



## DC90-12

**90AH@20HR**

**12-Volt**

**DEEP CYCLE**

**Maintenance-Free  
Sealed AGM Battery**

### Nominal Specifications

<b>Battery Model</b>	<b>DC90-12</b>	<b>Rated Capacity</b>	<b>90AH/20HR</b>
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### Mechanical Specifications

<b>Group Size</b>	27		
<b>Overall Height (H)</b>	215±2mm	8.46"	
<b>Container Height (h)</b>	211±2mm	8.31"	
<b>Length</b>	307±2mm	12.09"	
<b>Width</b>	169±2mm	6.65"	
<b>Weight</b>	Approx.28.8kg	63.49lbs.	
<b>Terminal Type</b>	M6- Button Terminal		
<b>Terminal Torque</b>	5.6-7.9 N.m		
<b>Container Material</b>	ABS: Standard (UL 94-HB)		

### Temperature Range Specifications

<b>Operating Temperature Range</b>	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)
<b>Recommended Operating Temperature Range</b>	+74°F (23°C) to +80°F (27°C)
<b>Self-Discharge</b>	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.

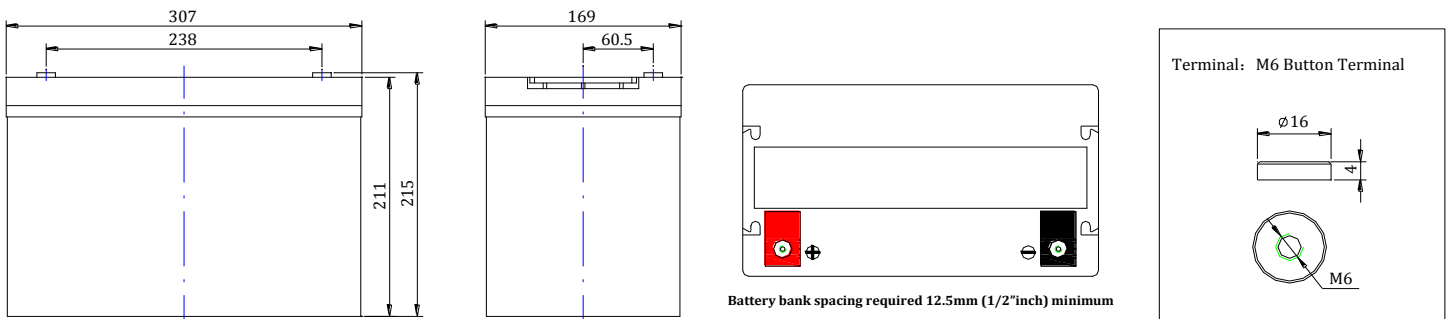
### Electrical Specifications

<b>C100</b>	99AH
<b>C20</b>	90AH
<b>C10</b>	81AH
<b>C5</b>	74 AH
<b>CCA</b>	530A
<b>CA or MCA</b>	630A
<b>HPCA</b>	750A
<b>Max. Discharge Current</b>	1000A (5s)
<b>Internal Resistance</b>	4.2mΩ
<b>Reserve Capacity</b>	
<b>Reserve @25 AMPS</b>	140 Minutes
<b>Reserve @75 AMPS</b>	38 Minutes

### Charge Voltages

<b>Float Charging Voltage</b>	13.5 to 13.8 VDC/unit@ (25°C)	
<b>Equalization and Cycle Service Charging Voltage</b>	14.3 to 14.5 VDC/unit @(25°C)	
<b>Maximum Charge Current(A)</b>	22.5A	
<b>Charging Temperature Compensation</b>	Cycle use	-4mV/cell/°C
	Float use	-3mV/cell/°C

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



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

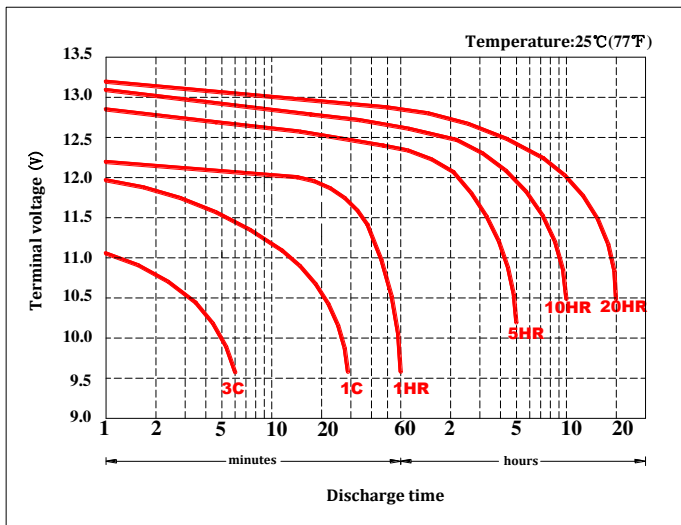
<b>Cut off voltage V/cell</b>	<b>15M</b>	<b>30M</b>	<b>45M</b>	<b>1H</b>	<b>2H</b>	<b>3H</b>	<b>5H</b>	<b>8H</b>	<b>10H</b>	<b>12H</b>	<b>20H</b>
<b>1.75V</b>	<b>130</b>	<b>84</b>	<b>62</b>	<b>51.2</b>	<b>27.1</b>	<b>20.4</b>	<b>14.3</b>	<b>9.8</b>	<b>8.10</b>	<b>6.90</b>	<b>4.50</b>

