

#### Specification

Nominal Voltage	12V
Nominal Capacity(10HR)	80.0AH
Dimensions	Length 259±3mm (10.2 inches)
	Width 168±2mm (6.61 inches)
	Container Height 208±3mm (8.19 inches)
	Total Height (with Terminal) 214±3mm (8.43 inches)
Approx Weight	Approx 23.8 kg (52.36lbs) Terminal: Stainless
Battery Life	10 Years
Container Material	ABS
Rated Capacity	83.2 AH/4.16A (20hr, 1.80V/cell, 25°C/77°F)
	80.0 AH/8.0A (10hr, 1.80V/cell, 25°C/77°F)
	69.0 AH/13.8A (5hr, 1.75V/cell, 25°C/77°F)
	62.4 AH/20.8A (3hr, 1.75V/cell, 25°C/77°F)
	48.8 AH/48.8A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	960A (5s)
Internal Resistance	Approx 6mΩ
Operating Temp. Range	Discharge : -15~50°C (5~122°F)
	Charge : -5~50°C (23~122°F)
	Storage : -20~50°C (-4~122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)
Cycle Use	Initial Charging Current less than 24.0A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	No limit on Initial Charging Current Voltage
Standby Use	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	DS series 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.

TSE

UL

ISO 14001

ISO 9001

CE

MSDS

IEC

ISO 45001

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	136.9	107.6	91.5	76.6	60.9	46.1	37.7	24.0	19.0	15.5	12.5	10.9	8.84	7.55	4.12
1.80V/cell	183.8	137.5	110.6	90.5	71.8	53.6	42.2	26.2	20.4	16.6	13.4	11.7	9.38	8.00	4.16
1.75V/cell	207.2	151.1	120.8	97.4	74.6	55.6	44.2	27.2	20.8	16.9	13.8	12.0	9.54	8.08	4.20
1.70V/cell	228.2	164.7	129.0	102.3	77.6	57.8	45.6	28.3	21.4	17.4	14.1	12.2	9.67	8.16	4.28
1.65V/cell	251.6	177.8	137.2	108.7	81.9	59.3	47.1	29.1	22.3	18.0	14.5	12.5	9.82	8.33	4.34
1.60V/cell	277.5	193.0	146.7	115.8	86.4	61.8	48.8	30.0	23.0	18.5	15.0	12.8	9.92	8.42	4.36

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

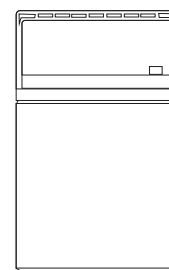
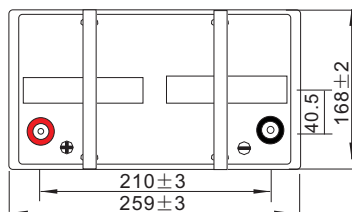
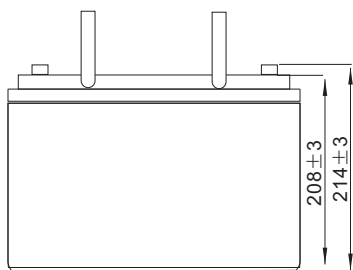
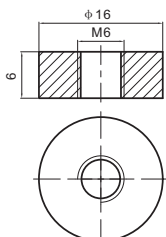
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	250.3	198.8	170.8	144.3	116.0	88.5	72.7	46.7	37.0	30.3	24.5	21.4	17.4	14.9	8.16
1.80V/cell	332.5	251.1	203.6	168.1	134.8	102.2	81.1	50.6	39.6	32.2	26.2	22.9	18.5	15.8	8.23
1.75V/cell	366.9	271.5	219.7	179.1	138.8	105.0	84.4	52.3	40.2	32.8	26.8	23.4	18.7	15.9	8.30
1.70V/cell	392.8	289.2	231.3	186.8	143.6	108.8	86.8	54.2	41.2	33.6	27.4	23.9	19.0	16.1	8.45
1.65V/cell	427.0	309.2	244.0	197.0	150.3	110.5	89.1	55.4	42.8	34.7	28.1	24.3	19.2	16.4	8.55
1.60V/cell	460.1	328.1	256.7	207.5	157.5	114.6	91.7	57.0	43.9	35.6	28.9	24.8	19.4	16.5	8.58

Specifications subject to change without notice.

