



# LPGS Series-Gel Battery

## LPGS12-140(12V140Ah)

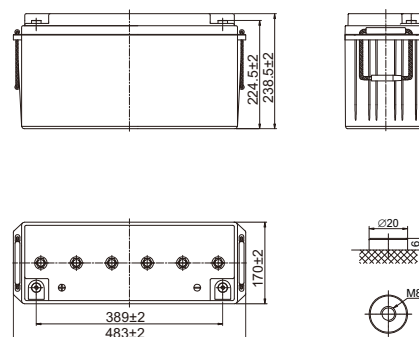


### Specifications

Rated Voltage	12V	
Nominal Capacity	140Ah (C <sub>10</sub> , 1.80V/cell)	
Dimension	Length	483±2mm (19.0 inches)
	Width	170±2mm (6.69 inches)
	Container Height	238.5±2mm (9.39 inches)
	Total Height	238.5±2mm (9.39 inches)
Approx Weight	41.8 Kg (92.2 lbs)	
Terminal	M8	
Container Material	ABS	
Rated Capacity (25°C)	144.2Ah	(20hr, 7.21A, 1.80V/cell)
	140.0Ah	(10hr, 14.0A, 1.80V/cell)
	119.0Ah	(5hr, 23.8A, 1.75V/cell)
	103.2Ah	(3hr, 34.4A, 1.75V/cell)
	79.7Ah	(1hr, 79.7A, 1.65V/cell)
Max. Discharge Current	1400A (5s)	
Internal Resistance (25°C)	Approx 4.0mΩ	
Operating Temp. Range	Discharge : -20 ~ 55°C (-4 ~ 131°F)	
	Charge : -20 ~ 40°C (-4 ~ 104°F)	
	Storage : -20 ~ 50°C (-4 ~ 122°F)	
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 35.0A. Voltage 14.4V~15.0V at 25°C(77°F) Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 35.0A. Voltage 13.5V~13.8V at 25°C(77°F) Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	LPGS series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



### Layout



### Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	225.7	177.4	150.9	126.2	99.8	75.8	62.7	39.9	31.0	25.5	21.7	18.9	15.3	13.0	7.00
1.80V/cell	298.6	223.4	179.7	147.0	114.8	86.0	69.7	43.3	33.2	27.1	23.2	20.3	16.3	14.0	7.21
1.75V/cell	343.6	250.6	200.3	161.5	122.4	90.9	73.7	45.4	34.4	28.0	23.8	20.8	16.6	14.1	7.28
1.70V/cell	382.8	276.4	216.3	171.6	129.1	95.5	77.0	47.6	35.7	28.8	24.5	21.2	16.9	14.2	7.42
1.65V/cell	418.0	295.3	227.8	180.6	135.1	98.4	79.7	48.9	37.0	29.7	25.0	21.7	17.1	14.4	7.49
1.60V/cell	464.8	323.2	245.7	193.9	143.6	104.0	83.6	50.7	38.3	30.4	25.5	22.1	17.3	14.6	7.56

### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	415.9	330.3	283.7	239.8	191.1	146.3	121.4	77.7	60.5	49.9	42.6	37.1	30.4	25.9	13.9
1.80V/cell	544.7	411.3	333.6	275.4	217.3	164.7	134.4	83.9	64.7	52.9	45.5	39.8	32.3	27.7	14.3
1.75V/cell	612.9	453.6	367.0	299.2	229.6	172.8	141.5	87.6	66.8	54.5	46.5	40.7	32.8	28.0	14.4
1.70V/cell	662.9	488.0	390.3	315.3	240.4	180.4	147.1	91.7	69.0	56.0	47.6	41.5	33.2	28.1	14.7
1.65V/cell	712.2	515.9	407.0	328.6	249.5	184.3	151.3	93.6	71.2	57.5	48.5	42.3	33.6	28.4	14.8
1.60V/cell	773.6	551.7	431.6	349.0	262.9	193.7	157.7	96.6	73.4	58.6	49.4	43.0	34.0	28.7	14.9