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

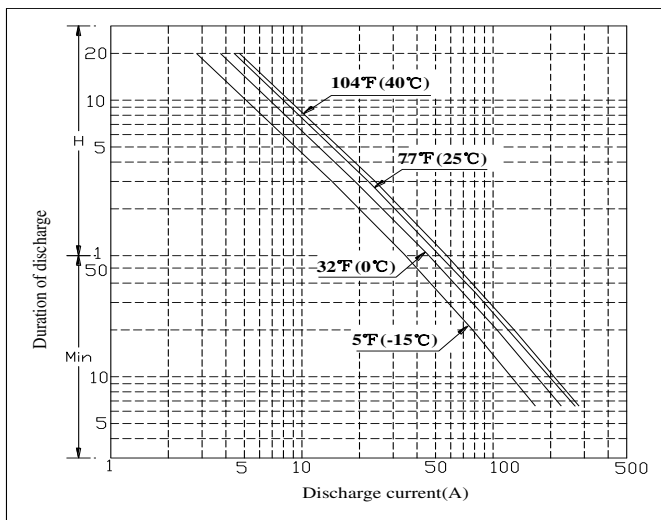


# DC90-12 DATA SHEET

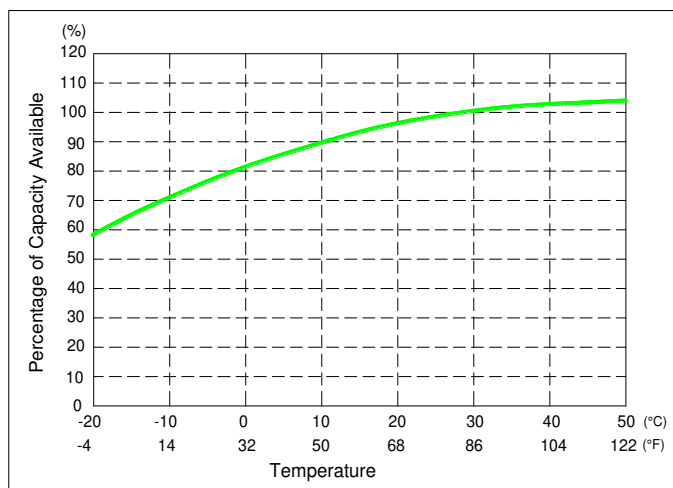
## Terminal Voltage(V) and Discharge Time



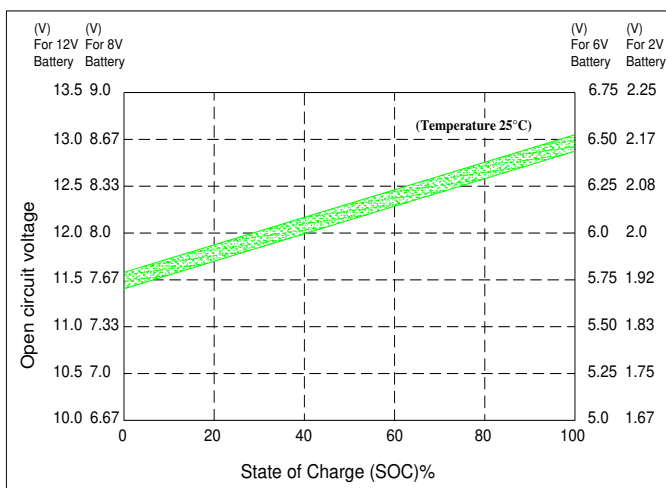
## Duration of discharge vs. Discharge current



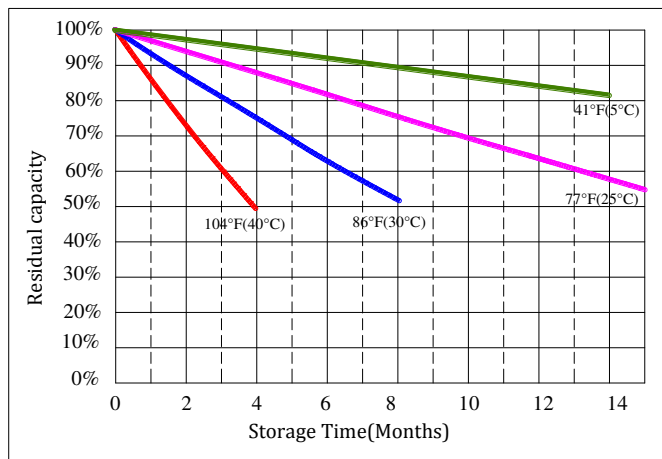
## Percent Capacity vs. Temperature



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



## Capacity Retention Characteristic



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

