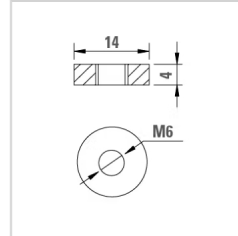
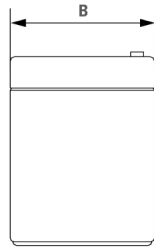
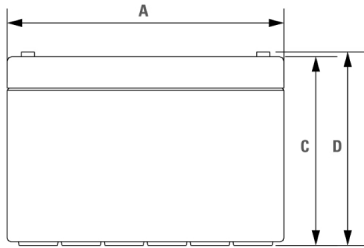


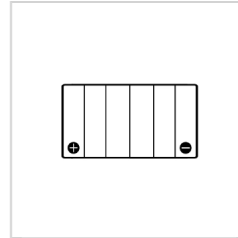
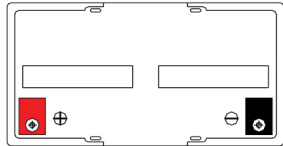


**AGM Deep Cycle Cyclic Battery**

Discover<sup>®</sup> VRLA AGM Deep Cycle batteries deliver deep-cycle and cyclic discharging for a general range of stationary applications such as backup power, solar, and renewable energy storage. The batteries are maintenance-free, safe, easy to use and a start to reducing energy cost and grid dependence.



TERMINAL



LAYOUT

**BENEFITS**

**ENHANCED RUNTIME**

- High energy density
- Consistent voltage performance

**EXTENDED SERVICE LIFE**

- Low self-discharge rates prolongs shelf life
- 99% gas recombination extends life
- Long life superior to general purpose batteries

**EXTREME TEMPERATURES**

- Wide ambient operating temperature
- Low temperature operation superior to FLA / Gel batteries

**RELIABLE AND SAFE**

- Valve Regulated Lead-Acid, AGM
- Maintenance-free, nonspillable, no-gassing
- Flame retardant (UL94:V0) ABS case and cover available

**CERTIFIED QUALITY**

Discover<sup>®</sup> manufacturing facilities are fully certified to ISO 9001/14001 and OSHA 18001 standards.

Designed in accordance with and published in compliance with applicable standards, including:

- IEC 60896-21/22
- BS EN 60254-1:2005
- UL, CE Health Safety Certified

**SHIPPING CLASSIFICATION**

- Classified as a nonspillable battery
- Without restriction for transport by Sea (IMDG amendment 27)
- Without restriction for transport by Air (IATA/ICAO provision 67)
- Without restriction for transport by Ground (STB, DOT-CFR-HMR49)



**MECHANICAL SPECIFICATIONS**

Length A (in/mm)	10.2	260
Width B (in/mm)	6.7	169
Height C (in/mm)	8.2	208
Total Height D (in/mm)	8.3	212
Weight (lbs/kgs)	49.5	22.5
Terminal *	F11M6	
Technology	AGM, VRLA	

**NOTE 1:** Dimensions have a ±2 mm (0.08 in) tolerance. Weights may vary.  
**NOTE 2:** Refer to [terminal guide](#) on website for torque values.

**ELECTRICAL SPECIFICATIONS**

Voltage (V)	12
Short Circuit (A) (20°C / 68°F)	1600
Self-Discharge (20°C / 68°F)	2-3% per month
Charge Temperature	Min: -10°C (14°F)   Max: 50°C (122°F)
Discharge Temperature	Min: -40°C (-40°F)   Max: 50°C (122°F)
Storage Temperature	-20°C (-4°F) to 60°C (140°F)

**NOTE 3:** Extra considerations must be given when designing systems for use at maximum temperatures.  
**NOTE 4:** Internal Resistance is approximate.

**PERFORMANCE SPECIFICATIONS**

Amp Hours (AH)			
1 HR	5 HR	10 HR	20 HR
47	64	75	78

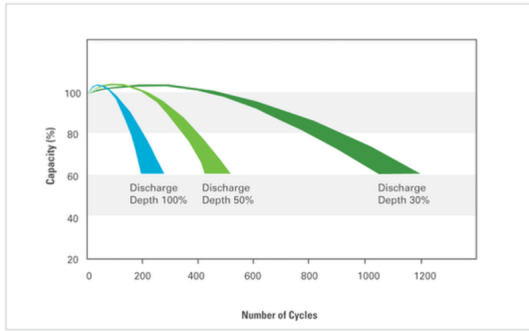
15MIN @ 1.67VPC; 1HR @ 1.60VPC, 5HR @ 1.75VPC; 10 HR @ 1.80VPC; 20 HR @ 1.80VPC. All at 30°C/86°F

