



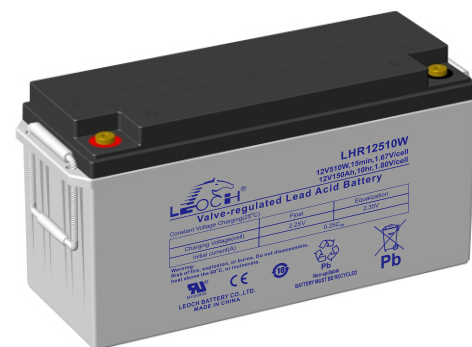
# LHR Series-High Rate

## LHR12510W(12V510W)

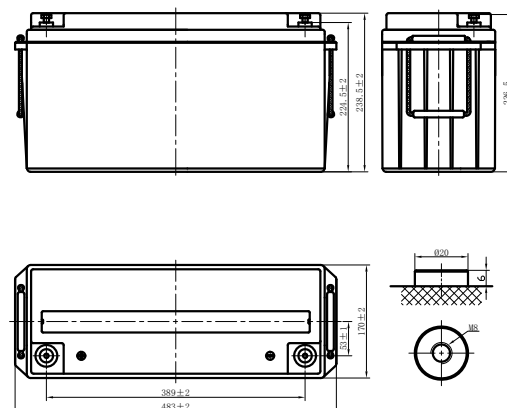


### Specifications

Rated Voltage	12V	
Nominal Rate ( $W_{15}$ , 1.67V/cell)	510W	
Nominal Capacity( $C_{10}$ , 1.80V/cell)	150Ah	
Dimension	Length	483±2mm (19.02 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	43.2 Kg (95.2 lbs)	
Terminal	M8	
Container Material	ABS(UL94 V-0)	
Rated Capacity (25°C)	150.0 Ah	(10hr, 15.0A, 1.80V/cell)
	139.2 Ah	(8hr, 17.4A, 1.80V/cell)
	132.0 Ah	(5hr, 26.4A, 1.75V/cell)
	120.0 Ah	(3hr, 40.0A, 1.75V/cell)
	96.7 Ah	(1hr, 96.7A, 1.67V/cell)
Max. Discharge Current	1500A	
Internal Resistance (25°C)	Approx. 3.5mΩ	
Operating Temp. Range	Discharge	-20 ~ 55°C (4 ~ 131°F)
	Charge	0 ~ 40°C (32 ~ 104°F)
	Storage	-15 ~ 50°C (5 ~ 122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max. Charging Current(25°C)	37.5A	
Charge voltage(25°C)	Float	13.5V
	Temp. Coefficient	-3mV/cell/°C
	Equalization	14.1~14.4V
Effect of temp. to Capacity	40°C (104°F)	106%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	≤3%/month @ 25°C	



### 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	105.9	83.0	61.6	49.6	36.9	29.2	24.7	17.1	14.6
1.80V/cell	347.0	276.5	239.3	187.7	132.1	112.2	88.3	65.5	52.5	38.6	30.3	25.7	17.4	15.0
1.75V/cell	376.9	299.8	259.1	202.7	142.1	116.7	91.9	68.0	54.5	40.0	31.3	26.4	17.6	15.1
1.70V/cell	402.9	319.7	275.2	214.9	150.6	120.4	94.2	69.7	55.8	40.8	32.0	27.0	17.9	15.2
1.67V/cell	417.0	329.8	283.2	220.8	154.2	123.7	96.7	71.5	57.1	41.7	32.5	27.4	18.1	15.4
1.60V/cell	431.7	341.1	292.0	226.5	158.0	125.9	98.5	72.8	58.3	42.7	33.2	27.9	18.2	15.5

### 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	203.6	160.6	119.5	96.5	72.1	57.3	48.6	33.9	29.0
1.80V/cell	637.4	512.6	447.3	353.3	250.5	214.3	169.9	126.2	101.6	75.2	59.2	50.4	34.5	29.8
1.75V/cell	680.2	547.1	477.4	377.1	267.3	221.6	175.9	130.6	105.1	77.5	60.9	51.6	34.7	29.9
1.70V/cell	715.1	575.1	501.8	396.5	281.0	226.9	179.5	133.2	107.1	78.9	62.1	52.6	35.2	30.1
1.67V/cell	726.8	584.5	510.0	402.9	285.6	231.9	183.2	136.0	109.2	80.2	62.7	53.1	35.5	30.5
1.60V/cell	736.9	592.6	517.1	408.5	289.6	233.8	185.2	137.5	110.7	81.8	63.9	54.0	35.6	30.6



# LHR Series-High Rate

## LHR12510W(12V510W)



### Applications

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

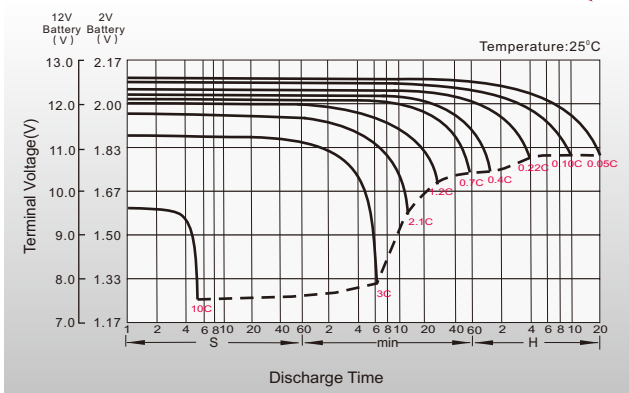
### General Features

- ABS material: UL94 V-0
- Oxygen recombination efficiency:  $\geq 98\%$
- High quality AGM separator: extend cycle life and prevent micro short circuit
- Unique vent valve design: reduce water losing and prevent air/spark going inside
- PbCaSn alloy for plate grids: less gassing, less self-discharging

