

# DC50-12A DATA SHEET



## DC50-12A

**50AH@20HR**

**12-Volt**

**DEEP CYCLE**

**Maintenance-Free  
Sealed AGM Battery**

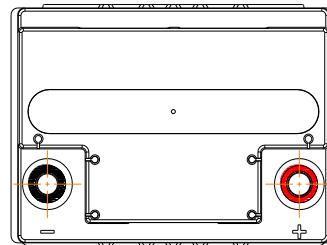
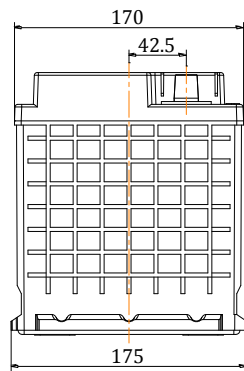
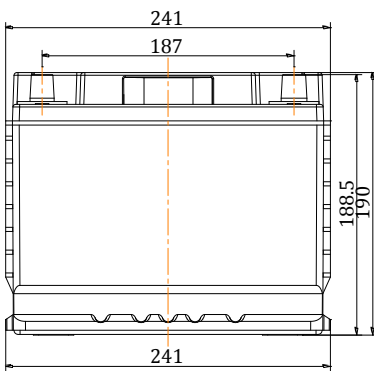
Nominal Specifications			
Battery Model	DC50-12A	Rated Capacity	50AH/20HR
Mechanical Specifications			
Group Size	47		
Overall Height (H)	190±2mm	7.48"	
Container Height (h)	190±2mm	7.48"	
Length	241±2mm	9.49"	
Width	175±2mm	6.89"	
Weight	Approx.18.5kg	40.79lbs.	
Terminal Type	AP- Auto Post Terminal		
Terminal Torque	5.6-7.9 N.m		
Container Material	ABS: Standard (UL 94-HB)		

Electrical Specifications	
C100	56AH
C20	50AH
C10	45AH
C5	41AH
CCA	440A
CA or MCA	575A
HPCA	690A
Max. Discharge Current	750A (5s)
Internal Resistance	5.0mΩ
Reserve Capacity	
Reserve @25 AMPS	85 Minutes
Reserve @75 AMPS	17 Minutes

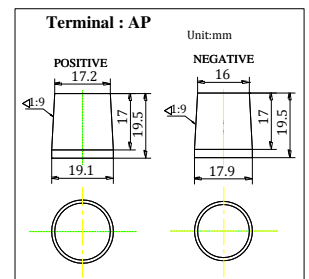
Temperature Range Specifications	
Operating Temperature Range	Discharge : -15°C ~+ 50°C (5°F ~122°F)
	Charge: -15°C ~ +40°C (5°F ~104°F)
	Storage: -15°C ~ +40°C (5°F ~104°F)
Recommended Operating Temperature Range	+74°F (23°C) to +80°F (27°C)
Self-Discharge	Less than 10% after 90 days, can be stored up to 6 months at 25°C (77°F); Fully recharging is required before usage, For higher temperatures the time interval will be shorter.

Charge Voltages		
Float Charging Voltage	13.5 to 13.8 VDC/unit@ (25°C)	
Equalization and Cycle Service Charging Voltage	14.3 to 14.5 VDC/unit @ (25°C)	
Maximum Charge Current(A)	12.5A	
Charging Temperature Compensation	Cycle use	-4mV/cell/°C
	Float use	-3mV/cell/°C

### BATTERY & TERMINAL DIMENSIONS (All units shown in mm)



Battery bank spacing required 12.5mm (1/2"inch) minimum



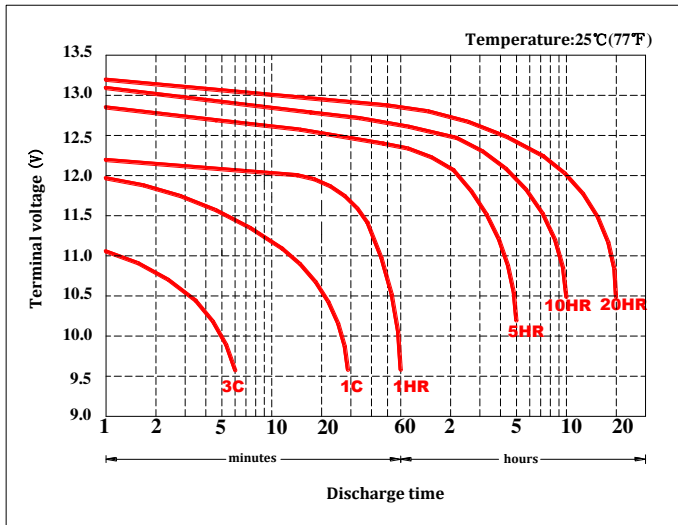
Constant Current Discharge Rating Amperes @ 77°F (25°C)											
Cut off voltage V/cell	15M	30M	45M	1H	2H	3H	5H	8H	10H	12H	20H
1.75V	80	55	38	27.8	17.5	11.6	8.0	5.3	4.5	3.88	2.50

**Note** The above data are average values, and can be obtained with 3 charge/discharge cycles. These are not minimum values.

