

US2-450(2V450AH)

Application

- Data Center
- Telecommunication center room
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency light
- Railway signal
- Aircraft signal
- Alarm and security system
- Electronic apparatus and equipment

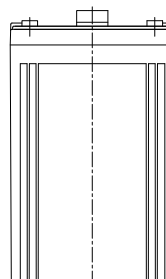
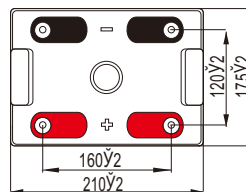


Features

- General purpose: 7~10 years design life
- VRLA Battery, maintenance-free
- Low self-discharge rate
- Silver-coated copper terminals
- PbCaSn alloy for plate grids: less gassing, less self-discharge
- ABS container, Flame retardant UL94-V0

Layout

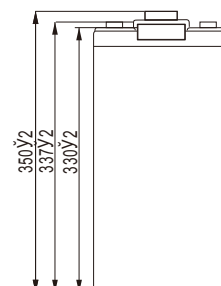
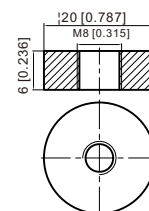
Unit: mm



Terminal

T11 Terminal

Unit: mm [inches]

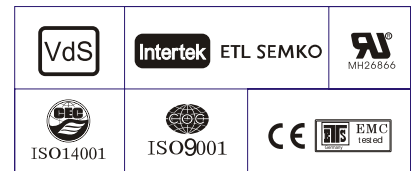


General Purpose AGM Battery-US Series

US2-450(2V450AH)

Specification

Nominal Voltage	12V	
Rated Capacity (Ah)	472.0 AH/23.6A	(20hr, 1.80V/cell, 25°C/77°F)
	450.0 AH/45.0A	(10hr, 1.80V/cell, 25°C/77°F)
	391.5 AH/78.3A	(5hr, 1.75V/cell, 25°C/77°F)
	340.2 AH/113.4A	(3hr, 1.75V/cell, 25°C/77°F)
	273.2 AH/273.2A	(1hr, 1.60V/cell, 25°C/77°F)
Dimension	Length	210±3mm (8.27 inches)
	Width	175±2mm (6.89 inches)
	Container Height	330±3mm (12.99 inches)
	Total Height (with Terminal)	350±3mm (13.78 inches)
Approx Weight	Approx 27.0 kg (59.5lbs)	
Terminal	T11	
Container Material	ABS	
Max. Discharge Current	3600A (5s)	
Internal Resistance	Approx 0.65mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C
	Charge	0 ~ 40°C
	Storage	-15 ~ 40°C
Capacity affected by Temperature	40°C	106%
	25°C	100%
	0°C	86%
Self Discharge	US series batteries can be stored up to 6 months at 25°C and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Performance - 25 °C

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

F.V/Time	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	463.5	417.2	345.1	273.6	224.6	134.9	104.3	85.6	72.9	63.7	51.3	43.0	22.8
1.80V/cell	526.5	464.4	370.2	287.9	238.5	142.3	109.4	89.4	76.0	66.5	53.3	45.0	23.6
1.75V/cell	578.4	500.6	392.1	302.7	248.9	148.2	113.4	92.5	78.3	68.1	54.3	45.5	23.9
1.70V/cell	617.4	535.3	411.4	314.1	257.6	152.6	116.4	94.5	79.7	69.3	55.1	45.9	24.1
1.65V/cell	650.8	561.8	431.5	327.8	266.9	157.1	119.0	96.5	81.4	70.5	55.9	46.5	24.4
1.60V/cell	682.3	582.6	446.4	336.6	273.2	160.9	121.5	97.9	82.5	71.5	56.6	47.0	24.7

