

# D12450D

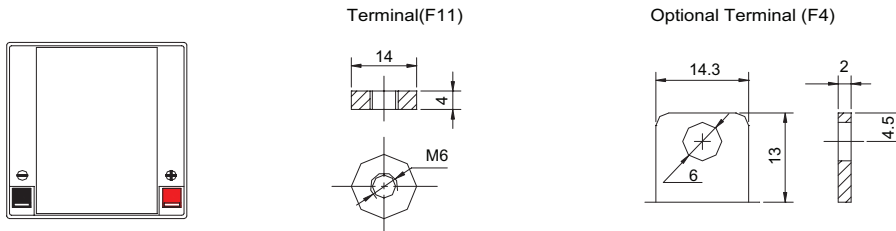
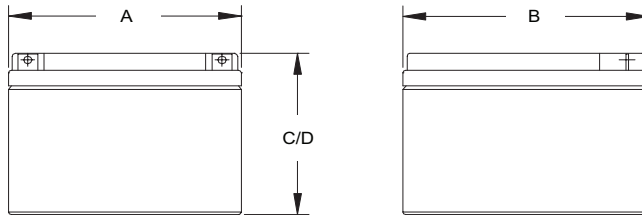
DATA SHEET



## Cyclic AGM Battery Block

Discover® AGM Series VRLA Industrial Batteries provide superior high integrity and reliability for commercial, industrial, and private applications. The maintenance-free Valve Regulated Lead Acid (VRLA) construction make Discover® Standard AGM Series Batteries the definitive choice for mobility and Home Medical Equipment (HME), solar and renewable energy, electronics and security, marine and RV, and utility applications.

### Mechanical Drawings



### Benefits and Features

- Tank formed lead-fin-calcium plates deliver consistent dependable performance and promote long life
- Maintenance-free technology
- 99% gas recombination for extended life in float applications
- Multiple terminal, configuration options and carrying handles available with most models
- Classified as a non-spillable battery and is not restricted for transportation by:
  - Air (IATA/ICAO provision 67)
  - Surface (DOT-CFR-HMR49)
  - Water (per IMDG amendment 27)
- Flame retardant ABS case and cover with UL94 V0 rating available
- UL924 recognized flame arresting low pressure safety vents
- 98% recyclable

### Mechanical Specifications

Length (A)	7.76 in	197 mm
Width (B)	6.5 in	165 mm
Height (C)	6.69 in	170 mm
Total Height (D)	6.69 in	170 mm
Weight	30.1 lbs	13.7 kgs
Terminal (Opt'l)	F11 (F4)	
Cells	6	
Electrolyte	AGM	

**TERMINAL TORQUE:** Please refer to our document, located in the Resources webpage ([www.discover-energy.com/resources/](http://www.discover-energy.com/resources/)).

**CAUTION:** Extra considerations must be given to depths of discharge, operating voltages and currents when designing systems for use at maximum temperatures.

### Electrical Specifications

Voltage	12 V
Internal Resistance	10 mΩ
Short Circuit 20°C (68°F)	-
20 HR	48 Ah
10 HR	45 Ah
5 HR	39 Ah
1 HR	28 Ah
15 MIN	-
Charge Temperature	-10°C (14°F) to 50°C (122°F)
Discharge Temperature	-20°C (-4°F) to 50°C (122°F)
Maximum Discharge*	-40°C (-40°F) to 60°C (140°F)

### Certifications and Standards

Designed in accordance with and published in compliance with applicable BCI, IEC and BS EN standards, including:

- IEC60896-21/22
- BS EN 60254-1:2005
- AS/NZS 4029.2:2000 BS EN 60254-1:2005 (MOD)

Discover® and its facilities and products are certified to multiple standards:

- ISO, UL, QS, and TUV standards
- EITS Germany
- Euro Bat classification for Environmental Stewardship Standards



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

End Point V/C	5 MIN	10 MIN	15 MIN	30 MIN	1 HR	3 HR	5 HR	10 HR	20 HR
1.60V	147	98.0	77.0	45.5	28.0	11.8	7.95	4.64	2.47
1.65V	136	93.0	74.1	43.7	27.2	11.6	7.91	4.61	2.46
1.70V	125	88.0	71.2	41.5	26.3	11.3	7.86	4.57	2.44
1.75V	114	83.0	67.1	39.6	25.4	11.0	7.80	4.54	2.42
1.80V	103	78.0	64.0	37.7	24.8	10.7	7.75	4.50	2.40

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

End Point V/C	5 MIN	10 MIN	15 MIN	30 MIN	45 MIN	1 HR	2 HR	3 HR	5 HR
1.60V	260	173	144	83.0	70.0	55.6	32.6	23.0	15.0
1.65V	246	167	140	81.8	68.7	54.8	32.1	22.8	14.8
1.70V	232	161	135	80.5	67.4	54.0	31.6	22.5	14.7
1.75V	218	154	131	79.3	66.1	53.1	31.0	22.3	14.5
1.80V	209	148	126	78.0	64.8	52.3	30.5	22.0	14.4

### Contact Us



Unit 5-13511 Crestwood Place,  
Richmond, BC, V6V 2E9, Canada  
Email: [info@discover-energy.com](mailto:info@discover-energy.com)  
[www.discover-energy.com](http://www.discover-energy.com)

### Charge and Discharge

Max Charge / Discharge Currents	Peak (5 seconds)	Peak (10 seconds)	Max Continuous
Charge	1c20	0.75c20	0.25c20
Discharge	15c20	10c20	0.5c20

**Float (Stand-By) Use:** Hold a constant voltage of 2.25vpc to 2.30vpc continuously.

When held at this voltage, the battery will seek its own current level and maintain itself in a fully charged condition.

