

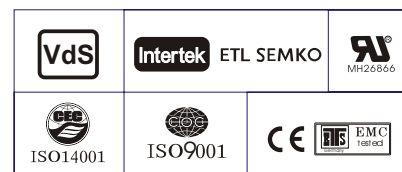


Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	140.0AH	
Dimension	Length	345 ± 3mm (13.6 inches)
	Width	172 ± 2mm (6.77 inches)
	Container Height	274 ± 3mm (10.79 inches)
	Total Height (with Terminal)	280 ± 3mm (11.02 inches)
Approx Weight	Approx 45.5 Kg (100.3 lbs)	
Terminal	T11	
Container Material	ABS	
Rated Capacity	149.8 AH/7.49A	(20hr, 1.80V/cell, 25°C/77°F)
	140.0 AH/14.0A	(10hr, 1.80V/cell, 25°C/77°F)
	122.0 AH/24.4A	(5hr, 1.75V/cell, 25°C/77°F)
	109.2 AH/36.4A	(3hr, 1.75V/cell, 25°C/77°F)
	86.8 AH/86.8A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	1400A (5s)	
Internal Resistance	Approx 4.0mΩ	
Operating Temp. Range	Discharge : -15~50°C (5~122°F)	
	Charge : 0~40°C (32~104°F)	
	Storage : -15~40°C (5~104°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 42.0A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
	Standby Use No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Shuriken batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

Applications

- ◆ UPS and EPS
- ◆ Emergency light
- ◆ Railway signal and aircraft signal system
- ◆ Marine and power stations Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply, DC power supply



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

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	163.8	137.8	122.2	101.4	78.2	66.9	43.3	32.6	26.7	22.5	19.7	15.8	13.6	7.24
1.80V/cell	187.4	154.7	135.1	110.1	84.4	70.6	46.6	35.0	28.4	23.8	20.8	16.6	14.0	7.49
1.75V/cell	212.9	174.4	149.3	119.6	92.0	77.0	48.4	36.4	29.3	24.4	21.5	17.2	14.4	7.68
1.70V/cell	240.4	193.4	164.8	130.6	99.1	81.5	51.0	38.3	30.7	25.8	22.5	17.9	14.9	7.88
1.65V/cell	258.2	207.1	175.4	137.8	104.9	84.3	52.9	39.9	31.9	26.6	23.3	18.5	15.3	8.12
1.60V/cell	284.0	226.8	190.5	147.1	109.0	86.8	54.3	40.9	32.6	27.2	23.8	18.8	15.7	8.25

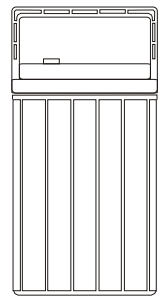
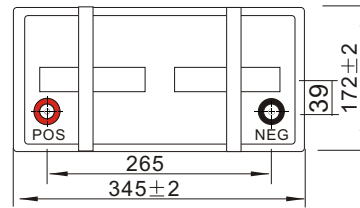
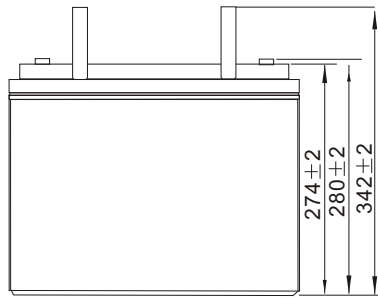
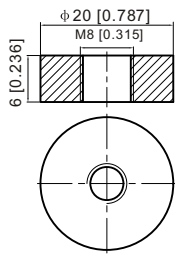
Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	305.8	259.8	232.8	195.2	151.9	130.4	85.0	64.2	52.7	44.5	39.1	31.5	27.1	14.5
1.80V/cell	345.9	287.9	253.7	208.8	162.6	136.9	90.8	68.5	55.7	46.9	41.2	33.0	27.9	15.0
1.75V/cell	386.6	320.5	277.7	225.1	175.7	148.6	94.1	71.0	57.5	47.9	42.4	34.1	28.7	15.3
1.70V/cell	426.9	350.7	304.2	244.4	188.5	156.7	98.9	74.6	59.9	50.5	44.4	35.5	29.7	15.7
1.65V/cell	454.3	372.6	321.3	255.8	197.7	161.0	101.9	77.3	62.1	51.9	45.8	36.6	30.5	16.2
1.60V/cell	488.5	401.5	345.2	271.1	204.4	164.9	104.0	78.9	63.2	53.0	46.6	37.1	31.1	16.4