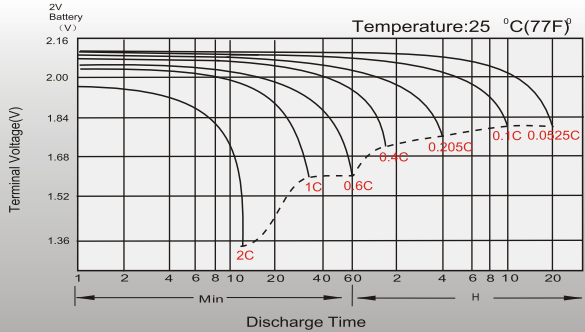
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	877.6	793.4	659.4	526.1	434.3	262.4	203.7	167.9	143.6	125.8	101.8	85.5	45.4
1.80V/cell	984.1	874.1	701.9	549.8	458.8	275.5	212.7	174.8	149.0	130.9	105.4	89.4	47.0
1.75V/cell	1065.8	931.3	737.6	574.7	476.5	285.7	220.0	180.1	153.0	133.6	107.1	90.2	47.4
1.70V/cell	1126.0	987.5	767.4	592.2	490.6	292.9	225.0	183.3	155.2	135.8	108.7	91.0	47.8
1.65V/cell	1172.0	1025.1	799.0	614.5	505.4	300.4	228.9	186.6	158.0	137.7	110.0	92.0	48.4
1.60V/cell	1208.4	1051.0	818.3	625.2	513.8	305.7	232.6	188.4	159.6	139.2	111.2	92.9	48.9

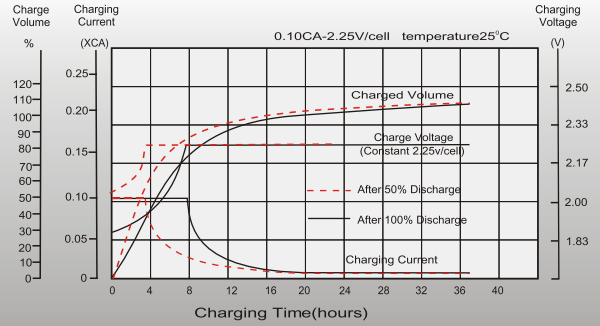
General Purpose AGM Battery-US Series

Characteristic Curve

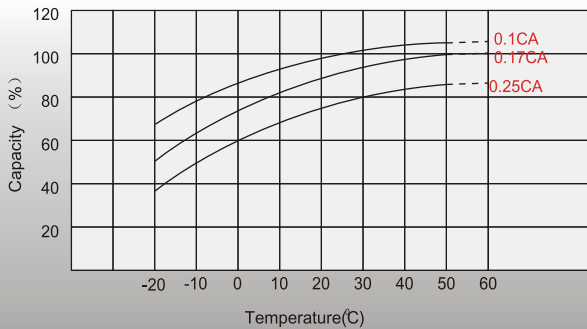
Discharge Characteristics



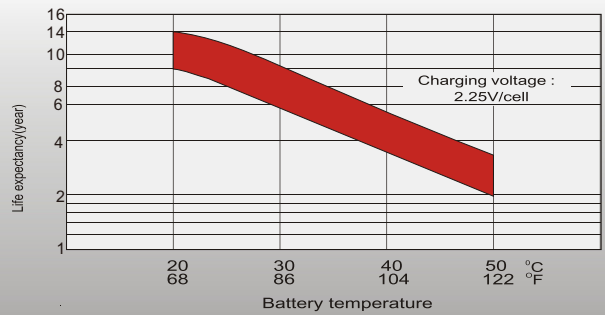
Float Charging Characteristics



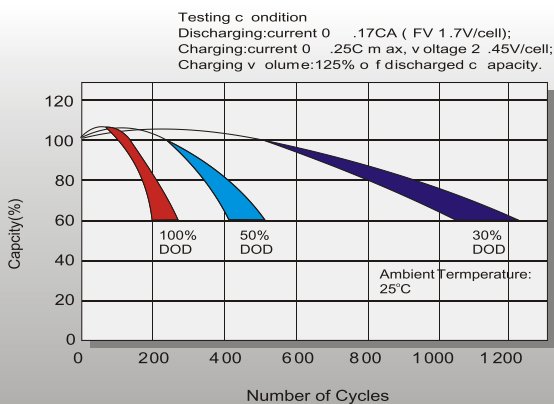
Temperature Effects in Relation to Battery Capacity



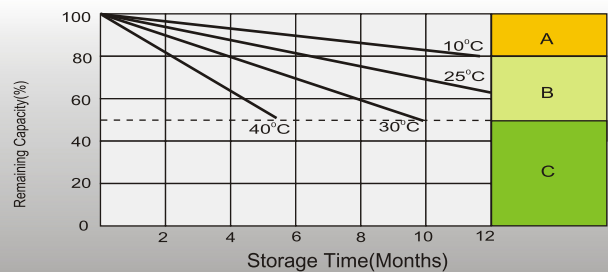
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



A No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)

Supplementary charge required before use. Optional charging way as below:

- B** 1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
- 2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
- 3. Charged for 8~10 hours at limited current 0.05CA.

C Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.