

LEAD ACID (AGM) BATTERY

MR8-12

Specification

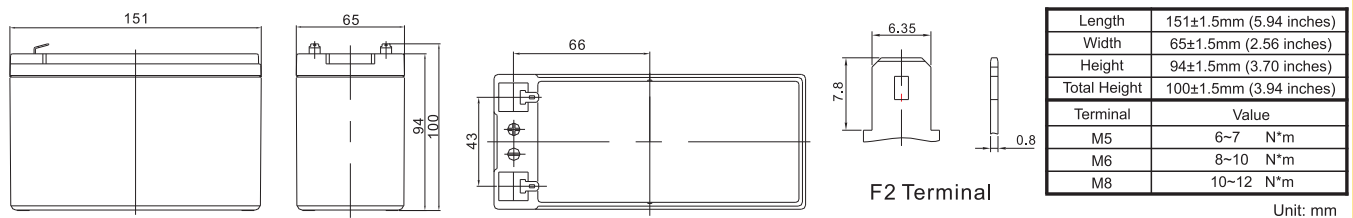


MR series is a general purpose battery with 6~8 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the MR series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.



Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	8Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 2.08 Kg (Tolerance ±5.0%)
Internal Resistance	≤30 mΩ (Full Charge Condition @25°C)
Terminal	Default F2,F1 Optional
Max. Discharge Current	80A (5 sec)
Short Circuit Current	375A
Design Life	6~8 years
Max. Charging Current	2.4 A
Reference Capacity	C ₃ 6.00Ah C ₅ 6.80Ah C ₁₀ 7.48Ah C ₂₀ 8.00Ah
Standby Use Voltage	13.7 V~13.9 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	Marvel Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Dimensions



Constant Current Discharge Characteristics : A (25°C)

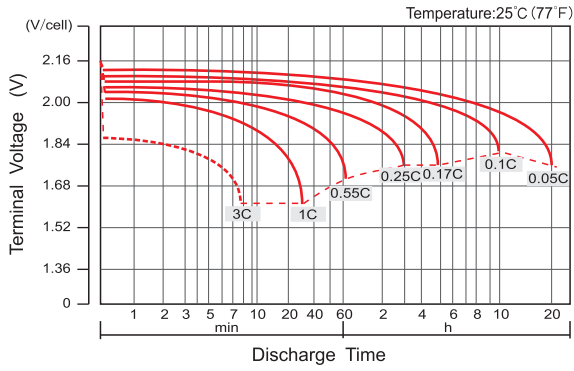
F.V./Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	30.35	21.45	15.51	8.907	4.888	3.001	2.256	1.821	1.509	0.971	0.789	0.417
1.65V	28.23	20.27	14.83	8.551	4.720	2.905	2.186	1.772	1.470	0.960	0.779	0.410
1.70V	25.47	18.66	13.89	8.173	4.567	2.810	2.127	1.724	1.432	0.946	0.767	0.405
1.75V	22.82	17.08	12.92	7.812	4.400	2.711	2.063	1.680	1.396	0.932	0.757	0.400
1.80V	20.03	15.46	11.93	7.466	4.231	2.614	2.000	1.632	1.360	0.917	0.748	0.396
1.85V	15.90	12.64	9.901	6.430	3.795	2.395	1.849	1.516	1.268	0.860	0.704	0.376

Constant Power Discharge Characteristics : W/Cell (25°C)

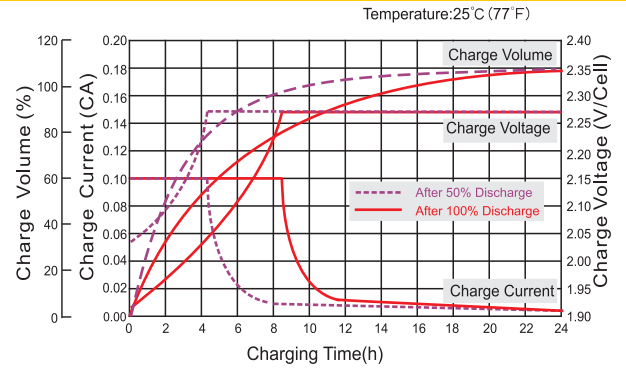
F.V./Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	50.32	36.46	27.11	16.18	9.185	5.688	4.309	3.497	2.909	1.897	1.551	0.820
1.65V	47.33	35.12	26.30	15.69	8.921	5.533	4.193	3.415	2.844	1.879	1.534	0.808
1.70V	43.68	32.93	25.00	15.15	8.685	5.380	4.098	3.334	2.780	1.855	1.513	0.800
1.75V	40.00	30.68	23.61	14.63	8.418	5.216	3.992	3.261	2.719	1.833	1.495	0.791
1.80V	35.87	28.26	22.10	14.12	8.143	5.055	3.884	3.179	2.658	1.806	1.477	0.784
1.85V	29.07	23.51	18.60	12.29	7.348	4.657	3.607	2.966	2.487	1.699	1.393	0.745

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C₂₀ should reach 95% after the first cycle and 100% after the third cycle.

