



AGM BATTERY ND Series

NM 12-50D (12V 50AH)



The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

Battery Construction

COMPONENT	POSITIVE PLATE	NEGATIVE PLATE	CONTAINER	COVER	SAFETY VALVE	TERMINAL	SEPARATOR	ELECTROLYTE
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper/Plug	Fiberglass	Sulfuric acid

Performance Characteristics

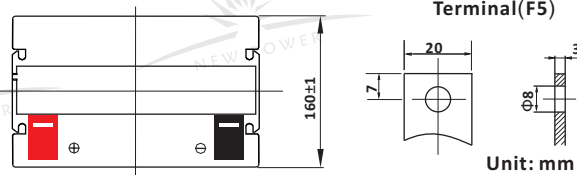
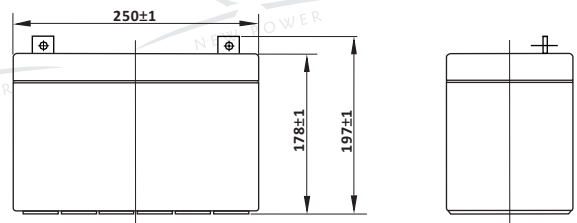
- **Nominal Voltage** 12V
- **Number of Cell** 6
- **Nominal Capacity (77°F /25°C)**
 - 20 Hour rate (2.7A, 10.8V) 54Ah
 - 10 Hour rate (5A, 10.8V) 50Ah
 - 5 Hour rate (8.8A, 10.5V) 44Ah
 - 1 Hour rate (31A, 9.6V) 31Ah
- **Internal Resistance**
 - Fully charged battery (77°F /25°C) 9mΩ
- **Capacity affected by temperature (10 hour rate)**
 - 104°F (40°C) 102% 32°F (10°C) 85%
 - 77°F (25°C) 100% 5°F (-15°C) 65%
- **Self-Discharge 68°F (20°C)**
 - Capacity after 3 month storage 90%
 - Capacity after 6 month storage 80%
 - Capacity after 12 month storage 60%
- **Max. discharge current 77°F /25°C** 650A(5S)
- **Charge Methods: constant voltage charge 77°F /25°C**
 - Cycle use 14.4 ~ 14.7V
 - Max. Current 12.5A
 - Standby use 13.6 ~ 13.8V

General Features

- **Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.**
- **Not restricted for air transport-complies with IATA/ICAO Special Provision A67.**
- **A recognized component of CE and UL**
- **Computer designed lead, calcium tin alloy grid for high power density.**
- **Long service life, float or cyclic applications.**
- **Maintenance-free operation.**
- **Low self discharge**
- **Design life 10 years**

Dimensions and Weight

Type	Length	Width	Height	Total Height	Approx. Weight
SI Units	250mm	160mm	178mm	197mm	15.8Kg
English Units	9.84inch	6.30inch	7.01inch	7.76inch	34.8lbs



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

V/cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60	160	115	87.5	56.0	31.0	13.7	9.25	5.25	2.85
1.65	151	109	83.5	54.1	30.1	13.4	9.15	5.20	2.85
1.70	142	103	79.5	52.2	29.2	13.0	9.00	5.15	2.80
1.75	133	96.5	75.0	50.3	28.2	12.6	8.80	5.10	2.75
1.80	123	90.0	70.0	48.2	27.1	12.1	8.50	5.00	2.70

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

V/cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60	290	217	176	101	77.6	62.7	37.4	26.5	17.1
1.65	273	205	161	99.2	76.4	61.2	36.6	25.9	16.9
1.70	256	194	154	97.4	74.9	59.9	35.9	25.4	16.6
1.75	238	182	147	95.6	73.3	58.5	34.9	24.8	16.4
1.80	227	169	140	94.6	71.3	57.0	34.0	24.3	16.3

(Note: The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.)