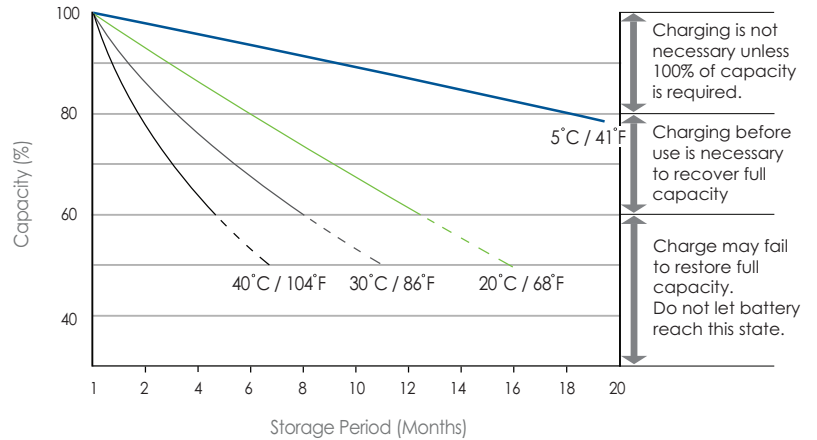
**Cyclic Use:** Limit initial currents to 0.25C20 amps. Charge until battery voltage reaches 2.40 to 2.45vpc. Hold at 2.40 to 2.45vpc until current drops to under 0.01C20 amps. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

**Temperature Coefficient:** Adjust charging voltage to +/- 0.005vpc (C, 0.003vpc/F) from 25°C (77°F).

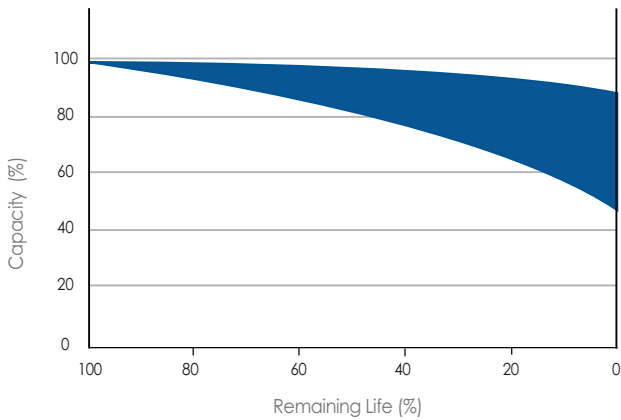
### Discharge Characteristics (20°C/68°F)



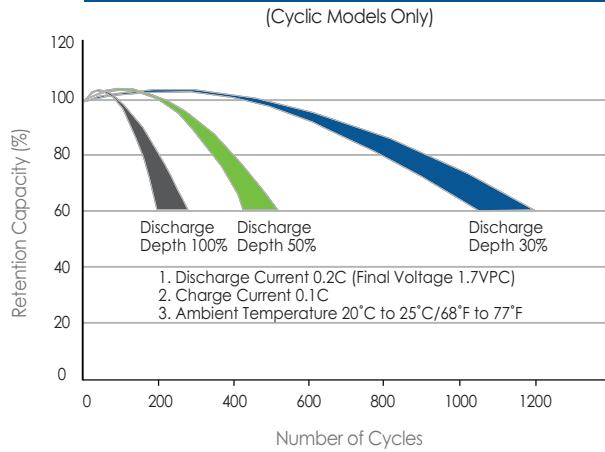
### Self-Discharge Characteristics



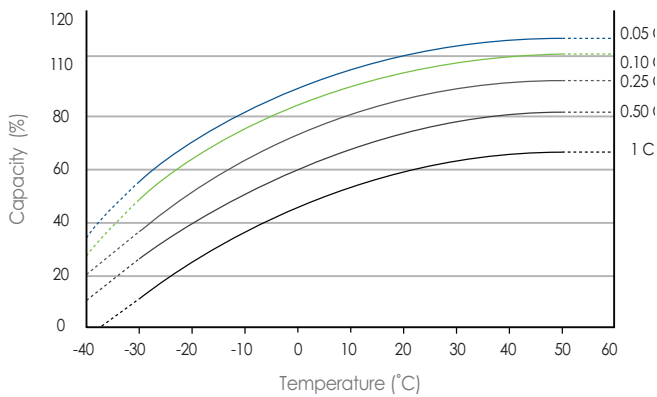
### Life Characteristics in Stand-By Use



### Life Characteristics in Cyclic Use



### Temperature Effects on Capacity



### Temperature Effects on Float Life