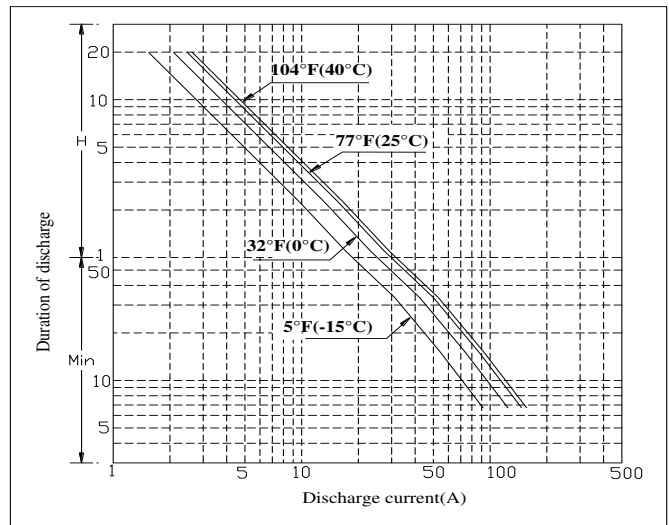


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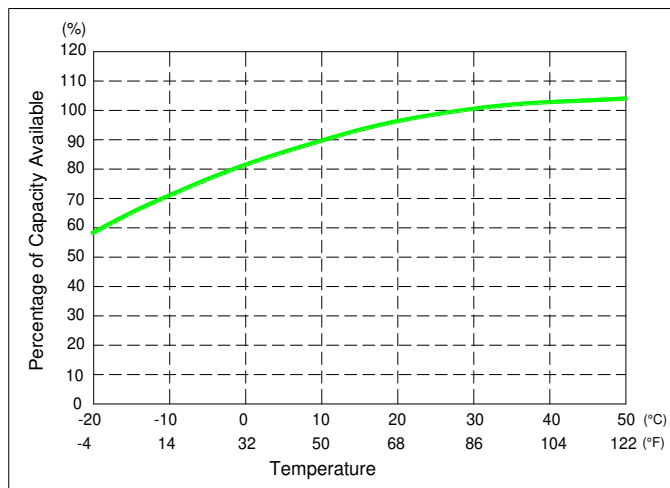
## Terminal Voltage(V) and Discharge Time



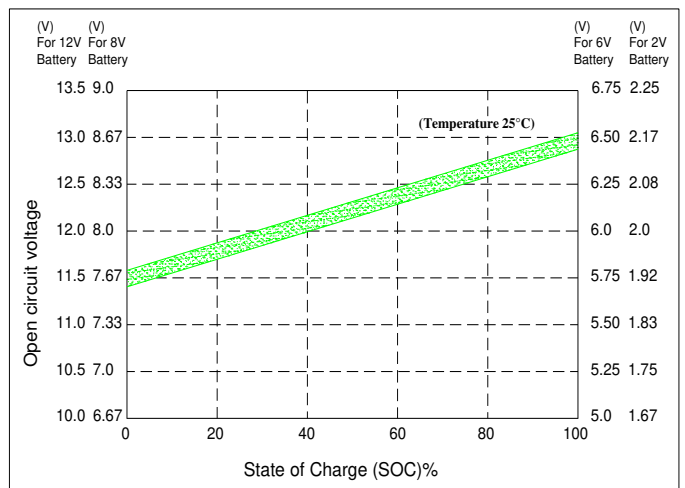
## Duration of discharge vs. Discharge current



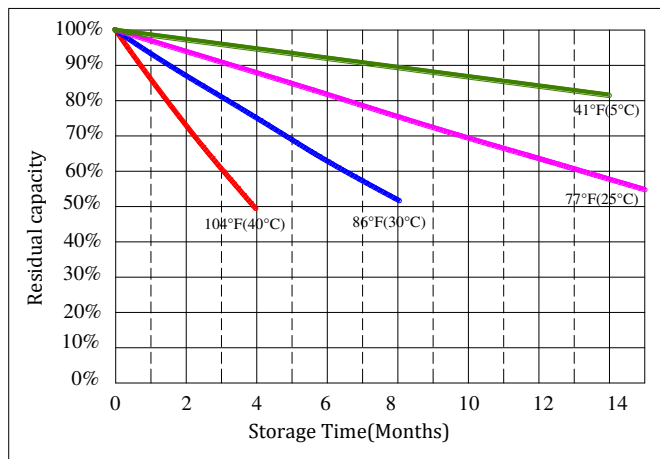
## Percent Capacity vs. Temperature



## State of Charge(SOC) vs Open Circuit Voltage(OCV)



## Capacity Retention Characteristic



## Cycle Life vs. Depth of Discharge(DOD)

