

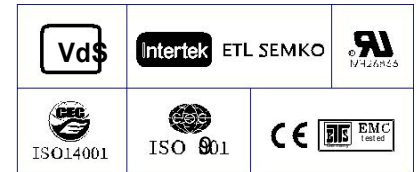
#### Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	22.0AH	
Dimension	Length	166.5± 1mm (6.56 inches)
	Width	175± 1mm (6.93 inches)
	Container Height	125± 1mm (4.92 inches)
	Total Height (with Terminal)	125± 1mm (4.92 inches)
Approx Weight	Approx 8.0 kg (17.64lbs)	
Terminal	T3 / T12	
Container Material	ABS	
Rated Capacity	22.0 AH/1.30A	(20hr, 1.80V/cell, 25°C/77°F)
	21.2 AH/2.42A	(10hr, 1.80V/cell, 25°C/77°F)
	20.1 AH/4.42A	(5hr, 1.75V/cell, 25°C/77°F)
	19.9 AH/6.63A	(3hr, 1.75V/cell, 25°C/77°F)
	16.3 AH/16.3A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	390A (5s)	
Internal Resistance	Approx 14mΩ	
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 7.8A. 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	PowerStar 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

- ◆ All purpose
- ◆ 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
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system



#### 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	49.5	38.0	31.5	27.2	21.1	15.5	13.1	7.73	6.05	4.92	4.01	3.48	2.81	2.35	1.29
1.80V/cell	66.5	48.6	38.1	32.2	24.8	18.0	14.6	8.44	6.51	5.25	4.31	3.73	2.98	2.42	1.30
1.75V/cell	74.9	53.4	41.6	34.6	25.8	18.7	15.3	8.75	6.63	5.37	4.42	3.84	3.03	2.48	1.31
1.70V/cell	82.5	58.2	44.4	36.4	26.8	19.5	15.8	8.97	6.81	5.51	4.53	3.92	3.07	2.53	1.34
1.65V/cell	91.0	62.8	47.2	38.7	28.3	20.0	16.2	9.10	7.11	5.70	4.66	4.00	3.12	2.58	1.35
1.60V/cell	100.4	68.2	50.5	41.2	29.9	20.8	16.3	9.49	7.32	5.88	4.81	4.09	3.15	2.61	1.36

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

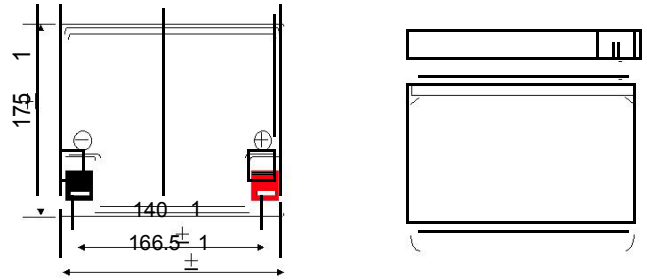
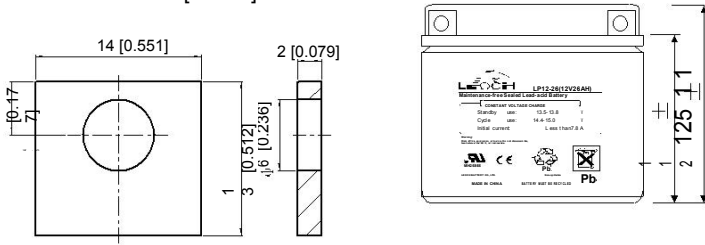
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	90.5	70.2	58.8	51.3	40.1	29.8	25.2	15.0	11.8	9.62	7.87	6.84	5.54	4.64	2.55
1.80V/cell	120.2	88.7	70.1	59.8	46.6	34.4	28.1	16.3	12.6	10.2	8.40	7.31	5.86	4.78	2.57
1.75V/cell	132.7	95.9	75.6	63.7	48.0	35.4	29.3	16.8	12.8	10.4	8.60	7.49	5.95	4.90	2.59
1.70V/cell	142.0	102.1	79.6	66.4	49.7	36.6	30.1	17.2	13.1	10.7	8.80	7.63	6.03	4.99	2.64
1.65V/cell	154.4	109.2	84.0	70.1	52.0	37.2	30.6	17.4	13.6	11.0	9.01	7.77	6.11	5.09	2.67
1.60V/cell	166.4	115.9	88.3	73.8	54.5	38.6	30.7	18.0	14.0	11.3	9.27	7.92	6.15	5.14	2.68