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## LPGS12-140(12V140Ah)



### Applications

- Communication power supply
- Engine starting
- Pump systems
- Alarm installations
- Marine and power stations

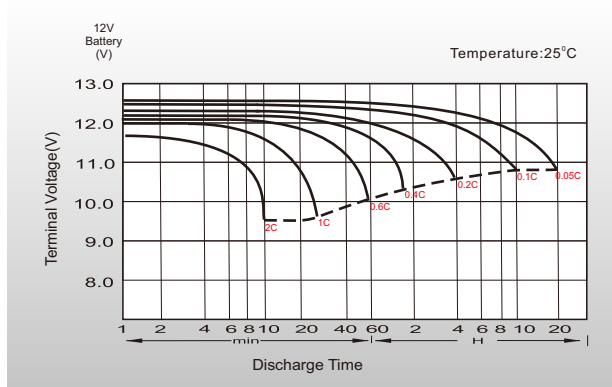
### General Features

- Adopted advantage AGM-GEL technology
- Operation temperature  $-20\sim 55^{\circ}\text{C}$
- $\leq 3\%$  Self discharge @ $25^{\circ}\text{C}$

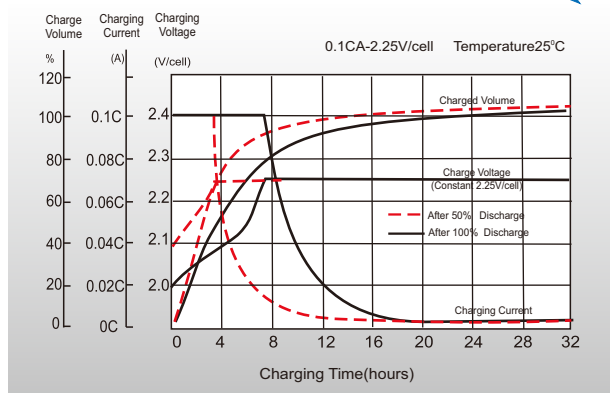
### Standards

- IEC 60896 Certified
- Classified as "Long Life" according to Eurobat
- UL Certified, CE Certified
- Manufactured in Leoch® IATF16949, ISO 9001, ISO 14001 and ISO 45001 certified production facilities

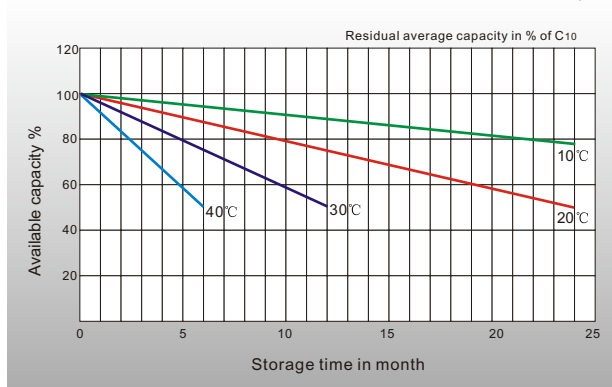
### Discharge Characteristics



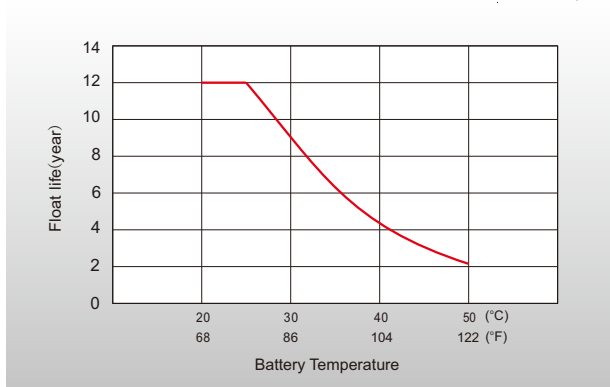
### Float Charging Characteristics



### General Relation of Capacity VS. Storage Time



### Effect of Temperature on Long Term Float Life



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