



# GENERAL PURPOSE **BATTERIES**

ST12-5.0 (12V 5.0Ah)

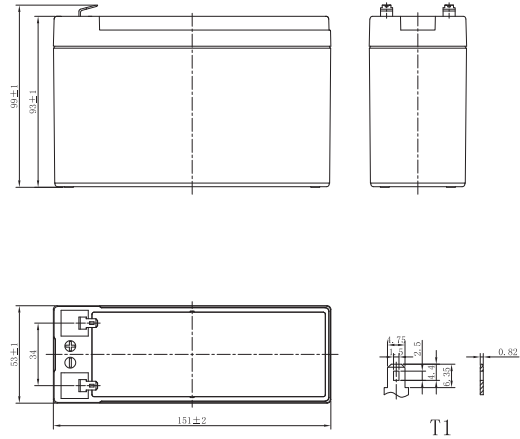


# ST SERIES - GENERAL PURPOSE

## ST12-5.0



### LAYOUT



## General Features

- ✓ 5 years design life(25°C)
- ✓ Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- ✓ PbCaSn alloy for plate grids: less gassing, less self-discharging
- ✓ High quality AGM separator: extend cycle life and prevent micro short circuit
- ✓ High purity raw material: ensure low self discharge rate

## Applications

- ✓ All purpose
- ✓ Uninterruptable Power Supply (UPS)
- ✓ Electric Power System (EPS)
- ✓ Emergency backup power supply
- ✓ Alarm and security system
- ✓ Communication power supply
- ✓ DC power supply
- ✓ Auto control system

## Standards

- ✓ Compliance with IEC 60896 standards, EU Battery Directive
- ✓ UL, CE Certified
- ✓ Manufactured in Starmax® IATF16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities



# SPECIFICATIONS

Rated Voltage	12V	
Nominal Capacity	5.0Ah	(C <sub>20</sub> ,1.75V/cell)
Dimensions	Length	151±2mm (5.94 inches)
	Width	53±1mm (2.09 inches)
	Container height	93±1mm (3.66 inches)
	Total height	99±1mm (3.90 inches)
Approx. weight	1.73 Kg (3.81 lbs)	
Terminal	T1/T2	
Container material	ABS	
Rated capacity (25°C)	5.00 Ah	(20hr,0.250A,1.75V/cell)
	4.73 Ah	(10hr,0.473A,1.75V/cell)
	4.32 Ah	(5hr,0.861A,1.75V/cell)
	3.84 Ah	(3hr,1.28A,1.75V/cell)
	3.29 Ah	(1hr,3.29A,1.60V/cell)
Max. discharge current	75A (5s)	
Internal resistance (25°C)	Approx 35mΩ	
Operating temp. range	Discharge	-15~50°C (5~122°F)
	Charge	-20~40°C (-4~104°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 1.5A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 1.5A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self discharge	ST 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.	

