



# LHR Series-High Rate

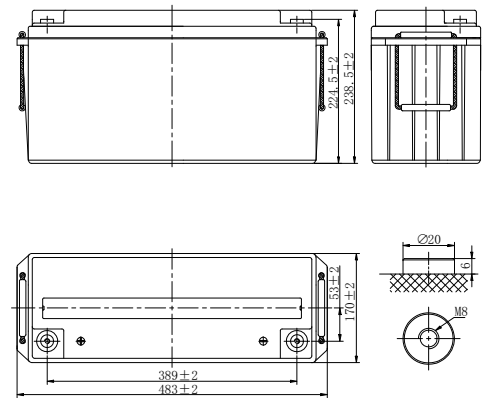
## LHR12510W(12V510W)

### Specifications

Rated Voltage	12V		
Nominal Rate( $W_{15}, 1.67V/cell$ )	510W/cell		
Nominal Capacity( $C_{10}, 1.80V/cell$ )	140Ah		
Dimension	Length	483±2mm (19.0 inches)	
	Width	170±2mm (6.69 inches)	
	Container Height	238.5±2mm (9.39 inches)	
	Total Height	238.5±2mm (9.39 inches)	
Approx Weight	43.6kg (96.1 lbs)		
Terminal	M8		
Container Material	ABS: UL 94 HB or V-0		
Rated Capacity(25°C)	140.0 Ah	C10(14.0A, 1.80V/cell)	
	130.4 Ah	C8(16.3A, 1.80V/cell)	
	123.0 Ah	C5(24.6A, 1.75V/cell)	
	109.2 Ah	C3(36.4A, 1.75V/cell)	
	89.1 Ah	C1(89.1A, 1.60V/cell)	
Max. Discharge Current	1400A (5s)		
Internal Resistance(25°C)	Approx 3.6mΩ		
Operating Temp. Range	Discharge	-20 ~ 55°C (-4 ~ 131°F)	
	Charge	-20 ~ 40°C (-4 ~ 104°F)	
	Storage	-15 ~ 50°C (5 ~ 122°F)	
Nominal Operating Temp. Range	25±3°C (77±5°F)		
Max.Charging Current(25°C)	35.0A		
Charge voltage(25°C)	Float	Charge voltage	Temp. Coefficient
	Equalization	2.25 ~ 2.30V/cell	-3mV/cell/°C
Effect of temp. to Capacity	40°C (104°F)	2.30~2.40V/cell	-4mV/cell/°C
	25°C (77°F)		106%
	0°C (32°F)		100%
Self Discharge	≤3%/month @ 25°C		
			86%



### Layout



### Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	305.1	243.6	211.2	166.1	117.2	85.7	77.0	56.6	46.3	34.5	27.2	23.0	15.9	13.6
1.80V/cell	347.0	276.5	239.3	187.7	132.1	91.6	79.6	58.3	49.0	35.6	28.3	24.0	16.3	14.0
1.75V/cell	376.9	299.8	259.1	202.7	142.1	95.8	82.9	60.7	50.9	36.4	29.2	24.6	16.4	14.1
1.70V/cell	402.9	319.7	275.2	214.9	150.6	99.3	86.5	63.2	52.1	37.2	29.9	25.2	16.7	14.2
1.67V/cell	417.0	329.8	283.2	220.8	154.2	104.2	87.5	64.9	53.3	38.0	30.3	25.5	16.9	14.4
1.60V/cell	431.7	341.1	292.0	226.5	158.0	110.0	89.1	67.1	54.4	38.9	31.0	26.0	16.9	14.5

### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	569.8	458.2	399.8	315.9	223.9	164.9	149.0	109.7	90.0	67.3	53.4	45.4	31.6	27.1
1.80V/cell	637.4	512.6	447.3	353.3	250.5	175.0	153.2	112.4	94.8	69.2	55.2	47.0	32.2	27.8
1.75V/cell	680.2	547.1	477.4	377.1	267.3	182.0	158.8	116.5	98.1	70.5	56.9	48.2	32.4	27.9
1.70V/cell	715.1	575.1	501.8	396.5	281.0	187.2	164.9	120.8	100.0	71.8	58.0	49.1	32.9	28.1
1.67V/cell	726.8	584.5	510.0	402.9	285.6	195.4	165.7	123.3	102.0	73.1	58.6	49.6	33.2	28.4
1.60V/cell	736.9	592.6	517.1	408.5	289.6	204.3	167.6	126.6	103.3	74.5	59.6	50.4	33.3	28.6



