



# LHR Series-High Rate

## LHR12820W(12V820W)

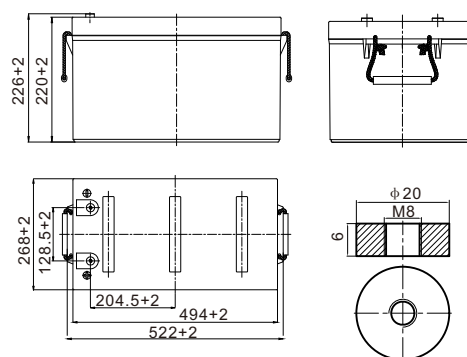


### Specifications

Rated Voltage	12V	
Nominal Rate ( $W_{15}, 1.67V/cell$ )	820W	
Nominal Capacity( $C_{10}, 1.80V/cell$ )	250Ah	
Dimension	Length	522±2mm (20.55 inches)
	Width	268±2mm (10.55 inches)
	Container Height	220±2mm (8.66 inches)
	Total Height	226±2mm (8.90 inches)
Approx. Weight	73.3 Kg (161.6 lbs)	
Terminal	M8	
Container Material	ABS(UL94 V-0)	
Rated Capacity (25°C)	250.0 Ah	(10hr, 25.0A, 1.80V/cell)
	240.0 Ah	(8hr, 30.0A, 1.80V/cell)
	219.0 Ah	(5hr, 43.8A, 1.75V/cell)
	198.9 Ah	(3hr, 66.3A, 1.75V/cell)
	160.0 Ah	(1hr, 160.0A, 1.67V/cell)
Max. Discharge Current	2500A	
Internal Resistance (25°C)	Approx. 2.5mΩ	
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)	62.5A	
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	520.3	388.4	323.5	271.9	209.0	155.9	131.7	98.8	79.1	59.6	47.5	39.7	28.0	23.4
1.80V/cell	606.5	458.0	376.2	313.3	236.2	174.4	145.8	108.1	86.0	64.5	51.2	42.8	30.0	25.0
1.75V/cell	661.9	491.1	397.9	328.7	246.9	181.4	151.2	111.7	88.7	66.3	52.5	43.8	30.5	25.4
1.70V/cell	716.8	523.8	420.6	345.9	257.8	188.3	156.7	115.5	91.5	68.2	53.8	44.7	31.1	25.8
1.67V/cell	748.4	543.0	433.8	355.7	264.3	192.6	160.0	117.6	93.0	69.2	54.6	45.3	31.4	26.0
1.60V/cell	825.0	587.5	465.0	378.8	279.3	202.5	167.8	122.8	96.9	71.8	56.4	46.7	32.2	26.6

### 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	983.7	732.1	642.7	615.4	475.3	349.0	264.0	198.6	158.3	119.9	98.8	84.3	59.8	50.0
1.80V/cell	1111.7	800.6	690.1	653.8	498.6	364.7	278.2	207.1	166.3	124.8	102.6	87.2	61.1	51.2
1.75V/cell	1198.2	865.3	737.6	684.9	524.4	384.8	294.1	218.5	173.1	129.5	106.0	89.9	62.1	51.6
1.70V/cell	1273.5	925.4	777.6	716.5	551.6	401.0	304.2	225.5	178.7	132.7	108.4	91.4	62.8	52.0
1.67V/cell	1320.2	980.9	820.0	745.1	570.9	412.3	313.4	232.0	183.4	136.2	110.3	92.6	63.4	52.4
1.60V/cell	1339.1	1033.4	849.3	767.6	585.7	421.4	320.5	236.6	186.8	137.4	111.4	94.0	64.1	53.1



# LHR Series-High Rate

## LHR12820W(12V820W)



### Applications

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

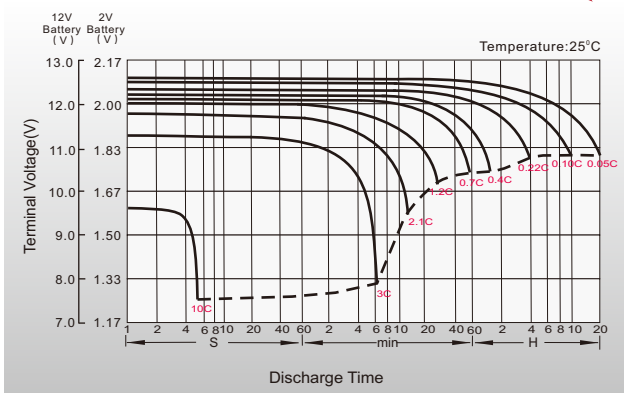
### General Features

- 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

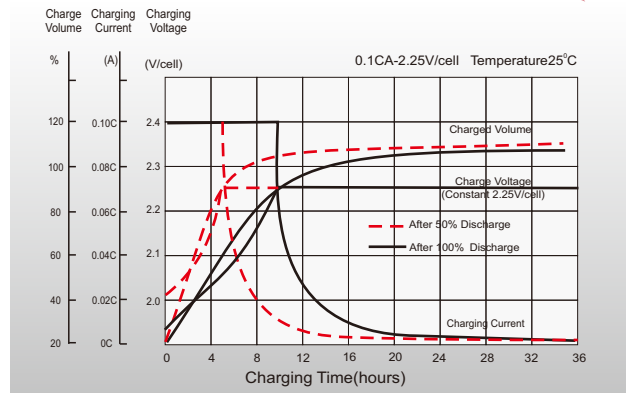
### Standards

- 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

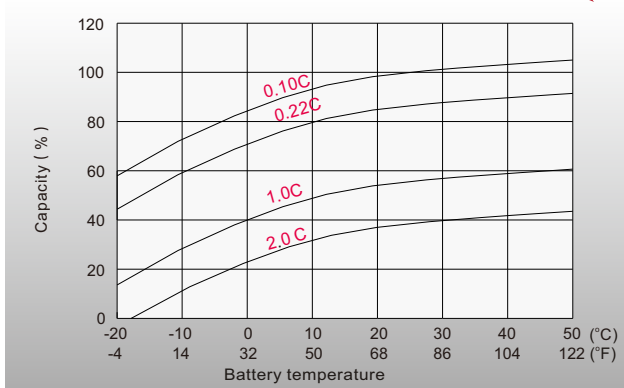
### Discharge Characteristics



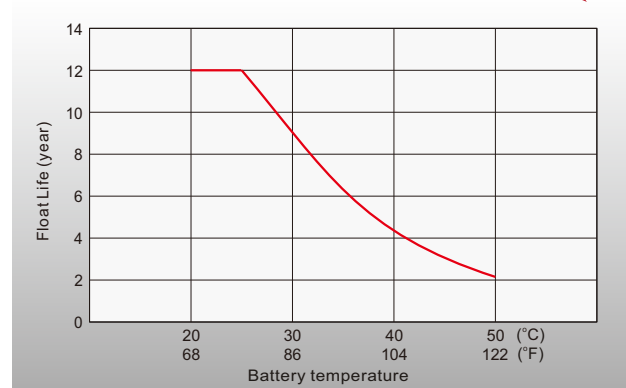
### Float Charging Characteristics



### 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



[Http://www.leoch.com](http://www.leoch.com)

© 2019 LEOCH. All rights reserved.

Trademarks and logos are the property of LEOCH and its affiliates unless otherwise noted.  
Subject to revisions without prior notice.

Publication No.: LB-LHR12820W-PD-EN-V1.1-201907