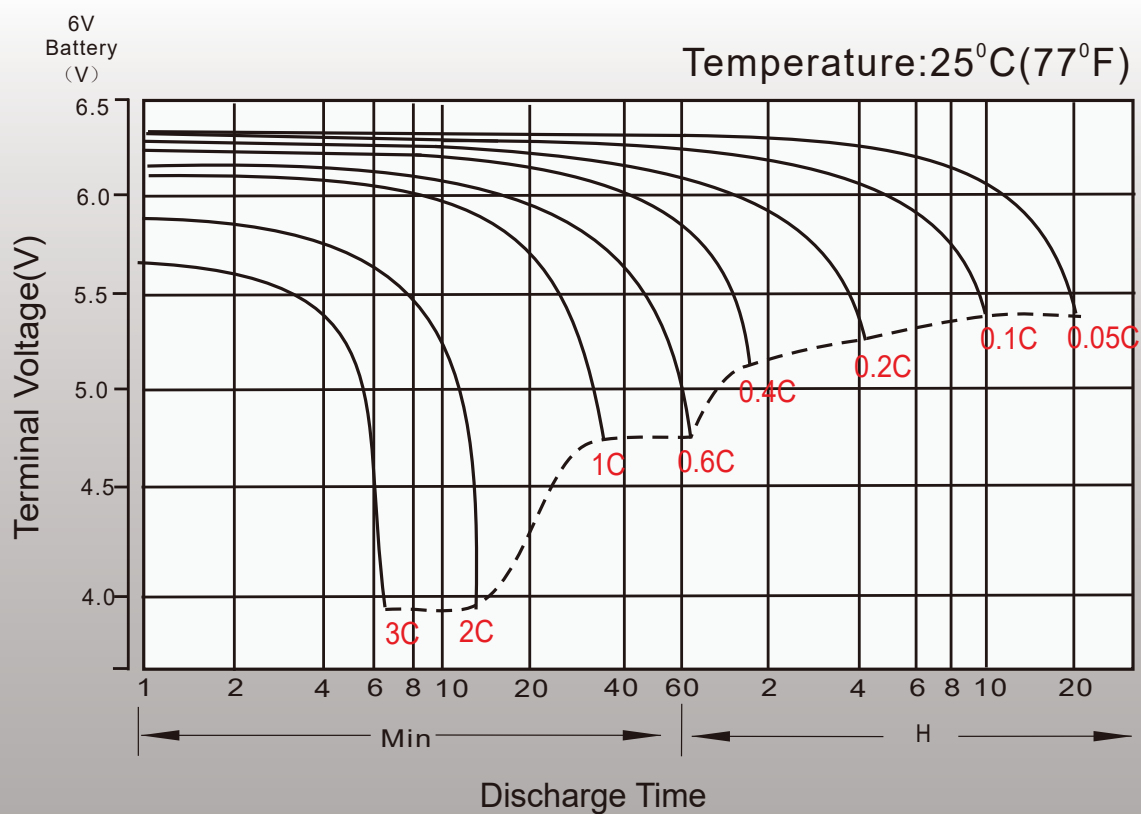
## Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	16.4	10.9	8.33	6.75	4.97	3.63	2.97	2.18	1.71	1.24	0.984	0.838	0.717	0.565	0.462	0.244
1.80V/cell	17.6	11.6	8.74	7.02	5.12	3.73	3.05	2.22	1.74	1.26	1.00	0.850	0.729	0.573	0.468	0.247
1.75V/cell	18.5	12.1	9.03	7.21	5.25	3.81	3.11	2.26	1.77	1.28	1.01	0.861	0.737	0.579	0.473	0.250
1.70V/cell	19.4	12.5	9.33	7.42	5.39	3.89	3.17	2.30	1.80	1.29	1.03	0.872	0.746	0.585	0.478	0.252
1.67V/cell	20.1	12.9	9.56	7.57	5.48	3.96	3.21	2.33	1.82	1.31	1.04	0.880	0.752	0.590	0.481	0.254
1.60V/cell	21.3	13.4	9.89	7.80	5.63	4.06	3.29	2.38	1.86	1.33	1.05	0.894	0.763	0.598	0.487	0.257

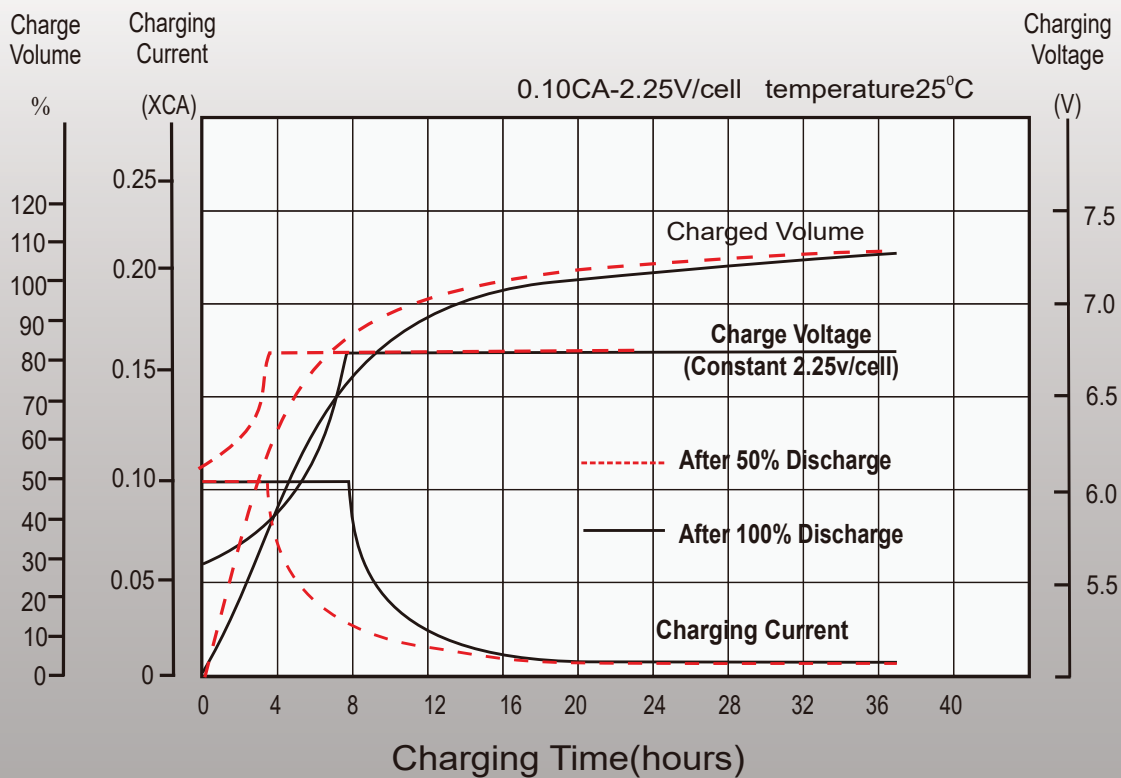
## Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	30.9	20.8	15.9	13.0	9.60	7.04	5.78	4.25	3.35	2.43	1.94	1.65	1.42	1.12	0.918	0.489
1.80V/cell	33.0	21.9	16.6	13.4	9.85	7.21	5.91	4.33	3.41	2.46	1.96	1.68	1.44	1.14	0.930	0.495
1.75V/cell	34.3	22.6	17.1	13.7	10.1	7.33	6.00	4.40	3.46	2.50	1.99	1.69	1.45	1.15	0.938	0.500
1.70V/cell	35.6	23.4	17.5	14.1	10.3	7.47	6.10	4.46	3.50	2.53	2.01	1.72	1.47	1.16	0.947	0.504
1.67V/cell	36.5	23.9	17.9	14.3	10.4	7.57	6.18	4.51	3.53	2.55	2.03	1.73	1.48	1.17	0.954	0.508
1.60V/cell	38.0	24.6	18.4	14.7	10.7	7.71	6.29	4.58	3.59	2.59	2.06	1.75	1.50	1.18	0.965	0.514

