

## ZLS SERIES

## 105°C Miniaturized, Low Impedance

• Load Life : 105°C 6000 hours.

RoHS  
compliance



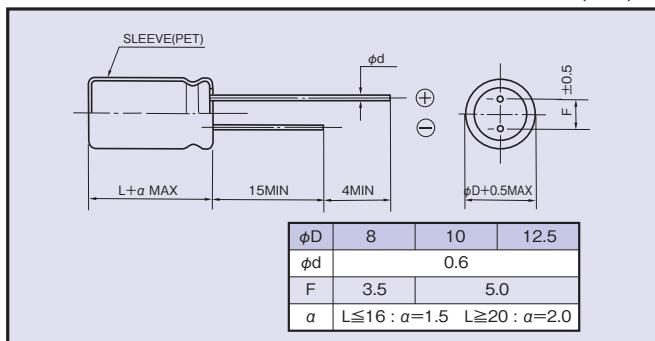
## ◆SPECIFICATIONS

Items	Characteristics																			
Category Temperature Range	−40~+105°C																			
Rated Voltage Range	10~35Vdc																			
Capacitance Tolerance	±20% (20°C, 120Hz)																			
Leakage Current(MAX)	$I=0.01CV$ MAX. (After 2 minutes) $I$ =Leakage Current( $\mu A$ ) $C$ =Capacitance( $\mu F$ ) $V$ =Rated Voltage(Vdc)																			
Dissipation Factor(MAX) ( $\tan\delta$ )	<table border="1"> <tr> <td>Rated Voltage (Vdc)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> </tr> <tr> <td><math>\tan\delta</math></td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> </tr> </table> (20°C, 120Hz) When capacitance is over 1000 $\mu F$ , $\tan\delta$ shall be added 0.02 to the listed value with increase of every 1000 $\mu F$ .					Rated Voltage (Vdc)	10	16	25	35	$\tan\delta$	0.19	0.16	0.14	0.12					
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Endurance	After applying rated voltage with rated ripple current for 6000 hours at 105°C, the capacitors shall meet the following requirements. <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±25% of the initial value.(10V:±30%)</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </table>					Capacitance Change	Within ±25% of the initial value.(10V:±30%)	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.									
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Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <tr> <td>Rated Voltage (Vdc)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> </tr> <tr> <td><math>Z(-25^\circ C)/Z(20^\circ C)</math></td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td><math>Z(-40^\circ C)/Z(20^\circ C)</math></td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table> (120Hz)					Rated Voltage (Vdc)	10	16	25	35	$Z(-25^\circ C)/Z(20^\circ C)$	2	2	2	2	$Z(-40^\circ C)/Z(20^\circ C)$	3	3	3	3
Rated Voltage (Vdc)	10	16	25	35																
$Z(-25^\circ C)/Z(20^\circ C)$	2	2	2	2																
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## ◆MULTIPLIER FOR RIPPLE CURRENT

	Frequency(Hz)	120	1k	10k	100k≤
Coefficient	220~270 $\mu F$	0.50	0.73	0.92	1.00
	330~680 $\mu F$	0.55	0.77	0.94	1.00
	820~1800 $\mu F$	0.60	0.80	0.96	1.00
	2200~5600 $\mu F$	0.70	0.85	0.98	1.00

## ◆DIMENSIONS (mm)



## ◆PART NUMBER

□□□      ZLS      □□□□□□      M      □□□      DXL  
 Rated Voltage    Series    Capacitance    Capacitance Tolerance    Option    Lead Forming    Case Size

## ◆OPTION

	Code
PET Sleeve	EFC

## ◆STANDARD SIZE

Rated Voltage (Vdc)	Capacitance ( $\mu\text{F}$ )	Size $\phi\text{D} \times \text{L}(\text{mm})$	Rated ripple current (mA r.m.s./105°C, 100kHz)	Impedance ( $\Omega$ MAX)	
				20°C, 100kHz	-10°C, 100kHz
10	680	8×11.5	900	0.062	0.19
	1000	8×16	1210	0.048	0.15
	1000	10×12.5	1240	0.045	0.14
	1500	8×20	1410	0.033	0.11
	1500	10×16	1650	0.032	0.10
	1800	10×20	1960	0.020	0.060
	2200	10×23	2250	0.018	0.054
	3300	12.5×20	2480	0.017	0.043
	3900	12.5×25	2900	0.015	0.038
	4700	12.5×30	3450	0.013	0.033
	5600	12.5×35	3570	0.012	0.031
	470	8×11.5	900	0.062	0.19
16	680	8×16	1210	0.048	0.15
	680	10×12.5	1240	0.045	0.14
	1000	8×20	1410	0.033	0.11
	1000	10×16	1650	0.032	0.10
	1500	10×20	1960	0.020	0.060
	1800	10×23	2250	0.018	0.054
	2200	10×25	2500	0.017	0.051
	2200	12.5×20	2480	0.017	0.043
	2700	12.5×25	2900	0.015	0.038
	3300	12.5×30	3450	0.013	0.033
	3900	12.5×35	3570	0.012	0.031
	330	8×11.5	900	0.062	0.19
25	390	8×16	1210	0.048	0.15
	470	10×12.5	1240	0.045	0.14
	560	8×20	1410	0.033	0.11
	680	10×16	1650	0.032	0.10
	820	10×20	1960	0.020	0.060
	1000	10×20	1960	0.020	0.060
	1000	10×23	2250	0.018	0.054
	1500	12.5×20	2480	0.017	0.043
	1800	12.5×25	2900	0.015	0.038
	2200	12.5×30	3450	0.013	0.033
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	220	8×11.5	900	0.062	0.19
35	270	8×16	1210	0.048	0.15
	330	10×12.5	1240	0.045	0.14
	390	8×20	1410	0.033	0.11
	470	10×16	1650	0.032	0.10
	560	10×20	1960	0.020	0.060
	680	10×23	2250	0.018	0.054
	1000	12.5×20	2480	0.017	0.043
	1200	12.5×25	2900	0.015	0.038
	1500	12.5×30	3450	0.013	0.033
	1800	12.5×35	3570	0.012	0.031