LHR Series-High Rate

LHR12120W(12V120W)

LEOCH BATTERY

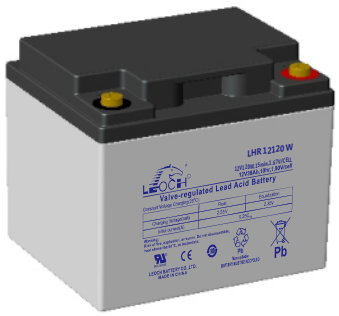
Specifications

Rated Voltage		12V
Nominal Rate (W_{15},1.67V/cell)		120W
Nominal Capacity(C_{10},1.80V/cell)		38Ah
Dimension	Length	197±2mm (7.76 inches)
	Width	165±2mm (6.50 inches)
	Container Height	170±2mm (6.69 inches)
	Total Height	170±2mm (6.69 inches)
Approx. Weight		11.6 Kg (25.57 lbs)
Terminal		M6
Container Material		ABS: UL 94 HB or V-0
Rated Capacity (25°C)	38.0 Ah	(10hr, 3.80A,1.80V/cell)
	35.3 Ah	(8hr, 4.41A,1.80V/cell)
	33.5 Ah	(5hr, 6.69A,1.75V/cell)
	30.3 Ah	(3hr, 10.1A,1.75V/cell)
	24.5 Ah	(1hr, 24.5A,1.67V/cell)
Max. Discharge Current		500A
Internal Resistance (25°C)		Approx. 10.0mΩ
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)		9.5A

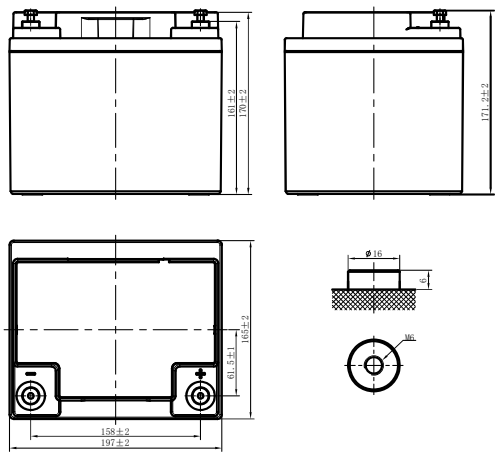
Charge voltage(25°C)		Charge voltage	Temp. Coefficient
	Float	2.25 ~2.30V/cell	-3mV/cell/°C
	Equalization	2.30~2.40V/cell	-4mV/cell/°C

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	71.8	57.3	49.7	39.1	27.6	26.8	21.0	15.6	12.6	9.35	7.40	6.26	4.32	3.70
1.80V/cell	81.6	65.1	56.3	44.2	31.1	28.4	22.4	16.6	13.3	9.79	7.67	6.50	4.41	3.80
1.75V/cell	88.7	70.6	61.0	47.7	33.4	29.6	23.3	17.2	13.8	10.1	7.92	6.69	4.46	3.82
1.70V/cell	94.8	75.2	64.7	50.6	35.4	30.5	23.9	17.7	14.1	10.3	8.12	6.84	4.53	3.84
1.67V/cell	98.1	77.6	66.6	52.0	36.3	31.3	24.5	18.1	14.5	10.6	8.22	6.93	4.58	3.90
1.60V/cell	101.6	80.3	68.7	53.3	37.2	31.9	24.9	18.5	14.8	10.8	8.41	7.07	4.60	3.92

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	134.1	107.8	94.1	74.3	52.7	51.6	40.7	30.3	24.4	18.3	14.5	12.3	8.58	7.35
1.80V/cell	150.0	120.6	105.2	83.1	58.9	54.3	43.0	32.0	25.7	19.0	15.0	12.8	8.73	7.55
1.75V/cell	160.1	128.7	112.3	88.7	62.9	56.1	44.6	33.1	26.6	19.6	15.4	13.1	8.80	7.57
1.70V/cell	168.3	135.3	118.1	93.3	66.1	57.5	45.5	33.8	27.1	20.0	15.7	13.3	8.92	7.61
1.67V/cell	171.0	137.5	120.0	94.8	67.2	58.7	46.4	34.4	27.7	20.3	15.9	13.5	9.00	7.72
1.60V/cell	173.4	139.4	121.7	96.1	68.1	59.2	46.9	34.8	28.0	20.7	16.2	13.7	9.03	7.75

