



# LHR Series-High Rate

## LHR12390W(12V390W)

IEEE/UL Battery  
Sizing by  
**MooreU**  
610-952-6067  
www.mooreu.com

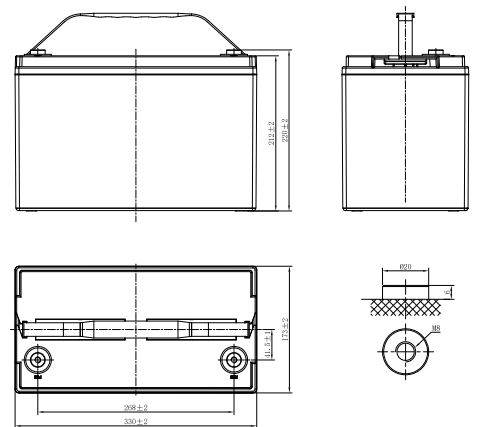


### Specifications

Rated Voltage	12V		
Nominal Rate(W <sub>15</sub> , 1.67V/cell)	390W/cell		
Nominal Capacity(C <sub>10</sub> , 1.80V/cell)	100Ah		
Dimension	Length	330±2mm (13.0 inches)	
	Width	173±2mm (6.81 inches)	
	Container Height	212±2mm (8.35 inches)	
	Total Height	220±2mm (8.66 inches)	
Approx Weight	33.0kg (72.6 lbs)		
Terminal	M8		
Container Material	ABS: UL 94 HB or V-0 optional		
Rated Capacity(25°C)	100.0 Ah	C10(10.0A, 1.80V/cell)	
	96.8 Ah	C8(11.6A, 1.80V/cell)	
	88.0 Ah	C5(17.6A, 1.75V/cell)	
	78.0 Ah	C3(26.0A, 1.75V/cell)	
	63.6 Ah	C1(63.6A, 1.60V/cell)	
Max. Discharge Current	1000A (5s)		
Internal Resistance(25°C)	Approx 5.0mΩ		
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)	25.0A		
Charge voltage(25°C)	Float	2.25 ~ 2.30V/cell	-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	233.3	186.3	161.5	127.0	88.0	67.9	55.0	40.4	33.1	24.6	19.5	16.5	11.4	9.73
1.80V/cell	265.3	211.4	183.0	143.6	99.2	72.1	56.9	41.6	35.0	25.4	20.2	17.1	11.6	10.0
1.75V/cell	288.5	229.5	198.3	155.2	106.8	76.5	59.2	43.3	36.3	26.0	20.9	17.6	11.7	10.0
1.70V/cell	308.1	244.5	210.4	164.4	113.1	80.8	61.8	45.2	37.2	26.5	21.4	18.0	11.9	10.1
1.67V/cell	318.8	252.2	216.5	168.8	115.8	82.6	62.5	46.3	38.1	27.1	21.6	18.2	12.0	10.3
1.60V/cell	330.1	260.8	223.3	173.2	118.7	84.7	63.6	47.9	38.8	27.8	22.1	18.6	12.1	10.3

### 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	435.7	350.4	305.8	241.6	168.2	130.6	106.5	78.3	64.3	48.1	38.2	32.4	22.6	19.3
1.80V/cell	487.4	392.0	342.0	270.2	188.1	137.7	109.4	80.3	67.7	49.5	39.4	33.6	23.0	19.9
1.75V/cell	520.7	418.8	365.4	288.7	201.0	145.2	113.4	83.2	70.0	50.4	40.6	34.4	23.1	19.9
1.70V/cell	546.9	439.8	383.8	303.2	211.1	152.3	117.8	86.3	71.4	51.3	41.4	35.1	23.5	20.0
1.67V/cell	555.8	446.9	390.0	308.1	214.5	154.8	118.4	88.1	72.8	52.2	41.8	35.4	23.7	20.3
1.60V/cell	563.5	453.2	395.5	312.4	217.5	157.4	119.7	90.4	73.8	53.2	42.6	36.0	23.8	20.4



# LHR Series-High Rate

## LHR12390W(12V390W)



### Applications

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

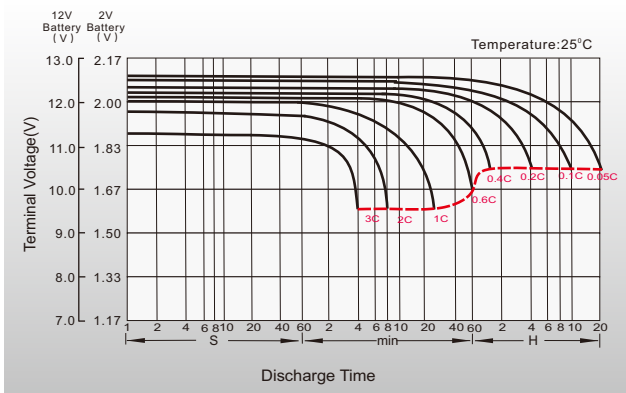
### General Features

- 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

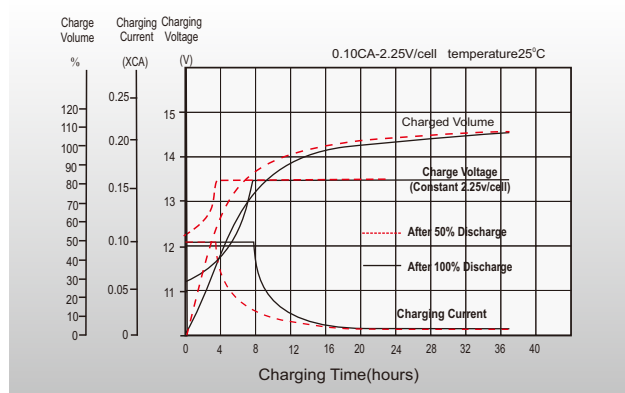
### Standards

- Compliance with IEC 60896 and YD/T 3427 standards
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

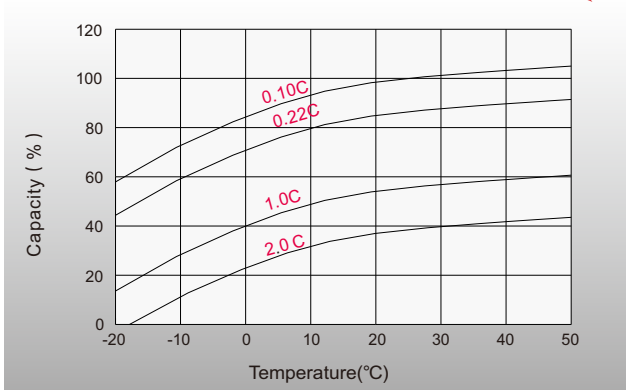
### Discharge Characteristics



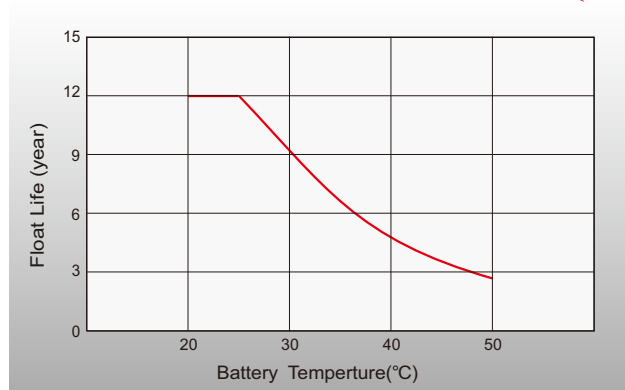
### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Temperature Effects on Long Term Float Life



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