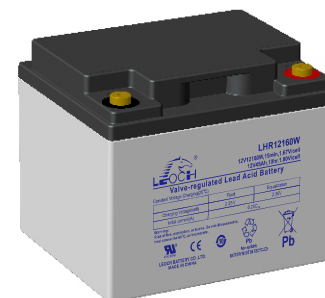


LHR Series-High Rate

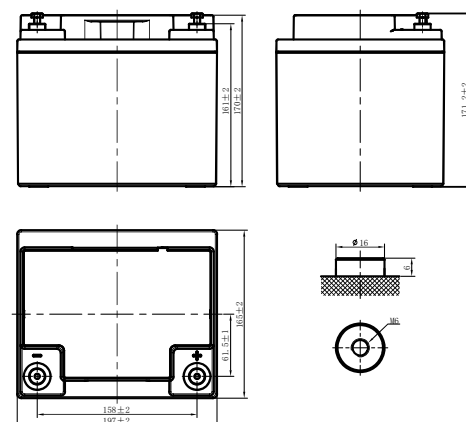
LHR12160W(12V160W)

Specifications

Rated Voltage	12V		
Nominal Rate ($W_{15}, 1.67V/cell$)	160W		
Nominal Capacity($C_{10}, 1.80V/cell$)	45Ah		
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	14.2 Kg (31.3 lbs)		
Terminal	M6		
Container Material	ABS: UL 94 HB or V-0		
Rated Capacity (25°C)	45.0 Ah	(10hr, 4.50A, 1.80V/cell)	
	41.8 Ah	(8hr, 5.23A, 1.80V/cell)	
	39.6 Ah	(5hr, 7.92A, 1.75V/cell)	
	36.0 Ah	(3hr, 12.0A, 1.75V/cell)	
	29.0 Ah	(1hr, 29.0A, 1.67V/cell)	
Max. Discharge Current	540A		
Internal Resistance (25°C)	Approx. 9.0mΩ		
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)	11.25A		
Charge voltage(25°C)	Charge voltage	Temp. Coefficient	
	Float	2.25 ~2.30V/cell	-3mV/cell/°C
Effect of temp. to Capacity	Equalization	2.30~2.40V/cell	-4mV/cell/°C
		40°C (104°F)	106%
		25°C (77°F)	100%
Self Discharge		0°C (32°F)	86%
			≤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	95.7	76.4	66.3	52.1	36.8	31.8	24.9	18.5	14.9	11.1	8.76	7.41	5.12	4.38
1.80V/cell	108.8	86.7	75.1	58.9	41.5	33.7	26.5	19.6	15.7	11.6	9.08	7.70	5.23	4.50
1.75V/cell	118.2	94.1	81.3	63.6	44.6	35.0	27.6	20.4	16.3	12.0	9.38	7.92	5.28	4.52
1.70V/cell	126.4	100.3	86.3	67.4	47.3	36.1	28.3	20.9	16.7	12.2	9.61	8.10	5.36	4.55
1.67V/cell	130.8	103.5	88.8	69.3	48.4	37.1	29.0	21.5	17.1	12.5	9.74	8.21	5.42	4.62
1.60V/cell	135.4	107.0	91.6	71.0	49.6	37.8	29.5	21.9	17.5	12.8	10.0	8.37	5.45	4.64

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	178.8	143.8	125.4	99.1	70.2	61.1	48.2	35.8	28.9	21.6	17.2	14.6	10.2	8.70
1.80V/cell	200.0	160.8	140.3	110.9	78.6	64.3	51.0	37.9	30.5	22.5	17.8	15.1	10.3	8.94
1.75V/cell	213.4	171.6	149.8	118.3	83.9	66.5	52.8	39.2	31.5	23.3	18.3	15.5	10.4	8.96
1.70V/cell	224.4	180.4	157.4	124.4	88.2	68.1	53.8	40.0	32.1	23.7	18.6	15.8	10.6	9.02
1.67V/cell	228.0	183.4	160.0	126.4	89.6	69.6	55.0	40.8	32.8	24.1	18.8	15.9	10.7	9.14
1.60V/cell	231.2	185.9	162.2	128.2	90.9	70.1	55.6	41.3	33.2	24.5	19.2	16.2	10.7	9.18



