

# TN12-7.0 [12V 7.0Ah]



## Product Features

General Purpose (AGM)		3~5 years of design life@25°C	
100% Model Coverage Both Cycle & Float Application	↑98% Capacity Retention High Purity Electrolyte	↑20% Charge Acceptance Special Negative Additive	↓50% Grid Corrosion Rare-earth patent alloy

## Product Applications



## Physical Specifications

Model	Dimensions (mm/inch)				Weight (kg/lbs)	Terminal	Container
	Length	Width	Height	Total Height			
TN12-7.0	151/5.94	65.5/2.58	94/3.70	100/3.94	2.00/4.41	T2	ABS UL94-HB (Optional: FR ABS UL94-V0)

## Product Specifications

Nominal Voltage	Rated Capacity@25°C/77°F	Internal Resistance	Max. Discharge Current	Operating Temp. Range
12V	7.0Ah 20hr Rate (1.80V/cell) 6.54Ah 10hr Rate (1.80V/cell) 5.90Ah 5hr Rate (1.75V/cell) 5.34Ah 3hr Rate (1.70V/cell)	28mΩ@25°C/77°F	105A (5s)	Discharge:-15~50°C (5~122°F) Charge:0~40°C (32~104°F) Storage:-15~40°C (5~104°F) Optimum:25±2°C (77±4°F)

## Constant Current Discharge (A)@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	16.0	11.7	10.0	8.5	6.2	4.6	3.65	2.17	1.62	1.32	1.12	0.96	0.76	0.627	0.343
1.80V/cell	19.2	13.7	11.3	9.2	6.7	4.9	3.89	2.27	1.68	1.37	1.16	1.00	0.79	0.654	0.350
1.75V/cell	21.5	14.9	12.0	9.7	6.9	5.1	4.04	2.34	1.74	1.40	1.18	1.02	0.80	0.664	0.357
1.70V/cell	23.4	15.9	12.8	10.2	7.2	5.2	4.11	2.40	1.78	1.43	1.21	1.04	0.82	0.673	0.361
1.67V/cell	25.5	16.8	13.4	10.6	7.4	5.4	4.23	2.44	1.80	1.45	1.23	1.05	0.83	0.681	0.365
1.60V/cell	26.8	17.6	13.8	10.9	7.6	5.5	4.32	2.50	1.84	1.48	1.25	1.07	0.85	0.691	0.371

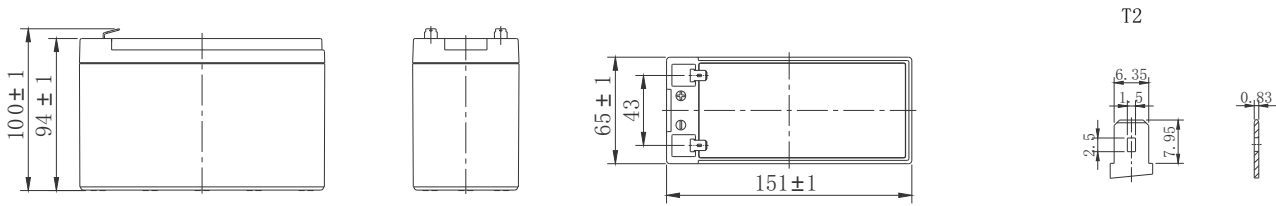
## Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	30.3	22.3	19.2	16.4	12.0	8.9	7.10	4.23	3.17	2.59	2.20	1.91	1.52	1.261	0.695
1.80V/cell	35.9	25.8	21.5	17.7	12.9	9.4	7.53	4.42	3.30	2.69	2.27	1.97	1.57	1.311	0.705
1.75V/cell	39.8	28.0	22.8	18.6	13.4	9.7	7.80	4.55	3.37	2.74	2.31	2.00	1.59	1.331	0.717
1.70V/cell	42.8	29.5	24.0	19.3	13.8	9.9	7.89	4.61	3.42	2.78	2.34	2.03	1.61	1.331	0.719
1.67V/cell	45.7	30.7	24.8	19.8	14.1	10.1	8.03	4.65	3.45	2.80	2.36	2.05	1.62	1.341	0.721
1.60V/cell	47.0	31.5	25.1	20.1	14.3	10.3	8.14	4.73	3.50	2.83	2.39	2.07	1.63	1.351	0.729

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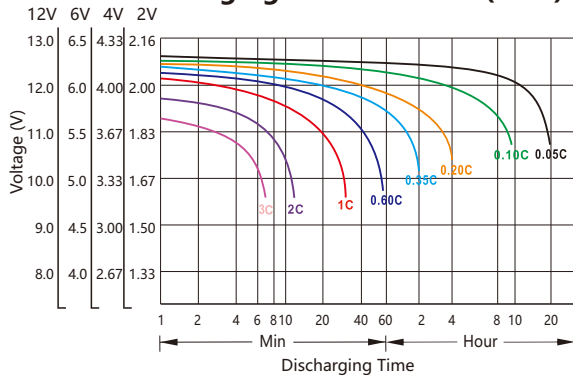


