



# LHR Series-High Rate

## LHR12650W(12V650W)

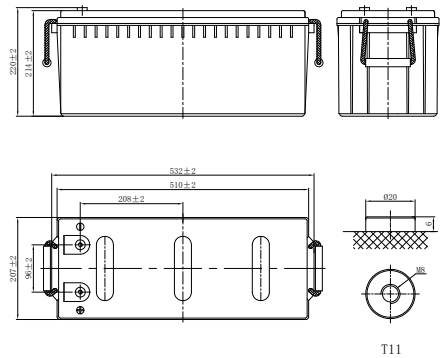


### Specifications

Rated Voltage	12V		
Nominal Rate(W <sub>15</sub> , 1.67V/cell)	650W/cell		
Nominal Capacity(C <sub>10</sub> , 1.80V/cell)	180Ah		
Dimension	Length	532±2mm (20.9 inches)	
	Width	207±2mm (8.15 inches)	
	Container Height	214±2mm (8.43 inches)	
	Total Height	220±2mm (8.66 inches)	
Approx Weight	56.5kg (124.6 lbs)		
Terminal	M8		
Container Material	ABS:UL94HB or V-0		
Rated Capacity(25°C)	180.0 Ah	C10(18.0A, 1.80V/cell)	
	167.2 Ah	C8(20.9A, 1.80V/cell)	
	158.5 Ah	C5(31.7A, 1.75V/cell)	
	140.4 Ah	C3(46.8A, 1.75V/cell)	
	114.6 Ah	C1(114.6A, 1.60V/cell)	
Max. Discharge Current	1800A (5s)		
Internal Resistance(25°C)	Approx 3.1mΩ		
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)	45.00A		
Charge voltage(25°C)	Float	2.25 ~ 2.30V/cell	Temp. Coefficient -3mV/cell/°C
	Equalization	2.30~2.40V/cell	-4mV/cell/°C
	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

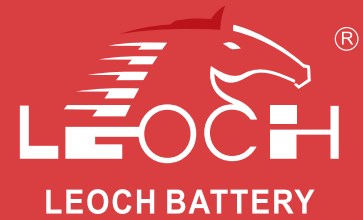


### Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85V/cell	388.8	310.4	269.1	211.7	146.7	122.2	99.1	72.7	59.5	44.3	35.0	29.6	20.5	17.5
1.80V/cell	442.2	352.4	305.0	239.3	165.4	129.8	102.4	74.9	63.0	45.8	36.3	30.8	20.9	18.0
1.75V/cell	480.3	382.1	330.2	258.3	177.9	137.6	106.6	78.0	65.4	46.8	37.5	31.7	21.1	18.1
1.70V/cell	513.5	407.4	350.7	273.9	188.6	144.4	111.3	81.3	67.0	47.8	38.4	32.4	21.4	18.2
1.67V/cell	531.4	420.3	360.9	281.4	193.1	148.4	112.5	83.4	68.6	48.8	38.9	32.8	21.7	18.5
1.60V/cell	550.2	434.7	372.1	288.6	197.8	152.0	114.6	86.2	69.9	50.1	39.8	33.5	21.8	18.6

### 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	726.2	584.0	509.6	402.6	280.3	235.0	191.6	141.0	115.7	86.6	68.7	58.4	40.7	34.8
1.80V/cell	812.3	653.3	570.1	450.3	313.5	247.9	197.0	144.5	121.9	89.0	71.0	60.4	41.4	35.7
1.75V/cell	867.0	697.2	608.4	480.6	334.6	261.3	204.2	149.8	126.1	90.7	73.1	61.9	41.7	35.9
1.70V/cell	911.4	733.0	639.6	505.3	351.8	272.3	212.0	155.3	128.6	92.4	74.6	63.2	42.3	36.1
1.67V/cell	926.3	744.9	650.0	513.5	357.5	278.2	213.1	158.6	131.1	93.9	75.3	63.8	42.6	36.6
1.60V/cell	939.2	755.3	659.1	520.7	362.5	282.4	215.5	162.8	132.8	95.8	76.7	64.8	42.8	36.7



