



SEALED MAINTENANCE FREE VRLA BATTERY EM12VB - 12V12Ah

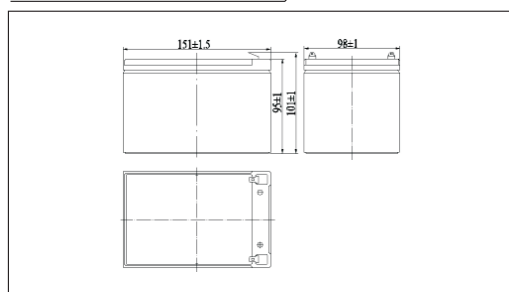
Applications



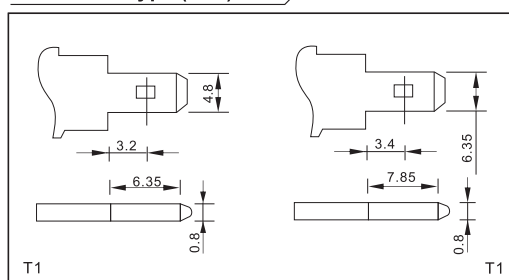
● Specifications

Nominal Voltage		12V
Rated capacity (20 hour rate)		12Ah
Dimensions	Length	151±1.5mm(5.94inch)
	Width	98±1mm(3.86inch)
	Height	95±1mm(3.74inch)
	Total Height	101±1mm(3.98inch)
Approx. Weight		3.65kg(8.05lbs)±4%

● Outer dimensions (mm)



● Terminal Type (mm)



● Characteristics

Capacity (25 C)	20HR(10.5V)	12Ah
	10HR(10.5V)	11.7Ah
	1HR(9.60V)	8Ah
Terminal type		T2/T1
Internal resistance (Fully charged, 25 C)		Approx. 16m Ω
Capacity affected by temperature (20HR)	40 C	102%
	25 C	100%
	0 C	85%
	-15 C	65%
Self-discharge (25 C)	3month	Remaining Capacity:91%
	6month	Remaining Capacity:82%
	12month	Remaining Capacity:65%
Nominal operating temperature		25°C ±3°C(77°F ±5°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)
Float charging voltage(25 C)		13.50 to 13.80V Temperature compensation: -18mV/°C
Cyclic charging voltage(25 C)		14.50 to 15.00V Temperature compensation: -30mV/°C
Maximum charging current		3.6A
Maximum discharge current		180A(5 sec.)
Designed floating life(20 C)		5 years

Unique Features

- ✓ Longer shelf life
- ✓ No water topping up throughout the life
- ✓ Good cycling performance
- ✓ AGM Technology for efficient Gas Recombination

Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Sulfuric acid	Rubber	Copper

Constant Current Discharge Characteristics Unit:A(25°C,77°F)

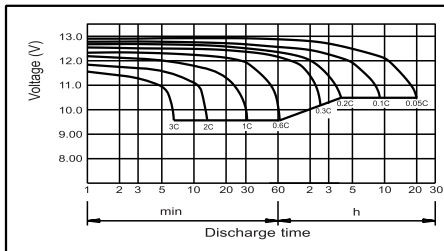
F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	@C10	@20h
9.60V	47.8	30.3	23.6	13.3	8.19	4.48	3.10	2.56	2.18	1.18	0.63
9.90V	46.3	29.3	23.1	13.0	8.06	4.45	3.08	2.55	2.17	1.18	0.63
10.2V	44.4	28.1	22.2	12.6	7.86	4.41	3.06	2.53	2.15	1.17	0.63
10.5V	42.5	26.9	21.5	12.3	7.70	4.35	3.04	2.51	2.14	1.17	0.63
10.8V	40.1	25.4	20.3	11.9	7.47	4.24	2.95	2.44	2.07	1.14	0.61

Constant Power Discharge Characteristics Unit:W(25°C,77°F)

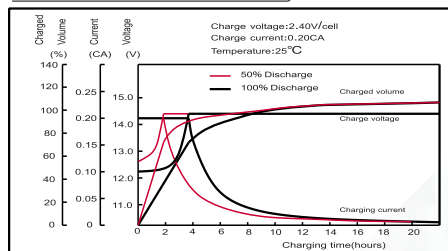
F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	@C10	@C20
9.60V	533	341	269	153	94.8	52.4	36.8	30.5	26.0	14.2	7.61
9.90V	517	331	263	150	93.4	52.1	36.6	30.3	25.9	14.1	7.58
10.2V	496	317	253	145	91.0	51.6	36.3	30.1	25.7	14.1	7.55
10.5V	474	304	245	141	89.2	50.9	36.1	29.9	25.5	14.0	7.50
10.8V	448	287	232	136	86.5	49.6	35.0	29.0	24.8	13.7	7..35

Note: The above characteristics data can be obtained within three charge or discharge cycles.

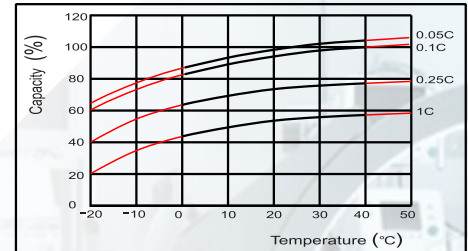
Discharge characteristics(25°C)



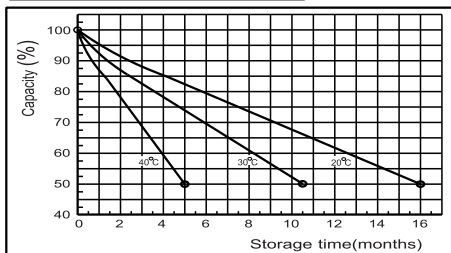
Charging characteristics (25°C)



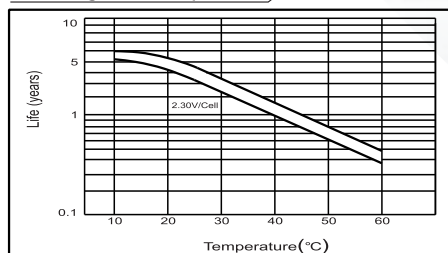
Effect of temperature on capacity



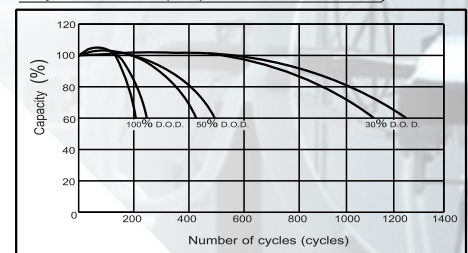
Self-discharge characteristics



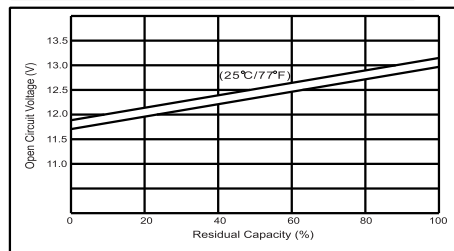
Floating life on temperature



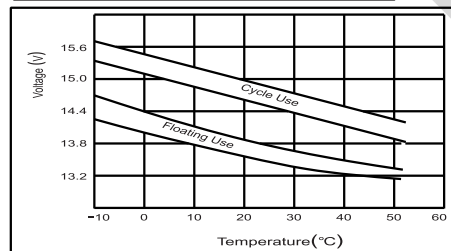
Cycle life on D.O.D(25°C)



The relationship for OCV and Capacity (25°C)



The relationship for Charging voltage and Temperature



Certification IEC CQC TLC ISO 9001 ISO 14001 ISO 45001