LHR Series-High Rate

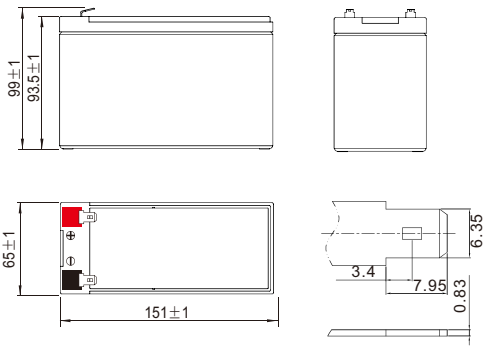
LHR1235W(12V35W)

LEOCH BATTERY

Specifications

Rated Voltage		12V
Nominal Rate (W_{15},1.67V/cell)		35W
Nominal Capacity(C_{10},1.80V/cell)		7.8Ah
Dimension	Length	151±1mm (5.94 inches)
	Width	65±1mm (2.56 inches)
	Container Height	93.5±1mm (3.68 inches)
	Total Height	99±1mm (3.90 inches)
Approx. Weight		2.50 Kg (5.51 lbs)
Terminal		T2
Container Material		ABS: UL 94 HB or V-0
Rated Capacity (25°C)	7.81 Ah	(10hr, 0.781A,1.80V/cell)
	7.66 Ah	(8hr, 0.958A,1.80V/cell)
	7.20 Ah	(5hr, 1.44A,1.75V/cell)
	6.63 Ah	(3hr, 2.21A,1.75V/cell)
	5.46 Ah	(1hr, 5.46A,1.67V/cell)
Max. Discharge Current		108A
Internal Resistance (25°C)		Approx. 20mΩ
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)		2.00A
		Charge voltage / Temp. Coefficient
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	24.8	16.5	13.4	10.4	7.75	5.62	4.49	3.32	2.66	1.99	1.57	1.31	0.894	0.732
1.80V/cell	28.9	19.5	15.5	12.0	8.76	6.28	4.97	3.63	2.89	2.15	1.70	1.41	0.958	0.781
1.75V/cell	31.6	20.9	16.4	12.6	9.16	6.54	5.16	3.75	2.98	2.21	1.74	1.44	0.975	0.793
1.70V/cell	34.2	22.3	17.4	13.3	9.56	6.79	5.35	3.88	3.07	2.27	1.78	1.48	0.992	0.806
1.67V/cell	35.7	23.2	17.9	13.6	9.80	6.94	5.46	3.95	3.13	2.31	1.81	1.50	1.00	0.813
1.60V/cell	39.4	25.1	19.2	14.5	10.3	7.29	5.72	4.13	3.26	2.39	1.87	1.54	1.03	0.830

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	47.3	31.7	26.6	20.1	15.0	10.9	8.73	6.47	5.19	3.90	3.09	2.58	1.77	1.45
1.80V/cell	54.5	37.0	30.5	22.9	16.8	12.1	9.60	7.04	5.62	4.20	3.32	2.77	1.89	1.54
1.75V/cell	58.7	39.2	32.9	23.8	17.4	12.5	9.88	7.23	5.76	4.30	3.39	2.83	1.92	1.57
1.70V/cell	62.7	41.3	34.3	24.8	18.0	12.9	10.2	7.43	5.91	4.40	3.47	2.88	1.95	1.59
1.67V/cell	64.9	42.5	35.0	25.3	18.4	13.1	10.3	7.54	5.99	4.45	3.51	2.91	1.97	1.60
1.60V/cell	70.7	45.5	36.9	26.6	19.2	13.6	10.7	7.81	6.20	4.59	3.60	2.99	2.01	1.63

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LEOCH BATTERY

Applications

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

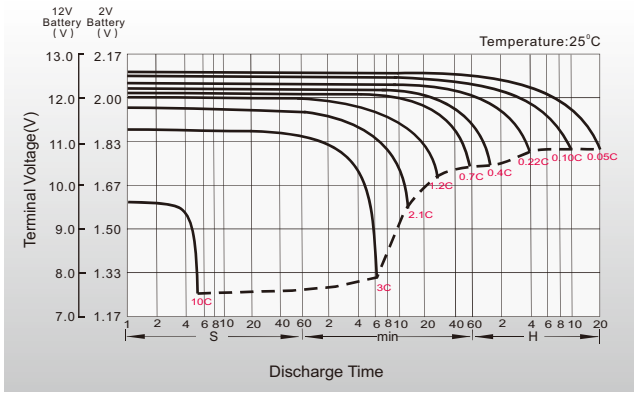
General Features

- 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

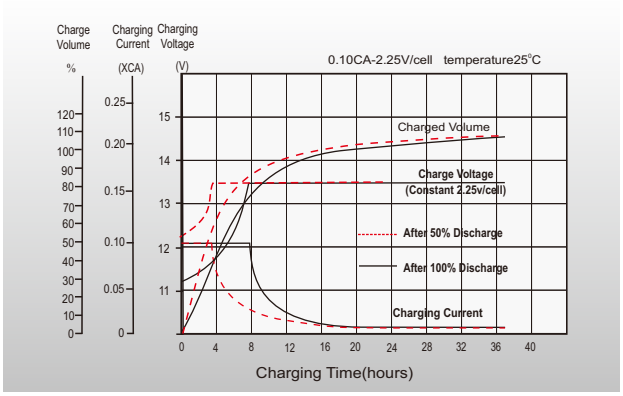
Standards

- Compliance with IEC 60896 standards
- Classified as “General Purpose” according to Eurobat
- CE, UL, IEC Certified
- Manufactured in Leoch®IATF16949, ISO 45001,ISO 9001 and ISO 14001 certified production facilities

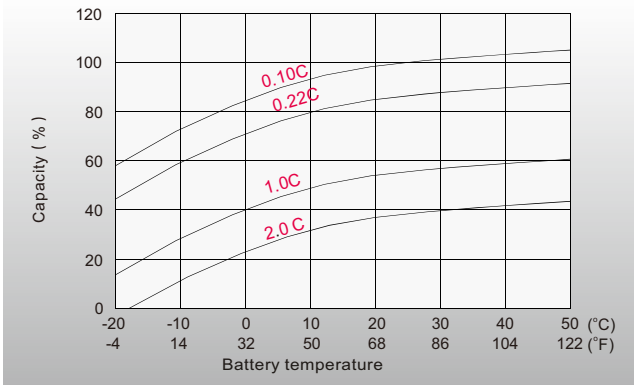
Discharge Characteristics



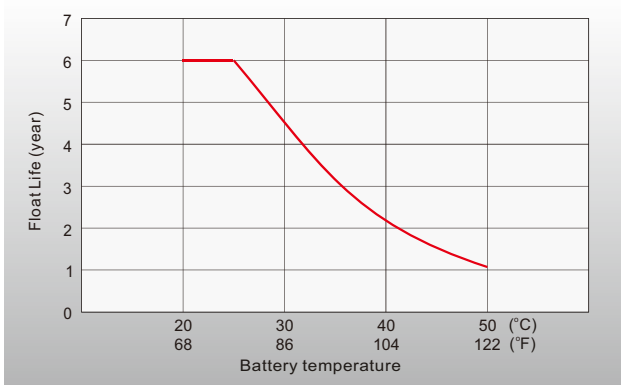
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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