

General features for MPE Series (Deep-cycle) battery

- * Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- * Computer designed lead, calcium tin alloy grid for high power density.
- * UL-recognized component.
- * Long service life, float or cyclic applications.
- * Maintenance-free operation.
- * Low self discharge.
- * Case and cover are available in both standard and flame retardant ABS (Standard : UL94V0).



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MPE8-180 (8V180Ah)

Specifications

Nominal Voltage		8V
Rated capacity (10 hour rate)		180 Ah
Dimensions (±2mm)	Total Height	298mm (11.73inches)
	Height	295 mm (11.61 inches)
	Length	260 mm (10.2 inches)
	Width	180 mm (7.09 inches)
Weight Approx (±3%)		35.0 Kg (77.2 lbs)

Battery picture and construction

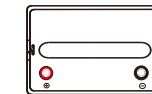
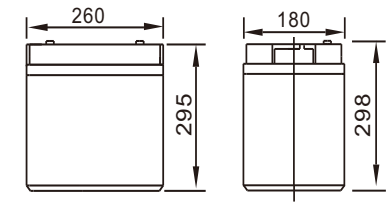
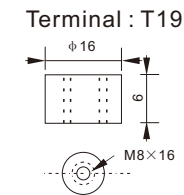


Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fiberglass	Rubber	Copper

Outer dimension and terminal

Outer dimensions(±2mm)
Unit:mm



Characteristics

Capacity 25°C(77°F)	10 hour rate(18.0 A,7.2V)	180 Ah
	5 hour rate(28.8A,7.0V)	144Ah
	1 hour rate(108 A,6.4V)	108 Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx.3 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage	91%
	Capacity after 6 month storage	82%
	Capacity after 12 month storage	64%
Terminal type		T19
Max. Discharge current 25°C/(77°F)		1400A (5Seconds)
Nominal operating temperature		25°C ±5°C(77°F ±9°F)
Operating Temperature Range	Discharge	-15°C ~50°C (5°F ~122°F)
	Charge	-10°C ~50°C (14°F ~122°F)
	Storage	-20°C ~50°C (-4°F ~122°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use	Initial Charging Current less than 45A Voltage 9.67-10.00V Temperature compensation:-20mV/°C
	Standby use	Voltage 9.00-9.20V Temperature compensation:-12mV/°C

Constant current discharge (25°C , 77 °F)

Unit:A

Constant power discharge (25°C , 77 °F)

Unit:watts

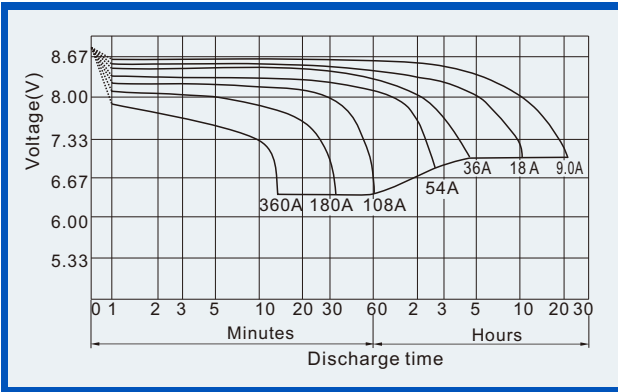
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time	Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)												
	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h	
6.40V	A	577	380	306	205	108	63	46	36	30	21	18.9	10.2
	W	3958	2705	2190	1473	776	461	340	270	225	161	146	79
6.80V	A	558	343	288	196	102	60	45	35	29	20.5	18.5	9.9
	W	3978	2558	2153	1463	763	462	345	272	226	160	145	77
7.00V	A	540	307	252	184	98	59	44	35	29	20.3	18.2	9.9
	W	3928	2320	1918	1410	755	454	341	270	225	159	143	77
7.20V	A	521	289	234	169	95	57	43	34	28	19.8	18.0	9.7
	W	3898	2220	1800	1310	730	445	335	268	221	156	143	77
7.40V	A	503	271	216	151	92	56	41	33	27	19.3	17.1	9.2
	W	3800	2093	1680	1176	718	438	326	262	218	154	138	74

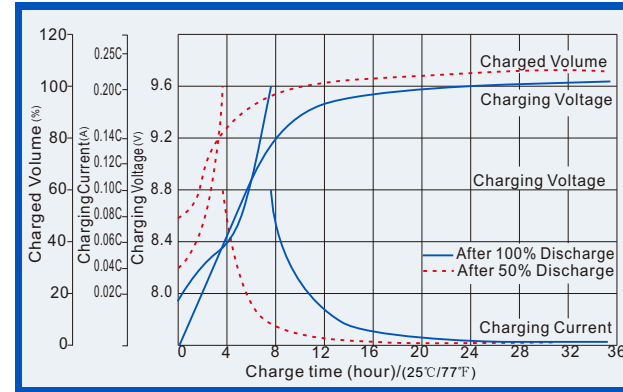
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

