

LHR SERIES

NEW



105°C 5000 hours, Low Thermal Resistance, Screw Terminal Type

◆FEATURES

- Load Life : 105°C 5000 hours.
- Low thermal resistance structure.
- RoHS compliance.

◆SPECIFICATIONS

Items	Characteristics										
Category Temperature Range	-25~+105°C										
Rated Voltage Range	350~450Vdc										
Capacitance Tolerance	±20%(20°C,120Hz)										
Leakage Current(MAX)	$I=3\sqrt{CV}$ or 5mA whichever is smaller.(After 5 minutes application of rated voltage) $I$ =Leakage Current( $\mu$ A) $C$ =Capacitance( $\mu$ F) $V$ =Rated Voltage(Vdc)										
Dissipation Factor(MAX) (tan $\delta$ )	<table border="1"> <thead> <tr> <th>Vdc \ <math>\phi</math>D</th> <th>64</th> <th>77</th> <th>90</th> <th>(20°C,120Hz)</th> </tr> </thead> <tbody> <tr> <td>350~450</td> <td>0.25</td> <td>0.25</td> <td>0.25</td> <td></td> </tr> </tbody> </table>	Vdc \ $\phi$ D	64	77	90	(20°C,120Hz)	350~450	0.25	0.25	0.25	
Vdc \ $\phi$ D	64	77	90	(20°C,120Hz)							
350~450	0.25	0.25	0.25								
Endurance	<p>After applying rated voltage with rated ripple current for 5000 hours at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within <math>\pm</math>20% of the initial value.</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> </tbody> </table>	Capacitance Change	Within $\pm$ 20% of the initial value.	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.				
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Dissipation Factor	Not more than 200% of the specified value.										
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◆MULTIPLIER FOR RIPPLE CURRENT

Frequency (Hz)	60(50)	120(100)	300	500	1k	10k $\leq$
Coefficient	0.80	1.00	1.17	1.23	1.30	1.40

◆PART NUMBER

□□□ LHR     
 □□□□□ M     
 □□□     
 □□     
 D×L  
 Rated Voltage      Series      Capacitance      Capacitance Tolerance      Option      Mounting Code      Case Size

◆Dimensions in mm (not to scale)

<Clamp Mounting>

(I type)      (Y type)

(mm)							
$\phi$ D	Dt	W1	W2	W3	W4	W5	F
64	13.0	40.0	45.0	4.5	7.0	12	28.5
77	17.3	47.0	53.0	4.5	6.0	12	31.8
90	17.3	54.0	60.0	4.5	6.0	14	31.8
64	13.0	38.0	43.0	4.5	8.0	14	28.5
77	17.3	44.5	49.0	4.5	7.0	14	31.8
90	17.3	50.8	56.0	4.5	8.0	16	31.8

<Stud Mounting>

(mm)		
$\phi$ D	Dt	F
64	13.0	28.5
77	17.3	31.8
90	17.3	31.8

**◆STANDARD SIZE**

Rated Voltage (Vdc)	Capacitance (uF)	Size		Rated Ripple Current (Arms 105°C, 120Hz)	
		φDXL (mm)	Lt (mm)	Ta=105°C※1	Tc=105°C※2
350	2700	64×96	103	8.2	11.7
	3300	64×106	113	9.0	12.7
	3900	64×126	133	10.2	14.0
	4700	64×146	153	11.5	15.4
	4700	77×103	109.5	12.2	17.8
	5600	64×146	153	11.9	16.0
	5600	77×113	119.5	14.4	20.8
	6800	77×133	139.5	15.1	21.3
	6800	90×103	109.8	17.1	23.5
	8200	77×153	159.5	17.1	23.5
	8200	90×113	119.8	18.8	30.3
	10000	77×193	199.5	18.8	30.3
	10000	90×133	139.8	21.4	33.5
	12000	77×220	226.5	21.4	33.5
	12000	90×153	159.8	24.2	36.9
	15000	90×193	199.8	28.7	42.0
18000	90×220	226.8	31.9	45.7	
400	2200	64×96	103	7.7	11.1
	2700	64×106	113	8.6	12.1
	3300	64×126	133	9.8	13.4
	3900	64×146	153	10.9	14.7
	3900	77×103	109.5	11.6	17.0
	4700	77×113	119.5	13.7	19.8
	5600	77×133	139.5	15.4	21.7
	5600	90×103	109.8	16.3	26.6
	6800	77×153	159.5	17.4	23.9
	6800	90×113	119.8	18.0	28.9
	8200	77×193	199.5	18.9	25.2
	8200	90×133	139.8	20.4	31.9
	10000	77×220	226.5	21.1	27.5
	10000	90×153	159.8	23.1	35.3
	12000	90×193	199.8	27.1	39.7
	15000	90×220	226.8	30.5	43.6

Rated Voltage (Vdc)	Capacitance (uF)	Size		Rated Ripple Current (Arms 105°C, 120Hz)	
		φDXL (mm)	Lt (mm)	Ta=105°C※1	Tc=105°C※2
450	1800	64×96	103	7.3	10.5
	2200	64×106	113	8.1	11.4
	2700	64×126	133	9.2	12.7
	2700	77×103	109.5	10.4	14.0
	3300	64×146	153	10.4	14.0
	3300	77×113	119.5	11.6	16.7
	3900	77×133	139.5	13.0	18.3
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	6800	77×193	199.5	18.0	23.9
	6800	90×133	139.8	19.5	30.4
	8200	77×220	226.5	20.0	26.0
	8200	90×153	159.8	21.9	33.4
	10000	90×193	199.8	25.7	37.7
	12000	90×220	226.8	28.7	41.0

Ta: Ambient temperature under natural convection.  
Tc: Case bottom temperature.

※1: Rated ripple current in continuous operation under natural convection at Ta=105°C.  
※2: Rated ripple current in continuous operation under forced convection at Ta=105°C.

**◆Tightening torque of bolt and Permissible current of terminal.**

Clamp Bolt	Recommended Tightening torque
M3	0.6 [N·m]
M4	1.3 [N·m]

Terminal	Recommended Tightening torque (Permissible Range)	Permissible Current of Terminal
M5	2.2(1.5~3.2) [N·m]	60Arms
M6	3.2(3.0~3.5) [N·m]	100Arms