Discharge Constant Current (Amperes) @ 25°C / 77°F										
VPC/Time	5 MIN	10 MIN	15 MIN	30 MIN	1 HR	3 HR	5 HR	10 HR	20 HR	
1.60 VPC	237.00	178.00	137.00	82.30	47.00	19.50	13.40	7.70	4.03	
1.65 VPC	223.00	168.00	132.00	79.80	45.40	19.20	13.20	7.67	4.01	
1.70 VPC	210.00	158.00	126.00	77.20	44.70	18.90	13.00	7.63	3.98	
1.75 VPC	196.00	149.00	121.00	74.50	44.10	18.60	12.80	7.60	3.95	
1.80 VPC	181.00	140.00	114.00	72.00	43.60	18.20	12.60	7.50	3.85	

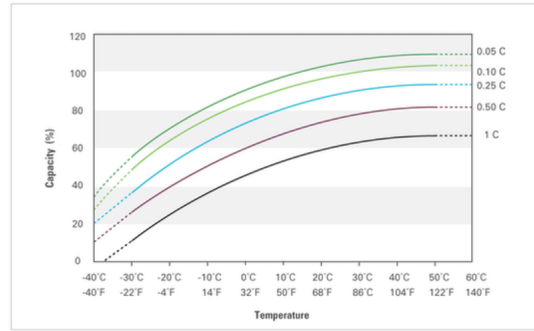
Discharge Constant Power (Watts) @ 25°C / 77°F										
VPC/Time	5 MIN	10 MIN	15 MIN	30 MIN	45 MIN	1 HR	2 HR	3 HR	5 HR	
1.60 VPC	415.00	325.00	255.00	153.00	120.00	97.70	54.90	40.00	27.40	
1.65 VPC	405.00	302.00	250.00	151.00	117.00	95.90	53.90	37.20	26.90	
1.70 VPC	377.00	292.00	246.00	148.00	115.00	94.10	52.90	36.50	26.40	
1.75 VPC	358.00	276.00	232.00	146.00	112.00	92.30	51.90	35.80	25.80	
1.80 VPC	343.00	263.00	220.00	143.00	109.00	90.50	51.00	35.10	25.30	



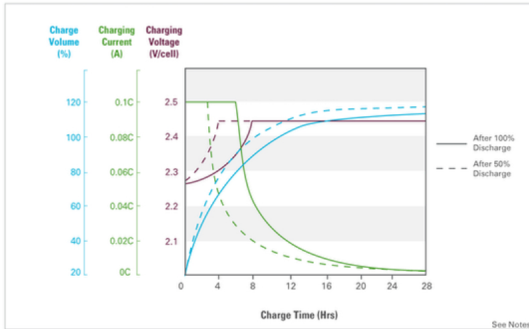
## Cycle Life Characteristics



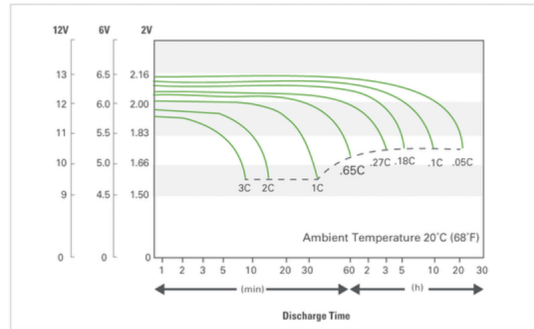
## Temperature Effects on Capacity



## Charge Characteristics



## Discharge Characteristics



## Self-Discharge Characteristics



- Self Discharge Characteristics**
- A** Charging is not necessary unless 100% of capacity is required.
  - B** Charging before use is necessary to recover full capacity.
  - C** Charge may fail to restore full capacity. Do not let battery reach this state.

## NOTES

1Due to self-discharge characteristics of lead acid battery technologies, batteries should be charged within 6 months of storage to ensure optimum performance, prevent sulphation and permanent capacity loss.

2Charge profile recommendations correspond to battery voltages at 25°C (77°F). For temperatures below, adjust +5mVPC/°C (+3mVPC/°F). Temperatures above, adjust -5mVPC/°C (-3mVPC/°F). Temperature compensated charging helps ensure optimum battery runtime and life performance.

3Charge until battery voltage reaches 2.45VPC and hold until current tapers down to 0.01C20 amps. Battery is fully charged under these conditions and charger should be disconnected or switched to "float" voltage. For standby / float use, a constant charge voltage of 2.25-2.30VPC is also acceptable. Hold until the battery seeks its own current level and maintain itself in a fully charged condition.

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