LHR Series-High Rate

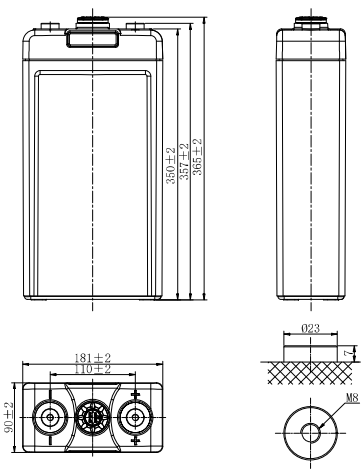
LHR500W(2V500W)

LEOCH BATTERY

Specifications

Rated Voltage		2V
Nominal Rate(W_{15},1.67V/cell) Nominal Capacity(C_{10},1.80V/cell)		500W 180Ah
Dimension	Length	90±2mm (3.54 inches)
	Width	181±2mm (7.13 inches)
	Container Height	350±2mm (13.8 inches)
	Total Height	365±2mm (14.4 inches)
Approx Weight		11.8 Kg (26.0 lbs)
Terminal		M8
Container Material		ABS: UL 94 HB or V-0
Rated Capacity(25℃)	180.0 Ah	C10(18.0A,1.80V/cell)
	169.6 Ah	C8(21.2A,1.80V/cell)
	159.0 Ah	C5(31.8A,1.75V/cell)
	138.0 Ah	C3(46.0A,1.75V/cell)
	107.9 Ah	C1(107.9A,1.60V/cell)
Max. Discharge Current		1440A (5s)
Internal Resistance(25℃)		Approx 0.80mΩ
Operating Temp. Range	Discharge	-20 ~ 55℃ (-4 ~ 131℉)
	Charge	-20 ~ 40℃ (-4 ~ 104℉)
	Storage	-15 ~ 50℃ (5 ~ 122℉)
Nominal Operating Temp. Range		25±3℃ (77±5℉)
Max.Charging Current(25℃)		45A
		Charge voltage / Temp. Coefficient
Charge voltage(25℃)	Float	2.25 ~2.30V/cell / -3mV/cell/℃
	Equalization	2.30~2.40V/cell / -4mV/cell/℃
Effect of temp. to Capacity	40℃ (104℉)	106%
	25℃ (77℉)	100%
	0℃ (32℉)	86%
Self Discharge		≤3%/month @ 25℃

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	261.6	229.6	204.8	167.8	131.7	110.2	95.0	71.1	56.0	43.7	34.7	30.4	20.5	17.6
1.80V/cell	294.6	258.5	228.0	183.4	137.2	116.1	99.0	74.3	58.5	45.1	35.4	31.0	21.2	18.0
1.75V/cell	302.3	272.1	240.2	194.4	144.5	120.2	100.0	76.5	59.8	46.0	36.0	31.8	21.4	18.2
1.70V/cell	334.2	286.3	252.5	204.6	151.6	124.5	104.0	78.8	61.5	47.9	36.9	32.2	21.7	18.5
1.67V/cell	360.4	305.9	266.0	212.8	156.9	127.6	105.9	81.0	62.8	48.8	38.0	32.8	22.0	18.7
1.60V/cell	365.4	310.1	269.7	215.7	159.1	130.7	107.9	83.3	64.5	49.7	38.7	33.5	22.2	18.9

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	491.9	431.6	385.0	315.4	247.5	211.6	182.5	140.1	110.3	86.1	68.4	59.8	41.0	35.1
1.80V/cell	553.8	485.9	428.6	344.7	258.0	222.9	190.1	146.3	115.3	88.8	69.7	61.2	42.3	36.0
1.75V/cell	568.4	511.5	451.5	365.4	271.7	230.7	192.0	150.7	117.8	90.6	71.0	62.6	42.8	36.5
1.70V/cell	628.3	538.2	474.8	384.6	285.0	239.1	199.6	155.1	121.1	94.3	72.7	63.4	43.4	36.9
1.67V/cell	677.5	575.0	500.0	400.0	295.0	245.0	203.4	159.6	123.6	96.1	74.9	64.7	43.9	37.4
1.60V/cell	687.0	583.1	507.0	405.6	299.1	250.9	207.2	164.0	127.0	97.9	76.3	66.0	44.4	37.8

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Applications

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

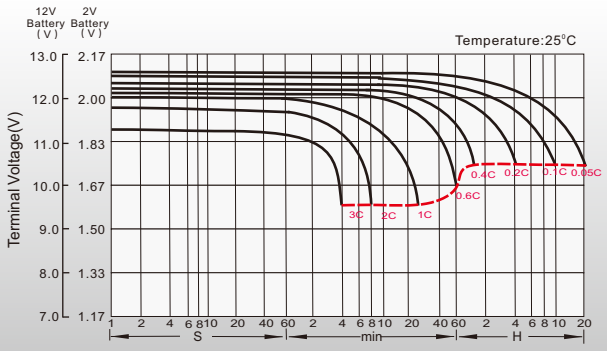
General Features

- 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

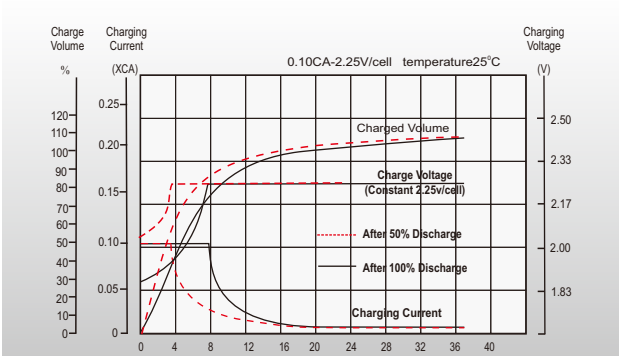
Standards

- 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

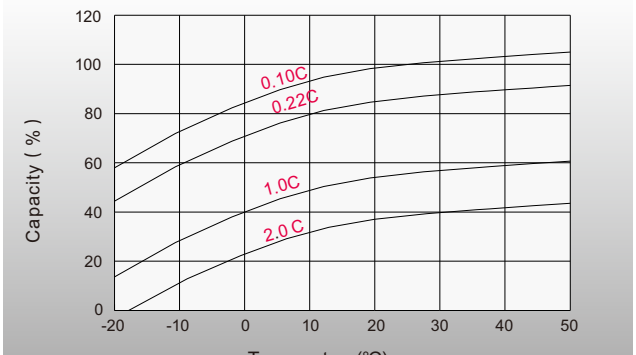
Discharge Characteristics



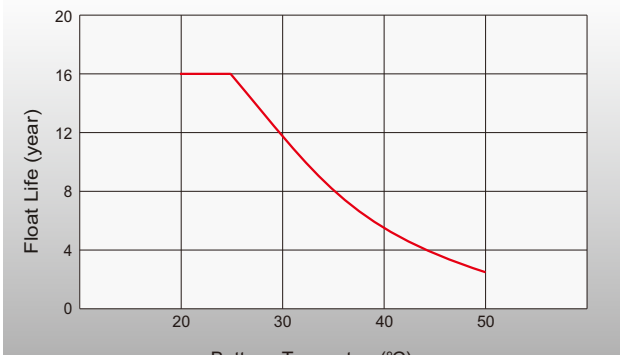
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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