# LHR Series-High Rate

## LHR12650W(12V650W)

### Applications

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

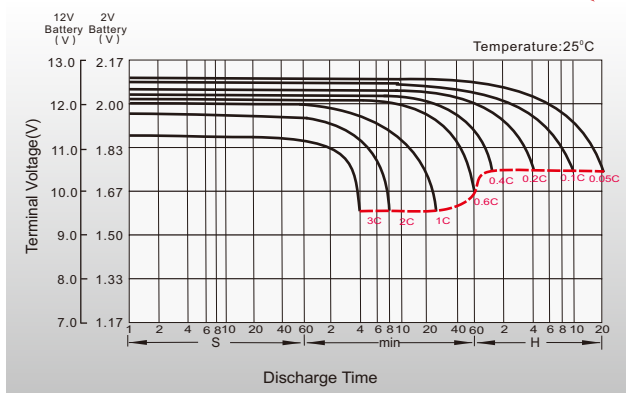
### General Features

- 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

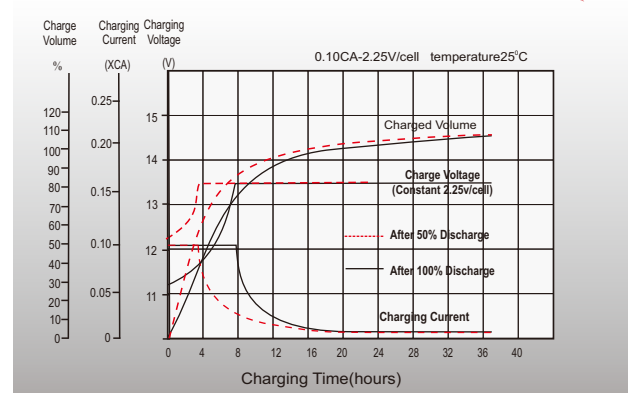
### Standards

- Compliance with IEC 60896 standards
- Classified as "Long Life" according to Eurobat
- CE, UL, IEC Certified
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

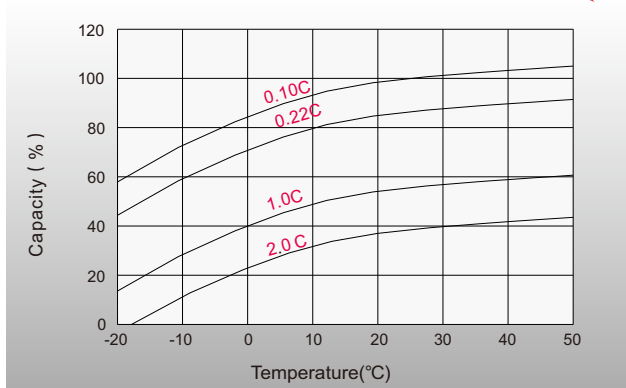
### Discharge Characteristics



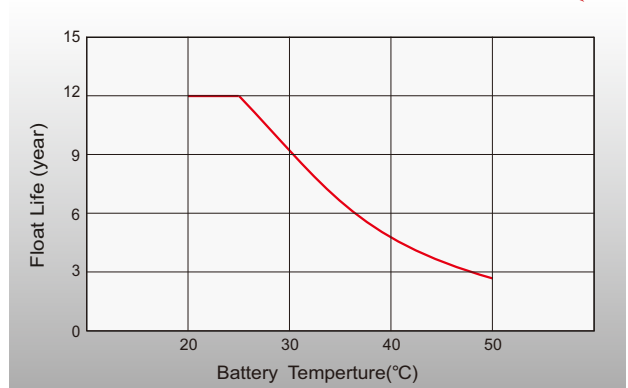
### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Temperature Effects on Long Term Float Life



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