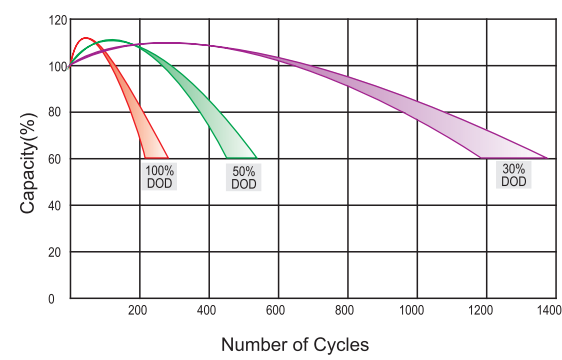
Discharge Characteristics Curve



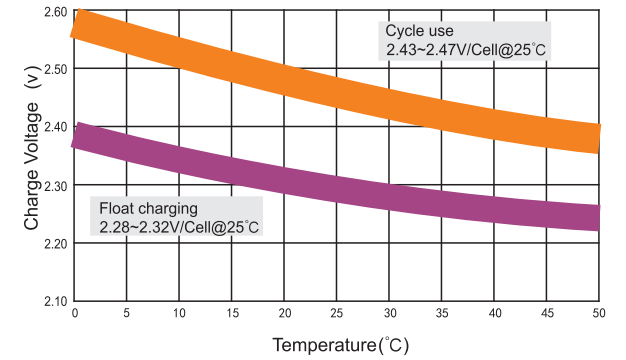
Charge Characteristic Curve For Standby Use(IU)



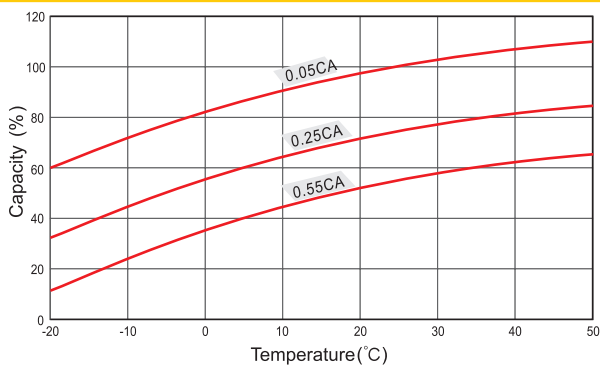
Cycle Life In Relation To Depth Of Discharge



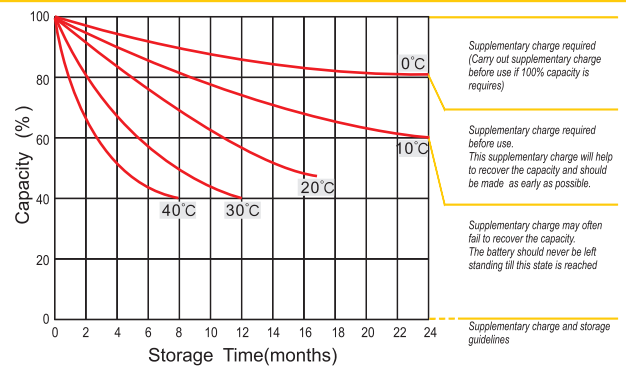
Relationship Between Charging Voltage And Temperature



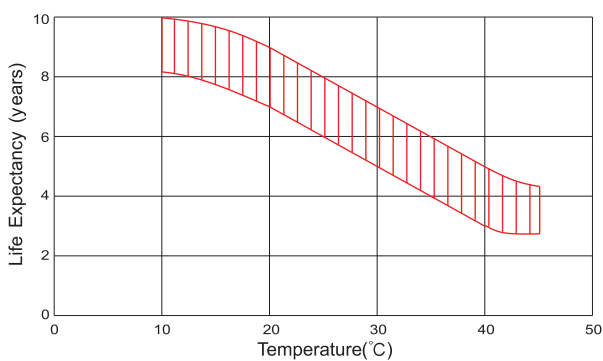
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