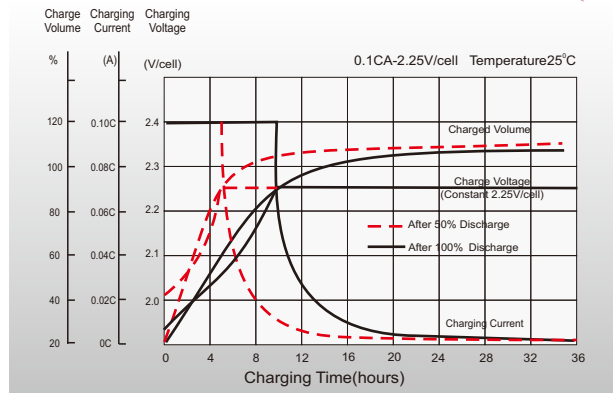
### Standards

- Compliance with IEC 60896 standards
- Classified as "Long Life" according to Eurobat
- CE, UL Certified
- Manufactured in Leoch@IATF16949, OHSAS 18001, ISO 9001 and ISO 14001 certified production facilities

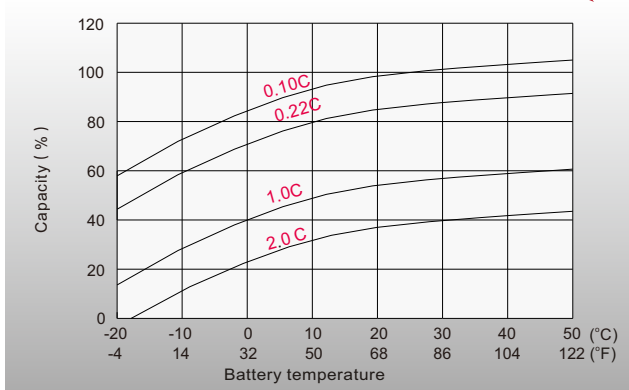
### Discharge Characteristics



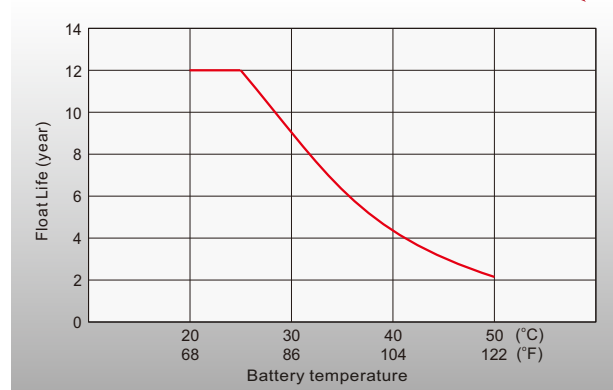
### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Temperature Effects on Long Term Float Life



## Sales Offices Worldwide

#### China Sales Office

5th Floor, Xinbaohui Bldg., Nanhai Blvd.,  
Nanshan, Shenzhen, China. 518052  
Tel: +86-755-86036060 (100 lines)  
Fax: +86-755-26067269  
E-mail: export@leoch.com

#### HongKong Sales Office

Workshop C, 33/F, TML Tower, No. 3 Hoi Shing Road,  
Tsuen Wan, New Territories, Hong Kong  
Tel: +852 35786666  
Fax: +44 1452 690125  
E-mail: sales.hk@leoch.com

#### Singapore Sales Office

No. 1 Tech Park Crescent,  
Singapore 638131  
Tel: +65 68636078  
Fax: +65 6863 6079  
Email: sales.sg@leoch.com

#### Australia Sales Office

2 /29 Tarlington Place, Smithfield. NSW 2164  
Australia  
Tel: 02 9756 0950  
E-mail: sales.au@leoch.com

#### North America Sales Office

19751 Descartes  
Foothill Ranch, CA 92610, USA  
Tel: 949-588-5853  
Fax: 949-588-5966  
E-mail: sales@leoch.us  
Http:// www.leoch.us

#### UK Sales Office

9B Wheatstone Court, Waterwells, Business Park,  
Gloucester, GL2-2AQ, UK United Kingdom  
Tel: +44(0) 1452 729428 / 1452 729696  
Fax: +44 1452 690125  
E-mail: Sales.Europe@leoch.com  
Http:// www.leoch.eu

#### EMEA Sales Office

1 Deligiorgi St., 121 31 Athens,  
Greece  
Tel: +30 210 5760318 (2 lines)  
E-mail: support\_EMEA@leoch.com  
Http:// www.leoch.eu

#### India Sales Office

Shed no. A-53(b), 2nd Stage of Peenya Industrial Area,  
Bangalore North Taluk, Bangalore-560058, India  
Tel: +91-80-23440018/23440019  
Fax: +91-80-23440017  
E-mail: indiasales@leoch.com



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