## Battery Dimensions(mm)

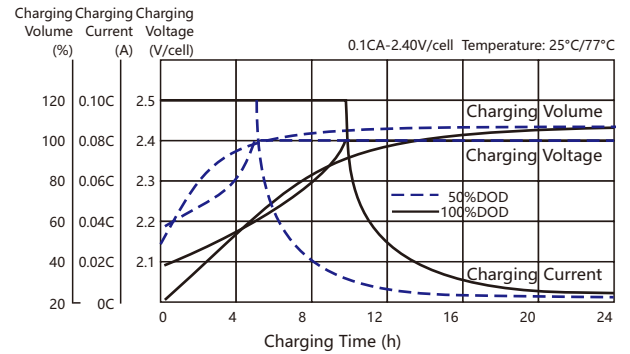


## Electrical Characteristics

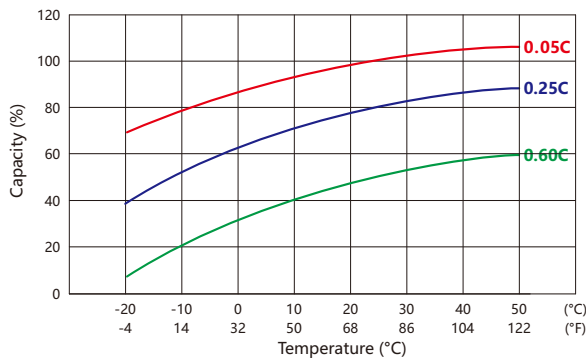
### Discharging Characteristics(25°C)



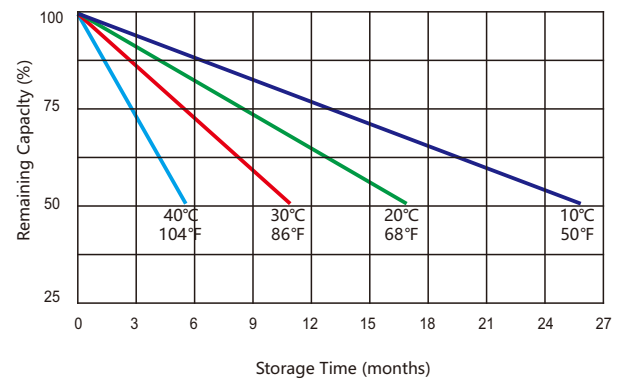
### Charging Characteristics(25°C)



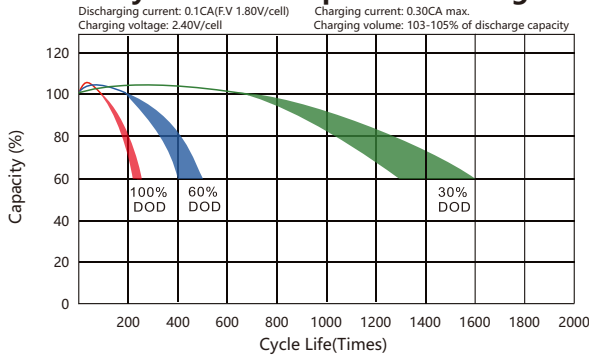
### Capacity vs Temperature



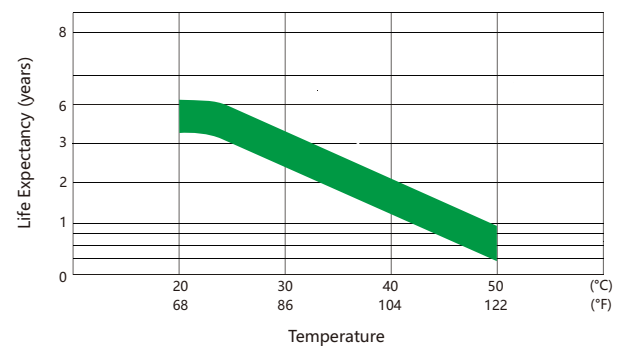
### Self-discharge vs Time



### Cycle Life vs Depth of Discharge



### Floating Life vs Temperature



## Usage and Maintenance

Charge Current	Equalization Charge	Float Charge
Limited current: $\leq 0.3C_{20A}$	Constant Voltage: 14.4~14.7V@25°C(77°F) Temp.Coefficient:-24mV/°C	Constant Voltage: 13.5~13.8V@25°C(77°F) Temp.Coefficient:-18mV/°C