# LHR Series-High Rate

## LHR12510W(12V510W)



### Applications

- UPS
- Hospitals & Testing Laboratories
- Emergency Power Supply
- Banks & Financial Markets
- Industrial Process Control Facilities
- Data & Network Operation Centers

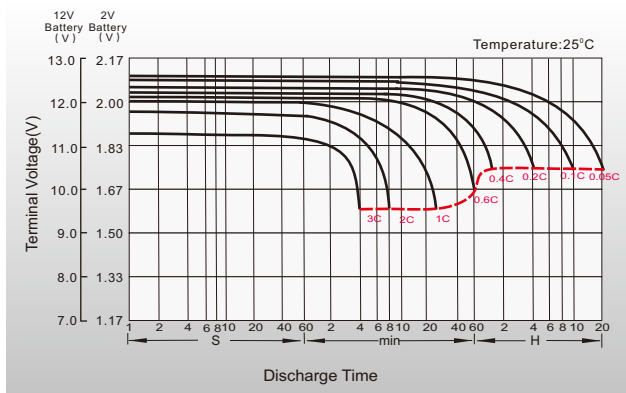
### General Features

- High quality AGM separator: extend cycle life and prevent micro short circuit
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- Unique vent valve design: reduce water losing and prevent air/spark going inside

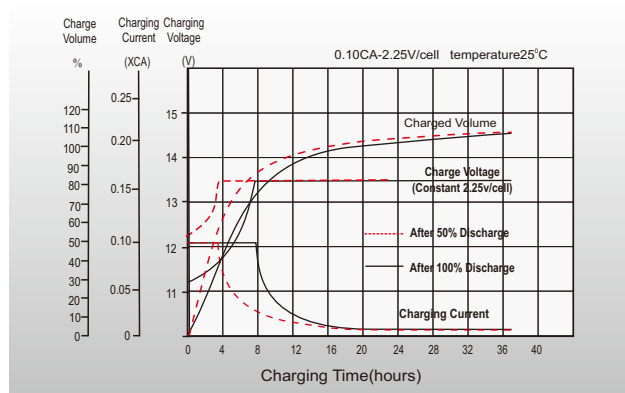
### Standards

- Compliance with IEC 60896 standards
- Classified as "Long Life" according to Eurobat
- CE, UL, IEC Certified
- Manufactured in Leoch@IATF 16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

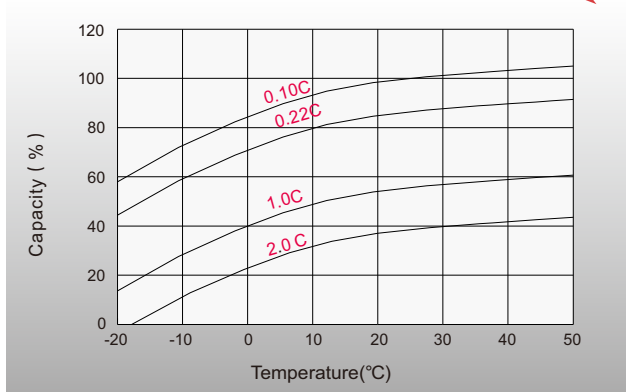
### Discharge Characteristics



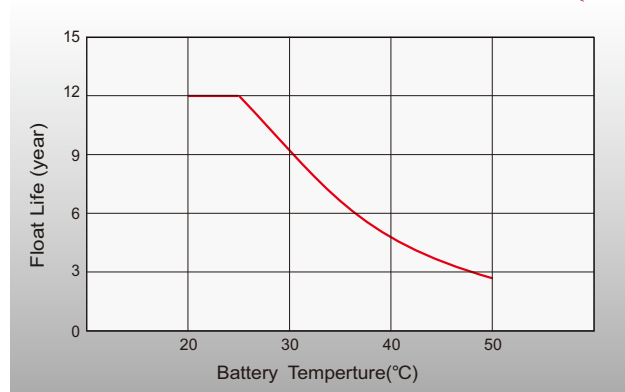
### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Effect of Temperature on Long Term Float Life



distributed by: Power Storage Deutschland GmbH

+49 (0)6081 96582-0

info@psd-power.de

www.psd-power.de



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Publication No.: LB-LHR12510W-PD-EN-V1.3-202304