LHR Series-High Rate

LHR12160W(12V160W)



Applications

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

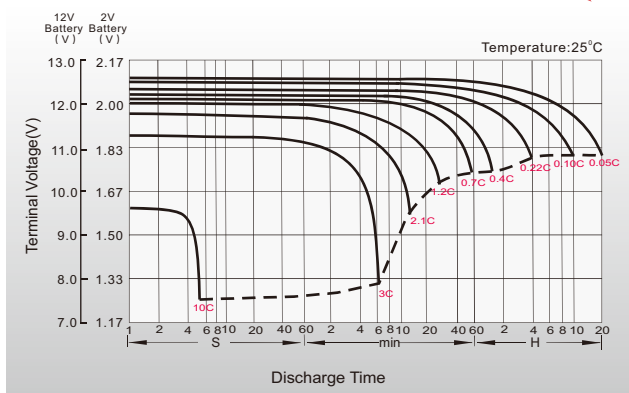
General Features

- 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

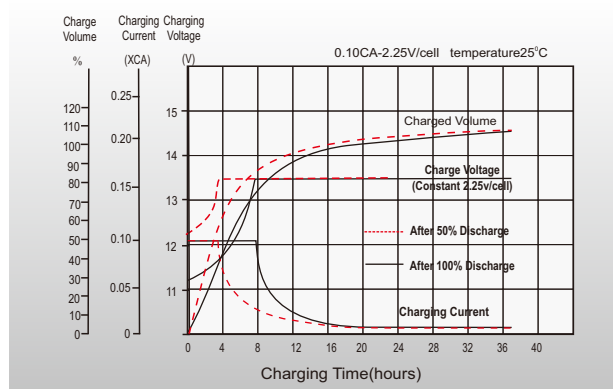
Standards

- Compliance with IEC 60896 standards
- Classified as "Long Life" according to Eurobat
- CE, UL, IEC Certified
- Manufactured in Leoch@IATF 16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

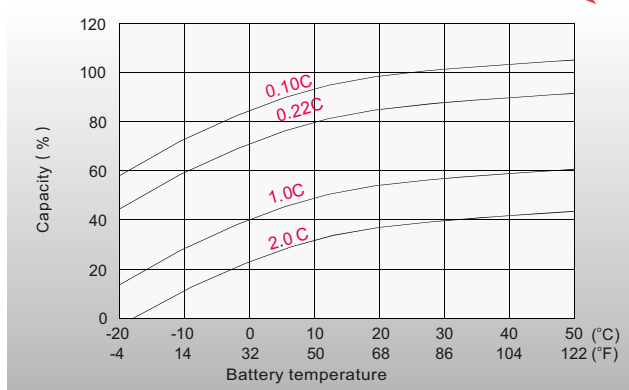
Discharge Characteristics



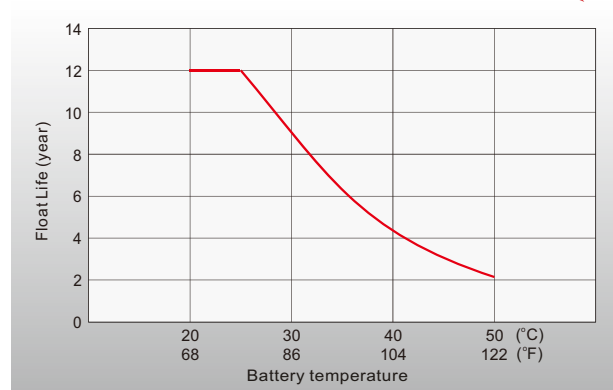
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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