Discover®
Innovative Battery Solutions

D12350D

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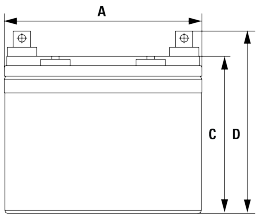
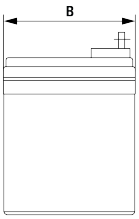
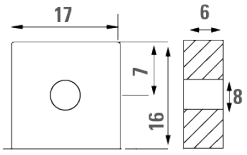
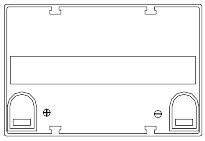
AGM Deep Cycle Cyclic Battery

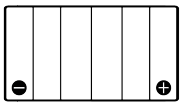
Discover® VRLA AGM Deep Cycle batteries deliver deep-cycle and cyclic discharging for a general range of stationary applications such as backup power, solar, and renewable energy storage. The batteries are maintenance-free, safe, easy to use and a start to reducing energy cost and grid dependence.











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® 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

Industry Reference		
Length A (in/mm)	7.7	195
Width B (in/mm)	5.1	130
Height C (in/mm)	6.1	155
Total Height D (in/mm)	7.1	180
Weight (lbs/kgs)	22.7	10.3
Terminal *	F7	
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
Internal Resistance (m?)	10.5
Short Circuit (A) (20°C / 68°F)	1100
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.

ISO 14001
DIN ISO 9001/QS9000

PERFORMANCE SPECIFICATIONS

Amp Hours (AH)			
1 HR	5 HR	10 HR	20 HR
20	29	33	35

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

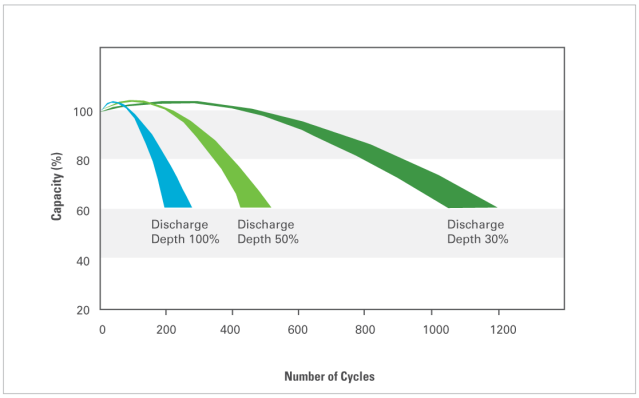
PERFORMANCE SPECIFICATIONS

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	114.00	79.20	61.50	36.30	20.00	8.61	6.01	3.43	1.83
1.65 VPC	108.00	75.20	58.40	34.50	19.00	8.45	5.90	3.41	1.82
1.70 VPC	101.00	70.70	54.90	32.40	18.10	8.30	5.81	3.38	1.80
1.75 VPC	94.00	65.80	51.10	30.80	17.20	8.15	5.70	3.35	1.78
1.80 VPC	86.50	60.50	47.00	28.30	16.30	8.01	5.60	3.30	1.75

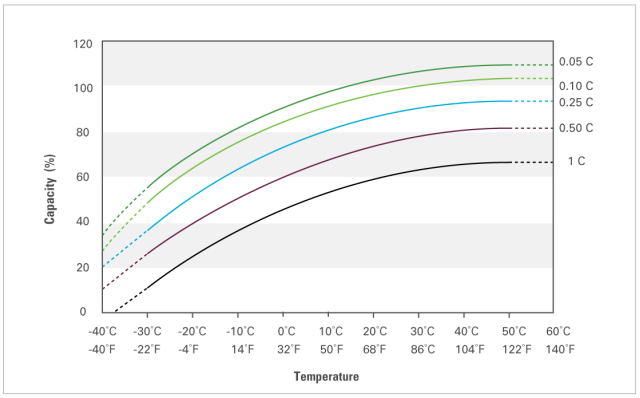
Discharge Constant Power (Watts) @ 25°C / 77°F									
VPC/Time	5 MIN	10 MIN	15 MIN	30 MIN	1 HR	3 HR	5 HR	10 HR	20 HR
1.60 VPC	215.00	150.00	112.00	71.80	43.70	17.70	11.70		
1.65 VPC	200.00	142.00	108.00	69.60	43.00	17.50	11.60		
1.70 VPC	185.00	133.00	103.00	67.50	42.30	17.30	11.50		
1.75 VPC	170.00	125.00	99.20	65.30	41.50	17.00	11.40		
1.80 VPC	160.00	116.00	95.00	63.00	40.80	16.80	11.40		

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

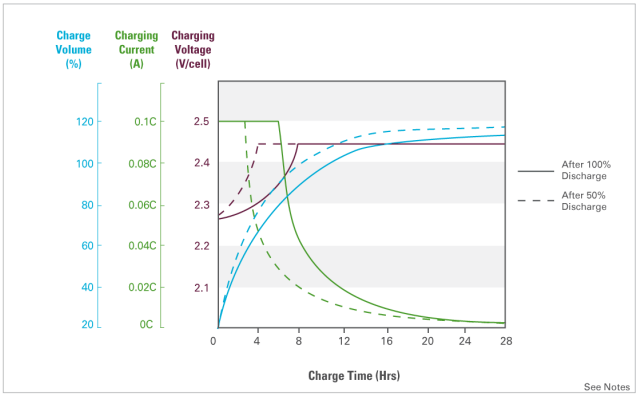
Cycle Life Characteristics



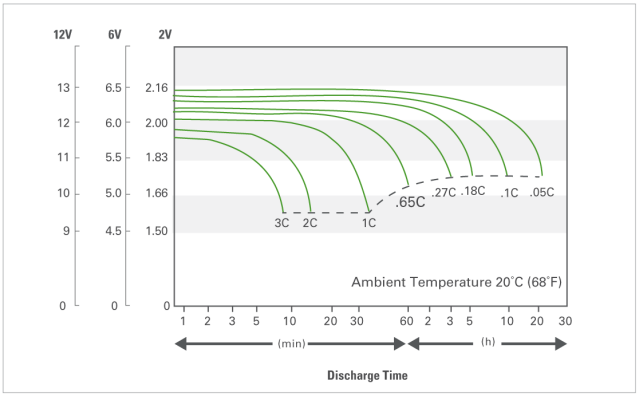
Temperature Effects on Capacity



Charge Characteristics



Discharge Characteristics



1. Due 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.
2. Charge 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.
3. Charge 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.