LHR Series-High Rate

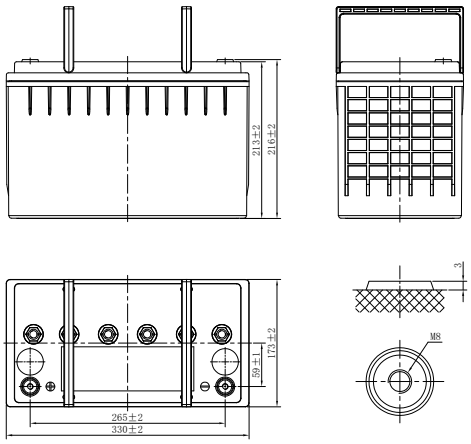
LHR12400W(12V400W)

LEOCH BATTERY

Specifications

Rated Voltage		12V
Nominal Rate(W_{15},1.67V/cell) Nominal Capacity(C_{10},1.80V/cell)		400W/cell 100Ah
Dimension	Length	330±2mm (13.0 inches)
	Width	173±2mm (6.81 inches)
	Container Height	213±2mm (8.39 inches)
	Total Height	216±2mm (8.50 inches)
Approx Weight		31.2kg (68.8 lbs)
Terminal		M8
Container Material		ABS: UL 94 HB or V-0
Rated Capacity(25℃)	100.0 Ah	C10(10.0A,1.80V/cell)
	96.8 Ah	C8(12.1A,1.80V/cell)
	88.0 Ah	C5(17.6A,1.75V/cell)
	77.4 Ah	C3(25.8A,1.75V/cell)
	67.7 Ah	C1(67.7A,1.60V/cell)
Max. Discharge Current		1000A (5s)
Internal Resistance(25℃)		Approx 3.5mΩ
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℃)		25.0A
Charge voltage(25℃)		Charge voltage / Temp. Coefficient
	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	280.5	232.4	185.5	141.2	101.0	72.4	56.7	40.5	32.3	23.8	19.4	16.5	11.8	9.70
1.80V/cell	315.9	258.7	206.4	159.6	107.2	76.8	60.3	42.8	34.0	24.9	20.2	17.1	12.1	10.0
1.75V/cell	343.4	269.8	215.2	165.7	112.7	80.1	62.9	44.4	35.2	25.8	20.8	17.6	12.2	10.1
1.70V/cell	361.9	273.1	217.9	166.8	117.7	82.7	64.7	45.8	36.3	26.4	21.3	18.0	12.4	10.2
1.67V/cell	375.0	277.3	220.4	173.7	121.7	84.8	66.3	46.8	37.1	26.9	21.6	18.2	12.5	10.3
1.60V/cell	383.6	281.4	228.6	179.1	125.0	86.5	67.7	47.7	37.8	27.6	22.1	18.6	12.6	10.4

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	506.7	420.6	334.5	273.8	198.9	143.8	113.4	81.1	64.9	48.0	39.5	33.7	24.0	20.0
1.80V/cell	572.6	468.7	372.8	305.1	209.9	151.8	120.1	85.5	68.1	50.1	41.0	35.0	24.5	20.5
1.75V/cell	617.2	489.1	389.1	318.4	219.2	157.7	124.8	88.4	70.3	51.8	42.4	36.0	24.9	20.6
1.70V/cell	655.9	495.2	393.9	322.4	227.1	161.9	127.6	90.6	72.1	53.1	43.3	36.6	25.1	20.8
1.67V/cell	680.0	502.8	400.0	327.3	232.6	165.0	129.8	92.8	73.4	54.5	44.1	37.0	25.4	20.9
1.60V/cell	689.7	510.5	408.3	332.3	236.0	168.5	131.5	94.6	74.7	55.0	44.6	37.6	25.6	21.2

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Applications

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

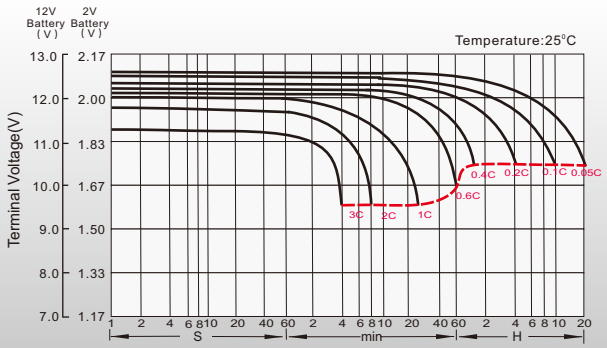
General Features

- 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

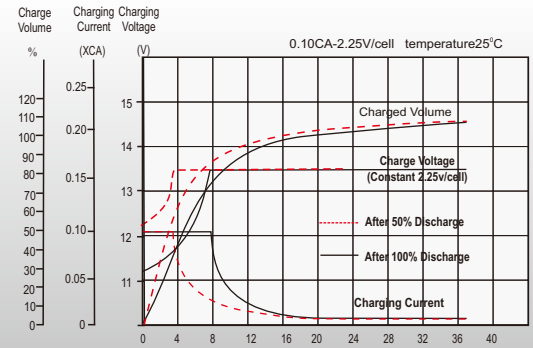
Standards

- 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

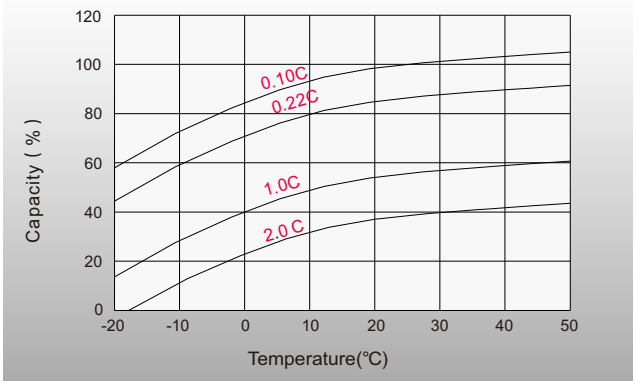
Discharge Characteristics



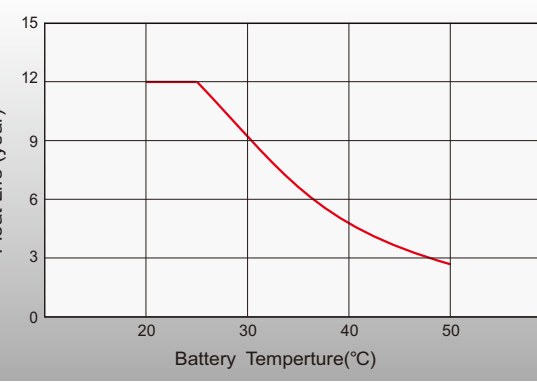
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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