

# LP (CD293)

85° C 2000

High ripple current ,Smaller size ,Load life of 2000 hours at 85°, Used in PCB Mounting.

ROHS (2002/95/EC)

Adapted to the ROHS directive (2002/95/EC) .

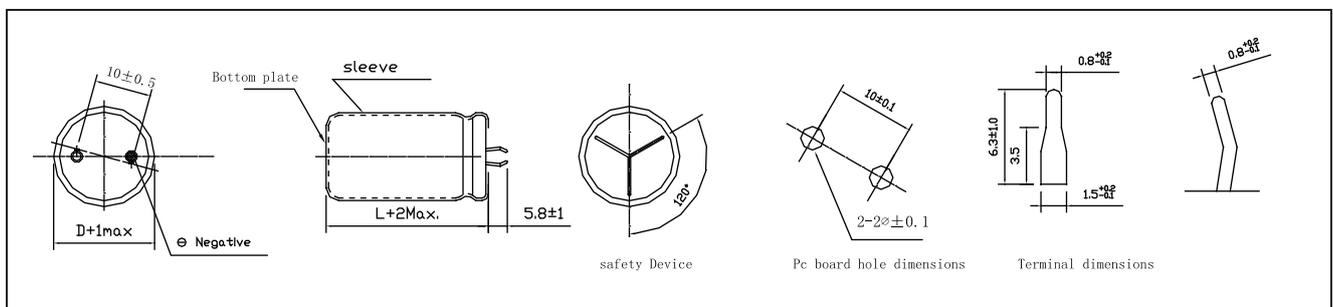


## Specifications

Item	Performance Characteristics																																																	
Operating temperature range	-40°C~ +85°C	-25°C~ +85°C																																																
Rated voltage range	10 ~ 400 V	450																																																
Capacitance tolerance	±20% (120Hz, +20°C)																																																	
Leakage current	$I \leq 0.01CV(\mu A)$ 1.5mA (Whichever is smaller) 5 ( at 20°,after 5 minutes)																																																	
(tg δ) Dissipation factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>10~16</th> <th>25</th> <th>30~50</th> <th>63</th> <th>80~100</th> </tr> </thead> <tbody> <tr> <td>Cap(μ F)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>≤2700</td> <td></td> <td></td> <td>0.20</td> <td>0.15</td> <td>0.15</td> </tr> <tr> <td>3300~4700</td> <td></td> <td>0.35</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> </tr> <tr> <td>5600~6800</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.20</td> <td>0.20</td> </tr> <tr> <td>≥8200</td> <td>0.40</td> <td>0.35</td> <td>0.35</td> <td>0.25</td> <td></td> </tr> </tbody> </table>	Rated voltage (V)	10~16	25	30~50	63	80~100	Cap(μ F)						≤2700			0.20	0.15	0.15	3300~4700		0.35	0.25	0.20	0.15	5600~6800	0.40	0.35	0.30	0.20	0.20	≥8200	0.40	0.35	0.35	0.25		<table border="1"> <thead> <tr> <th>Rated voltage (V)</th> <th>160~250</th> <th>250~450</th> </tr> </thead> <tbody> <tr> <td>Φ D(mm)</td> <td></td> <td></td> </tr> <tr> <td>22-30</td> <td>0.15</td> <td>0.18</td> </tr> <tr> <td>35</td> <td>0.18</td> <td>0.20</td> </tr> </tbody> </table>	Rated voltage (V)	160~250	250~450	Φ D(mm)			22-30	0.15	0.18	35	0.18	0.20
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Temperature characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>10</th> <th>16~35</th> <th>50~100</th> <th>160~200</th> <th>250~400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25°C/+20°C</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>4</td> <td>4</td> </tr> <tr> <td>Z-40°C/+20°C</td> <td>18</td> <td>15</td> <td>10</td> <td>6</td> <td>8</td> <td></td> </tr> </tbody> </table>		U <sub>R</sub> (V)	10	16~35	50~100	160~200	250~400	450	Z-25°C/+20°C	5	4	3	3	4	4	Z-40°C/+20°C	18	15	10	6	8																												
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Load life	After applying rated voltage with specified ripple current for 2000 hours at +85°C and then resumed 16 hours: Capacitance change : ±15% Initial measured value Leakage current : ≤ Initial specified value Dissipation factor : ≤ 1.5times Initial specified value																																																	
Shelf life	After storage for 1000 hours at +85°C, U <sub>R</sub> to be applied for 30 minutes and then resumed 16 hours Capacitance change : ±15% Initial measured value Leakage current : ≤ Initial specified value Dissipation factor : ≤ 1.5times Initial specified value																																																	

## Case table

Unit: mm



## Frequency coefficient

U(V) \ (Hz)	50	100(120)	1K	10K	100K
≤ 50	0.88	1.00	1.10	1.15	1.15
63~100	0.81	1.00	1.16	1.30	1.33
≤ 160	0.707	1.00	1.20	1.50	1.55

## ◇ Frequency coefficient

U(V)	Temperature (°C)			
	+40	+55	+70	+85
<160	2.1	1.8	1.5	1.0
≥160	1.7	1.5	1.3	1.0

## ■ Dimensions

ØD × L(mm)