Deep Cycle Battery (VRLA Battery, AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

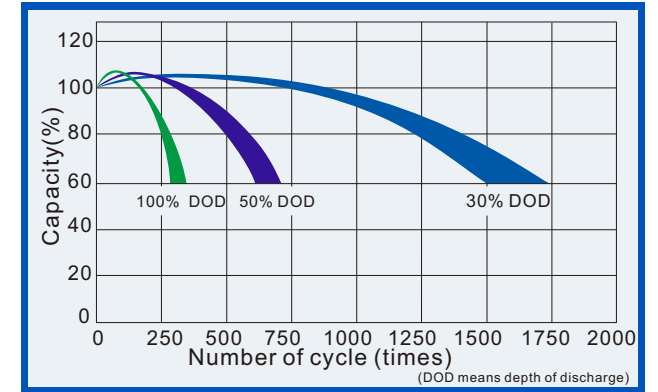
Discharge characteristics (25°C, 77°F)



Charge characteristics (25°C, 77°F)



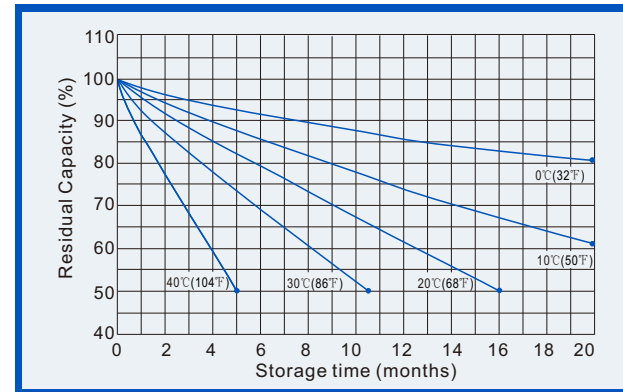
Life characteristics of Cyclic Use (25°C, 77°F)



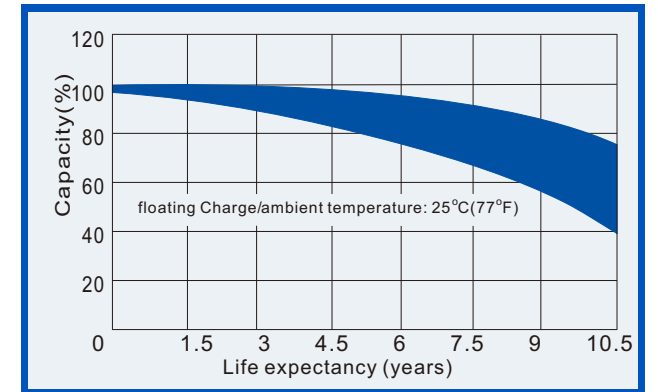
Effect of Temperature on capacity



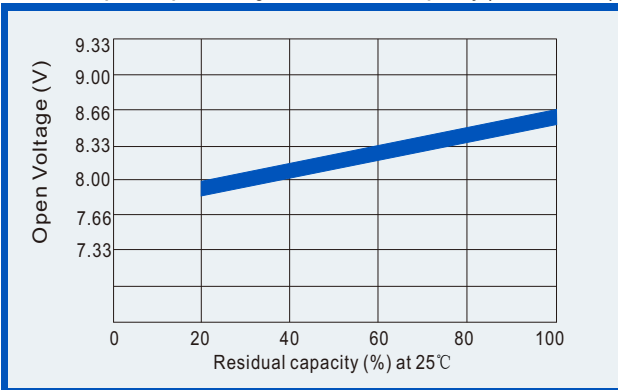
Self-discharge characteristics



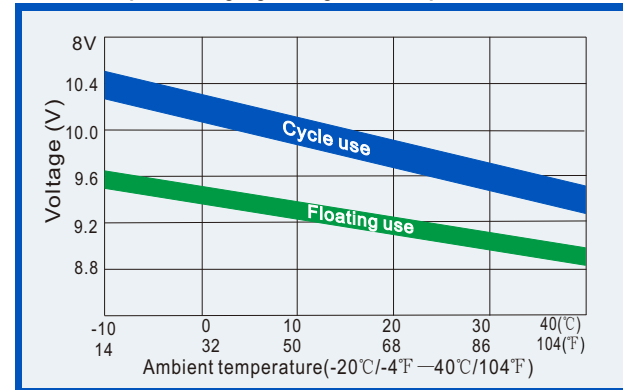
Life Characteristics of standby use (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

