountable on printed circuit board without holders.
- Smaller low profile sizes than ordinary capacitors.
- Terminal spacing fixed at 10mm for PC board plug in.
- Aluminum case designed explosion-proof vent.

**Characteristics**

<b>Voltage Range</b>	10 ~ 100V	160 ~ 450V						
<b>Capacitance Range</b>	470 ~ 68000uF	47 ~ 2700uF						
<b>Temperature Range</b>	-40 ~ +85°C	-25 ~ +85°C						
<b>Capacitance Tolerance</b>	±20% at 120Hz, 20°C( 10% Tol. is available upon request)							
<b>Leakage Current</b>	$I = 3\sqrt{CV}$ (uA) max C: Capacitance, V:W.V. (After 5 minutes)							
<b>Dissipation Factor(tanδ) ( at 20°C, 120Hz)</b>	Less than the value under table (%)							
	uF \\ W.V.	10 ~ 16	25 ~ 35	50 ~ 63	80 ~ 100	160 ~ 250	350 ~ 450	
	47 ~ 390	-	-	-	-	15	20	
	470 ~ 3900	25	20	20	20	15	20	
	4700 ~ 8200	35	30	30	25			
	10000 ~ 22000	40	35	30	30			
	27000 ~ 47000	45	40	35				
56000 ~ 68000	50	45						
<b>Low Temperature Characteristics (at 120Hz)</b>	Impedance ratio at 120Hz between the -25°C or -40°C value and 20°C value shall not exceed :							
	Rated Voltage	10 ~ 16	25	35 ~ 63	100	160 ~ 250	400 ~ 450	
	Z-25°C/Z 20°C	5	4	4	4	4	8	
	Z-40°C/Z 20°C	15	15	12	12	-	-	
<b>Load Life</b>	Following specifications shall meet when the capacitors are restored to 20°C after rated working voltage applied for 2,000 hours at max. operating temperature with the rated ripple current applied.							
	Capacitance change	≤ ±20% of the initial value.						
	Dissipation factor	≤ ±200% of the initial specified value						
	Leakage current	≤ The initial specified value.						
<b>Shelf Life</b>	After storage for 1000 hours at 85°C with no voltage applied, the capacitor shall meet the specified limit in load life. Pre-treatment for measurement shall be conducted after application of DC working voltage for 30 minutes.							

**Diagram of dimensions**



**Multiplier for Ripple Current vs Frequency**

Cap.(uF) \\ (Hz)	60	120	1K	10K	50K - 100K
10 < Cap. ≤ 100	0.8	1	1.36	1.48	1.53
100 < Cap. ≤ 1000	0.8	1	1.25	1.35	1.38
1000 < Cap.	0.8	1	1.17	1.25	1.28

(mm)

Dia	22 ~ 25	30 ~ 40
$\alpha$	2	3





**Standard Products Table**

W.V.	400								450							
	A		B		C		D		A		B		C		D	
Dimension	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
Cap. (uF)	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC	Size	RC
47	22x25	0.42							22x25	0.36						
68	22x25	0.51							22x25	0.50						
82	22x25	0.83							22x30	0.89	25x25	0.89				
100	22x30	1.03	25x25	1.03					22x35	1.03	25x30	1.03				
120	22x30	1.07	25x25	1.07					22x40	1.19	25x35	1.19				
150	22x40	1.26	25x30	1.26	30x25	1.26	22x35	1.26	22x45	1.39	25x35	1.39	30x30	1.39		
180	22x40	1.46	25x35	1.46	30x25	1.46			22x50	1.52	25x45	1.52	30x35	1.52		
220	22x45	1.75	25x40	1.75	30x30	1.75			25x50	1.76	30x40	1.76	30x30	1.68	35x35	1.76
270	25x45	1.96	30x35	1.96	30x30	1.96			30x45	2.00	35x35	2.00				
330	30x40	2.26	35x35	2.26	25x50	2.26			30x45	2.29	35x40	2.29	35x35	2.29		
390	30x45	2.50	35x40	2.26					30x45	2.54	35x40	2.54	40x35	2.54		
470	30x50	2.66	35x40	2.67	35x45	2.80	40x35	2.80	35x45	2.89	40x40	2.89	35x40	2.76		
560	35x40	2.89	35x45	3.03					30x55	2.76	35x40	2.63				
680	40x50	3.69	35x50	3.41					35x45	3.52	40x50	3.14				
820	35x60	3.80	40x40	3.23					35x55	3.86	40x50	4.00				
1000	35x65	3.80	40x45	3.75					35x70	4.74	40x55	4.60				
1200	35x65	4.50	40x60	4.68					35x80	5.51	40x65	5.42				
1500	40x70	5.60	40x80	4.23												

Ripple Current (A, rms) at 85°C 120Hz

**Part Numbering Designation**

<b>ELP</b>	<b>101</b>	<b>M</b>	<b>2G</b>	<b>B</b>	<b>A</b>
SERIES	CAPACITANCE	TOL.	W.V.	PACKAGE	SIZE
	IN 3DIGITS	M= ± 20%	10= 10V	B= Bulk	A= A Size
	101= 100uF	K= ± 10%	16= 16V		B= B Size
	102= 1000uF		25= 25V		C= C Size
	103= 10,000uF		35= 35V		D= D Size
			50= 50V		
			63= 63V		
			80= 80V		
			2A= 100V		
			2C= 160V		
			2D= 200V		
			2E= 250V		
			2V= 350V		
			2G= 400V		
			2W= 450V		