ΦD×L (mm)	W <sub>v</sub> (V)		10		16		25		35		50		63		80		100	
	U <sub>s</sub>		13		20		32		44		63		72		100		125	
	C <sub>R</sub> (μF)		Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple								
			μF	Arms	μF	Arms	μF	Arms	μF	Arms								
22×25	10000	2.5	8200	2.2	5600	2.0	3300	1.8	2200	1.7	1500	1.6	1000	1.3	680	1.1		
22×30	15000	3.2	10000	2.6	6800	2.3	3900	2.1	2700	1.9	2200	2.0	1200	1.5	820	1.2		
22×35	18000	3.6	12000	2.9	8200	2.6	5600	2.3	3900	2.1	2700	2.2	1800	1.9	1200	1.6		
22×40	22000	4.0	15000	3.3	10000	2.9	6800	2.9	4700	2.4	3300	2.3	2200	2.1	1500	1.8		
22×45			18000	3.8	12000	3.3					3900	2.5						
22×50			22000	4.2			8200	2.8	5600	2.5			2700	2.5	1800	2.1		
25×25	15000	3.1	10000	2.6	6800	2.3	4700	2.2	2700	1.9	2200	2.0	1500	1.7	1000	1.4		
25×30	18000	3.6	15000	3.3	10000	2.8	5600	2.3	3900	2.1	2700	2.3	1800	1.9	1200	1.6		
25×35	22000	4.1	18000	3.7	12000	3.2	6800	2.6	4700	2.4	3300	2.3	2200	2.2	1500	1.7		
25×40	33000	4.6	22000	4.2	15000	3.7	8200	2.8	5600	2.5	3900	2.6	2700	2.5	1800	2.0		
25×45	39000	5.2	27000	5.0			10000	3.1	6800	2.8	5600	3.1	3300	2.8	2200	2.2		
25×50	47000	5.8			18000	4.3	12000	3.5	8200	3.2			3900	3.1	2700	2.6		
30×25	22000	4.1	15000	3.4	10000	3.0	6800	2.7	3900	2.4	3300	2.3	2200	2.2	1500	1.8		
30×30	33000	4.8	22000	4.2	12000	3.4	8200	2.8	5600	2.5	3900	2.6	2700	2.5	1800	2.1		
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30×45	56000	6.7	39000	6.2			15000	4.1	10000	3.4			4700	3.6	3300	3.0		
30×50	68000	7.5	47000	7.0			18000	4.6	12000	3.8	8200	3.7	5600	3.5	3900	3.4		
35×25	33000	4.8	22000	4.4	15000	3.9	8200	2.9	5600	2.6	6900	2.7	2700	2.5	1800	2.2		
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35×45	82000	8.7	56000	8.0	39000	7.5	22000	5.3			10000	4.3						
35×50							27000	7.0	15000	4.5	12000	4.8	6800	4.1	4700	4.0		

Rated ripple current(A,+85 °C,120Hz)

## ■ Dimensions

$\Phi D \times L$ (mm)	$W_V(V)$		160		180		200		220		250		400		420		450	
	$U_s$		200		225		250		270		300		450		470		500	
	$C_R(\mu F)$		Cap	Ripple														
	$\mu F$	Arms	$\mu F$	Arms	$\mu F$	Arms	$\mu F$	Arms	$\mu F$	Arms	$\mu F$	Arms	$\mu F$	Arms	$\mu F$	Arms	$\mu F$	Arms
20x25								220	1.23			68	0.70	68	0.70			
20x30												82	0.80	82	0.80			
20x35												100	0.90	100	0.90			
												120	1.04	120	1.04			
22x25	330	1.3	270	1.2	220	1.1	270	1.42		0.94	68	0.55						
22x30	390	1.5	330	1.4	330	1.4	330	1.59	220	1.1	100	0.7	100	0.97	68	0.57		
												120	1.07	120	1.07			
22x35	560	1.9	470	1.7	390	1.6	390	1.8	270	1.2	120	0.79	150	1.21	100	0.72		
								470	2.06									
22x40	680	2.1	560	1.9	470	1.8	560	2.22	330	1.4	150	0.90	180	1.33	120	0.80		
22x45					560	2.0	680	2.62	390	1.6	180	1.0						
22x50	820	2.5	680	2.3					470	1.8	220	1.1				150	0.95	
25x25	390	1.5	390	1.5	330	1.4			220	1.1	100	0.7						
25x30	560	1.9	470	1.7	390	1.6			300	1.4	150	0.89				100	0.73	
25x35	680	2.2	560	2.0	560	2.0			390	1.6	180	1.0				120	0.83	
25x40	820	2.4	680	2.2	680	2.3			470	1.8	220	1.2	220	1.67	150	0.95		
25x45	1000	2.7	820	2.5					560	2.0	270	1.3				180	1.1	
25x50	1200	3.1	1000	2.9	820	2.6	1000	3.53								220	1.2	
30x25	560	2.0	470	1.8	470	1.9			330	1.5	150	0.95						
30x30	820	2.5	680	2.3	560	2.1			470	1.8	180	1.1				150	0.98	
30x35	1000	2.8	820	2.6	680	2.4	820	2.84	560	2.0	220	1.2	270	1.78	180	1.1		
30x40	1200	3.2	1000	2.9	820	2.7			680	2.3	270	1.4	330	1.98	220	1.3		
													390	2.22				
30x45	1500	3.7	1200	3.3	1000	3.1	1200	3.72	820	2.6	330	1.6				270	1.4	
30x50					1200	3.4				1.9	390	1.8	390	1.67				
35x25	820	2.4	680	2.2	560	2.0			470	2.4	180	1.2				180	1.2	
35x30	1000	2.7	820	2.5	820	2.5			680	2.6	270	1.5				220	1.3	
35x35	1200	3.0	1200	3.1	1000	2.8			820	2.6	330	1.7				270	1.5	
35x40	1500	3.5			1200	3.2	1500	4.10	1000	3.0	390	1.8	470	2.50				
35x45	1800	3.9	1500	3.6			1800	4.52	1200	3.4	470	2.1	560	2.95	390	1.9		
35x50	2200	4.5	1800	4.1	1500	3.8					560	2.3				470	2.2	

Rated ripple current(A,+85 °C ,120Hz)