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Applications

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

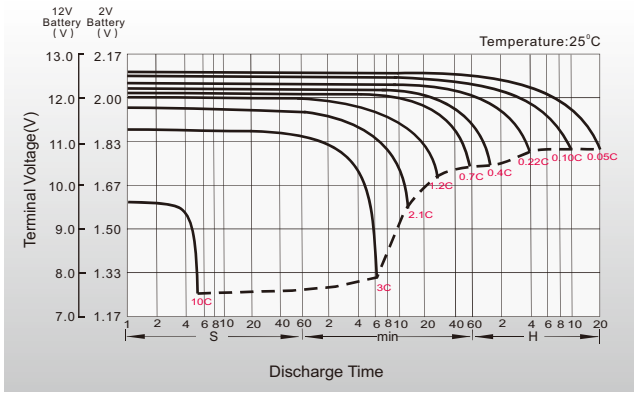
General Features

- 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

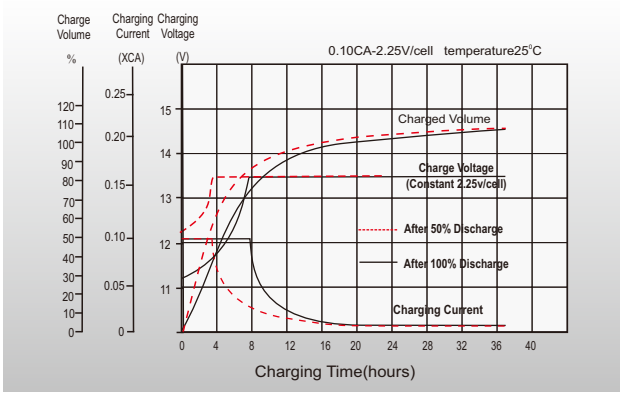
Standards

- 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

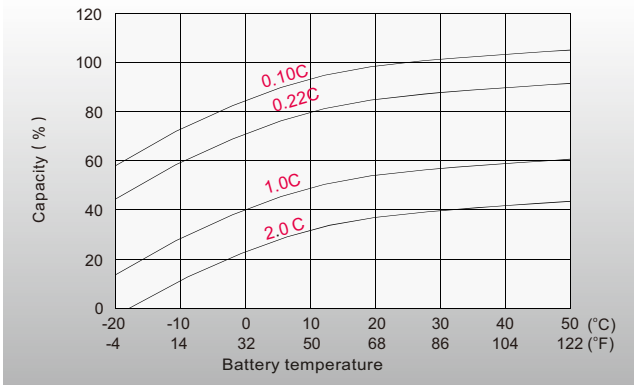
Discharge Characteristics



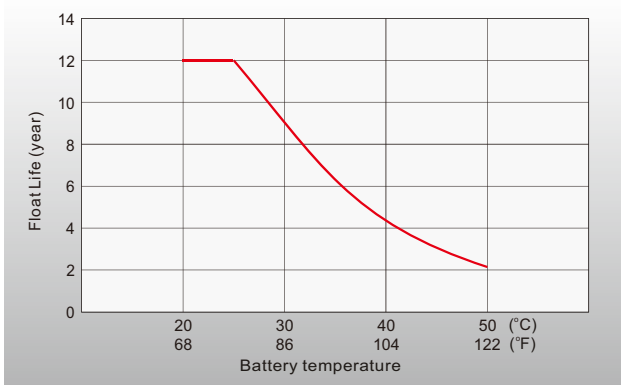
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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