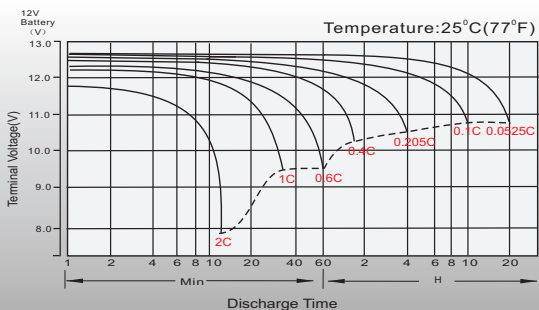
#### Dimensions

##### T6 Terminal

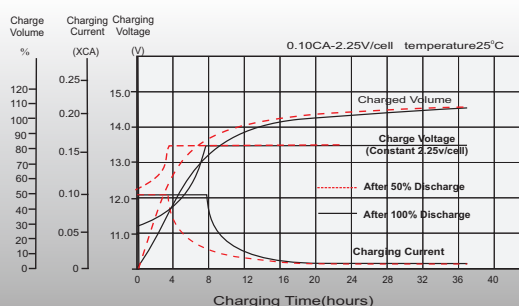
Unit: mm



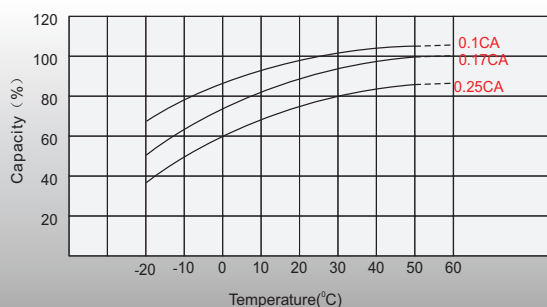
#### Discharge Characteristics



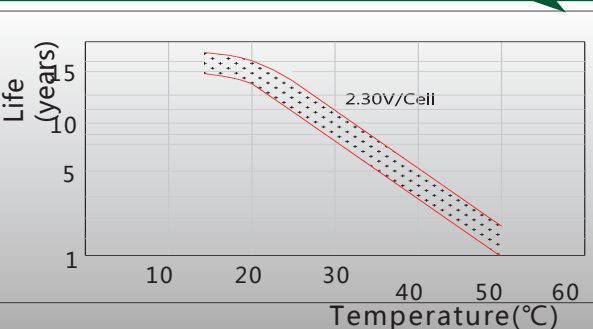
#### Float Charging Characteristics



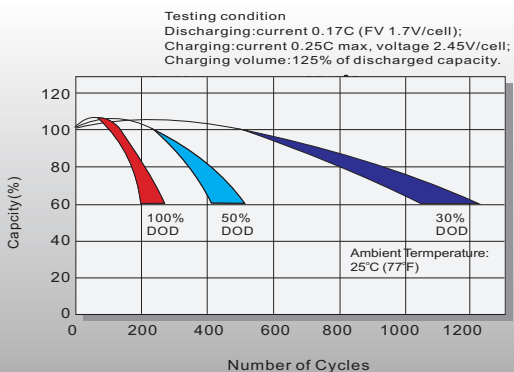
#### Temperature Effects in Relation to Battery Capacity



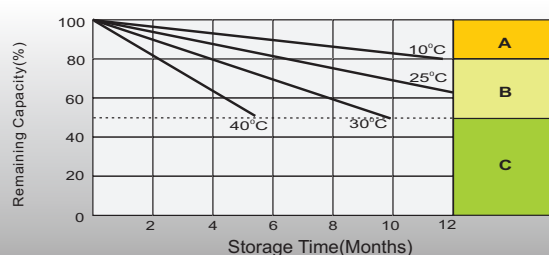
#### Effect of Temperature on Long Term Float Life



#### 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.)
- 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.