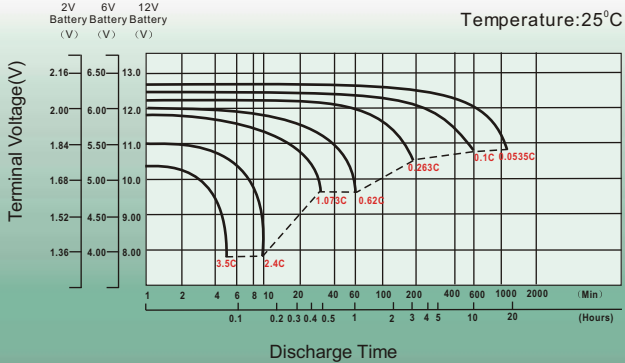
Dimensions

T11 Terminal

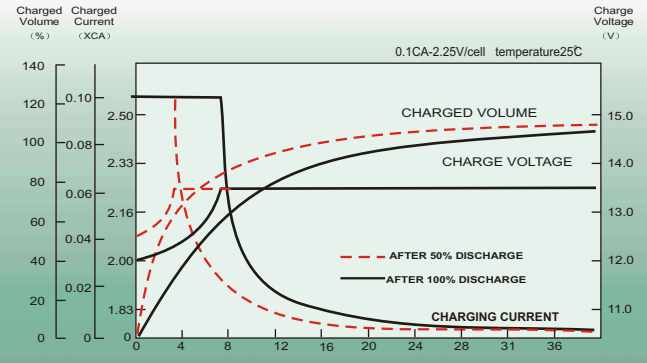
Unit: mm [inches]



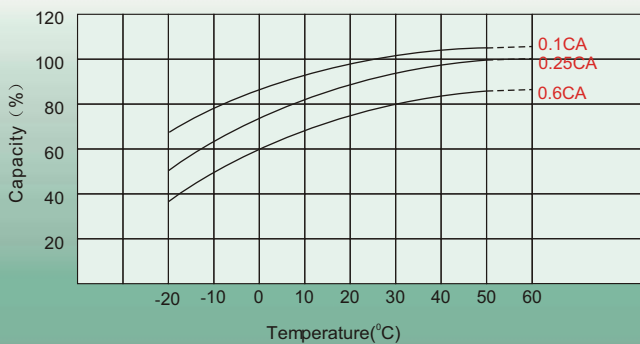
Discharge Characteristics



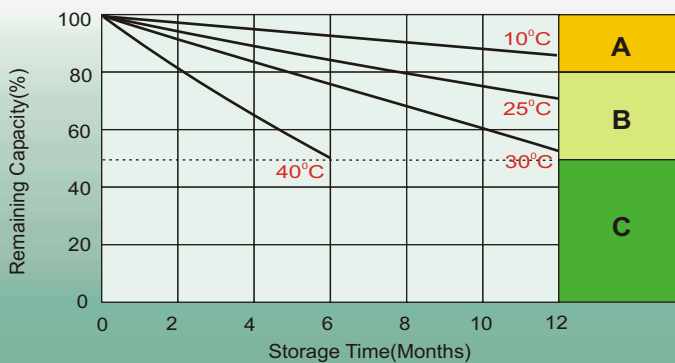
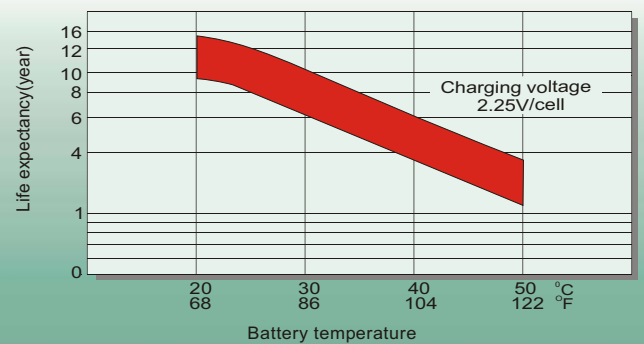
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Self Discharge Characteristics

- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
 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.