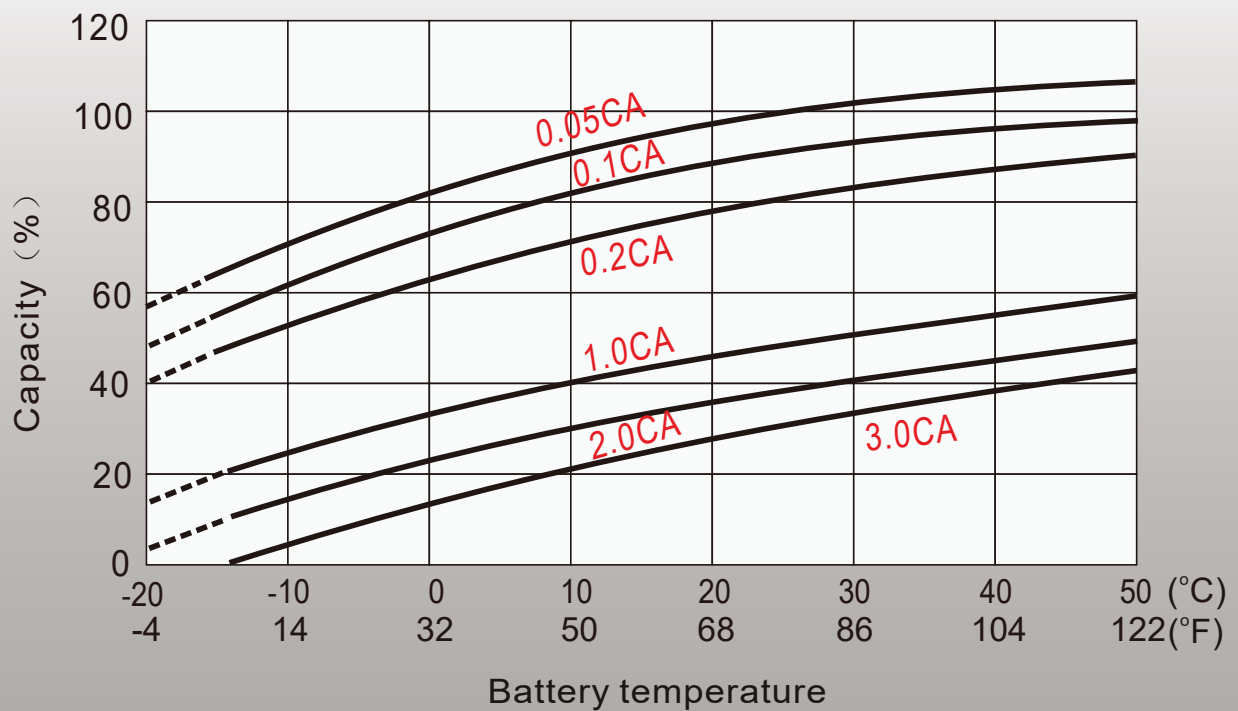
## Discharge Characteristics



# Float Charging Characteristics



# Temperature Effects in Relation to Battery Capacity



# Float Service Life



# ST12-5 (12V 5.0Ah)



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