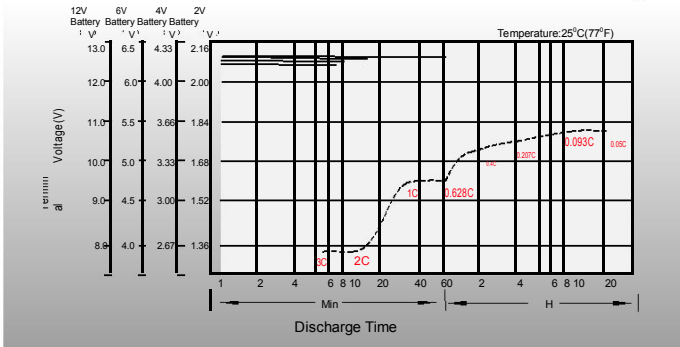
# Dimensions

## T3 Terminal

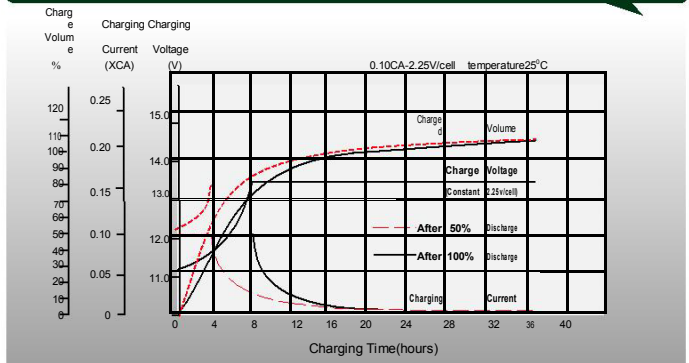
Unit: mm [inches]



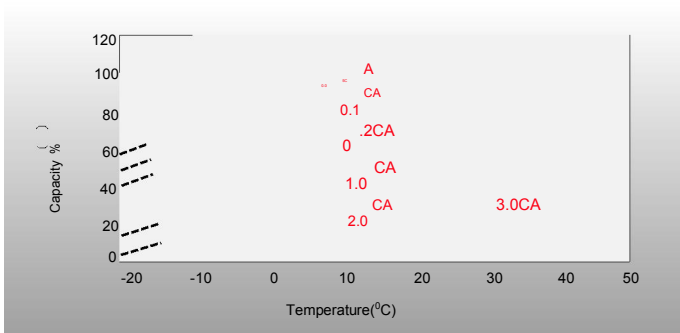
## Discharge Characteristics



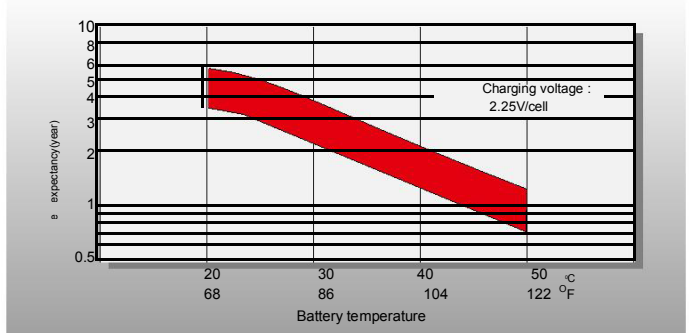
## Float Charging Characteristics



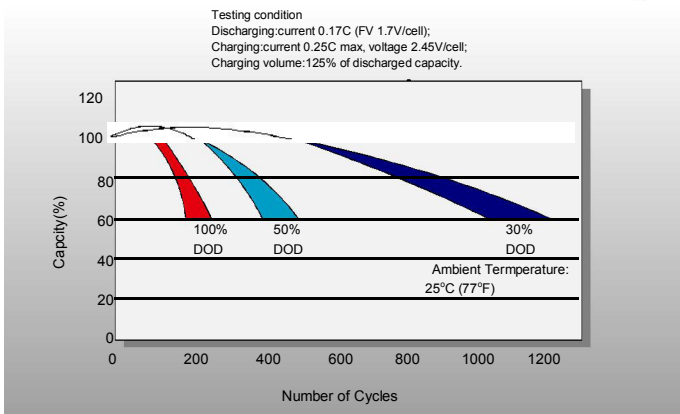
## Temperature Effects in Relation to Battery Capacity



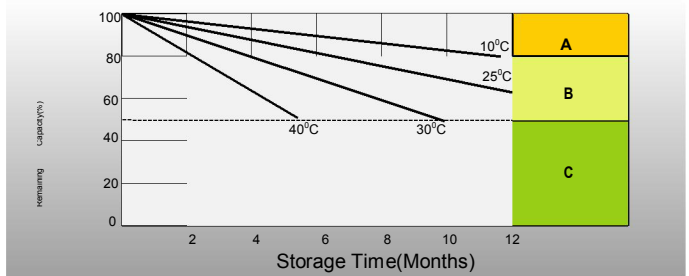
## Effect of Temperature on Long Term Float Life



## 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: 1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
- B** 2. Charged for above 20hours at limited current 0.25CA and constant voltage 2.45V/cell. 3. Charged for 8-10hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.
- C** The battery should never be left standing till this is reached.

## Sales Office

### PowerStar sales office:

Add: BatteryJack Inc  
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 Http://www.powerstarsla.com

