

# 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
TN12-7.0	Length	Width	Height	Total Height	2.15/4.74	T1/T2	ABS UL94-HB (Optional: FR ABS UL94-V0)
	151/5.94	65/2.55	95/3.74	101/3.98			

## 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) 6.64Ah 10hr Rate (1.80V/cell) 5.80Ah 5hr Rate (1.75V/cell) 5.10Ah 3hr Rate (1.70V/cell)	30mΩ@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	22.7	14.7	12.2	10.1	7.02	4.88	3.80	2.14	1.57	1.29	1.11	0.966	0.781	0.648	0.345
1.80V/cell	24.5	15.5	12.7	10.3	7.21	4.99	3.89	2.19	1.61	1.32	1.13	0.994	0.802	0.664	0.350
1.75V/cell	25.3	16.0	13.0	10.6	7.38	5.12	3.98	2.24	1.66	1.35	1.16	1.02	0.823	0.678	0.359
1.70V/cell	26.3	16.3	13.3	10.8	7.54	5.28	4.10	2.31	1.70	1.39	1.19	1.05	0.846	0.693	0.366
1.67V/cell	26.9	16.8	13.6	11.1	7.70	5.39	4.19	2.37	1.74	1.42	1.22	1.07	0.859	0.703	0.372
1.60V/cell	27.8	17.6	14.1	11.5	7.93	5.52	4.30	2.46	1.79	1.46	1.25	1.09	0.880	0.720	0.379

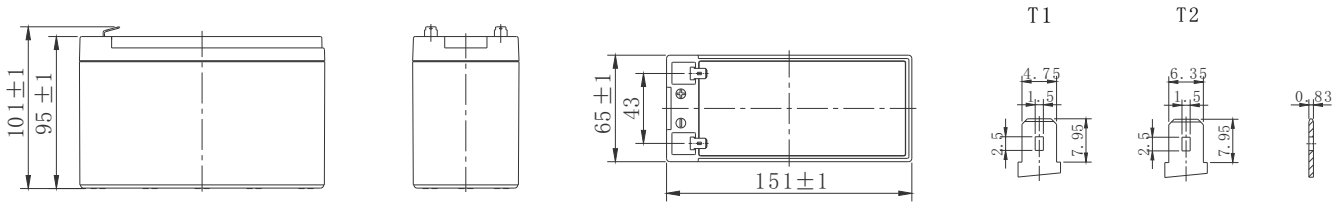
## Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	42.2	27.8	23.5	19.5	13.8	9.67	7.56	4.31	3.17	2.62	2.26	1.97	1.60	1.33	0.711
1.80V/cell	45.4	29.3	24.3	19.9	14.1	9.87	7.73	4.38	3.24	2.68	2.31	2.03	1.64	1.36	0.719
1.75V/cell	47.0	30.0	24.8	20.3	14.4	10.1	7.89	4.48	3.33	2.74	2.36	2.07	1.68	1.39	0.735
1.70V/cell	48.6	30.6	25.3	20.7	14.7	10.4	8.11	4.60	3.40	2.80	2.41	2.12	1.72	1.41	0.745
1.67V/cell	49.8	31.5	25.7	21.2	15.0	10.6	8.26	4.70	3.47	2.85	2.46	2.15	1.74	1.43	0.757
1.60V/cell	51.1	32.7	26.6	21.8	15.3	10.8	8.44	4.87	3.57	2.92	2.51	2.20	1.78	1.46	0.768

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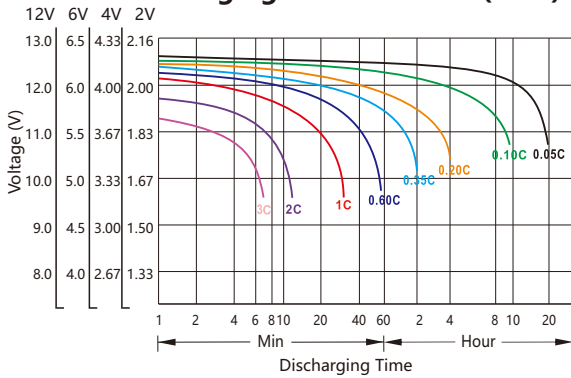


## Battery Dimensions(mm)

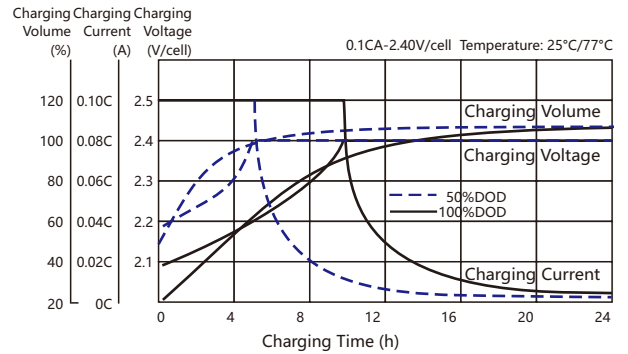


## Electrical Characteristics

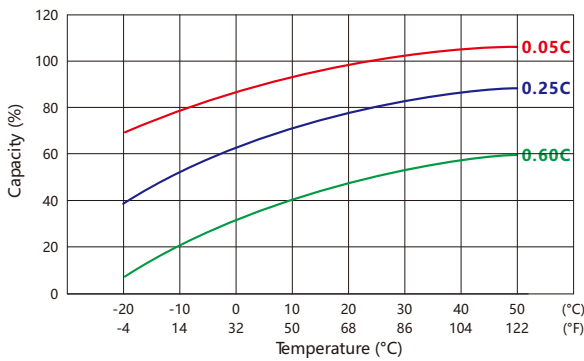
### Discharging Characteristics(25°C)



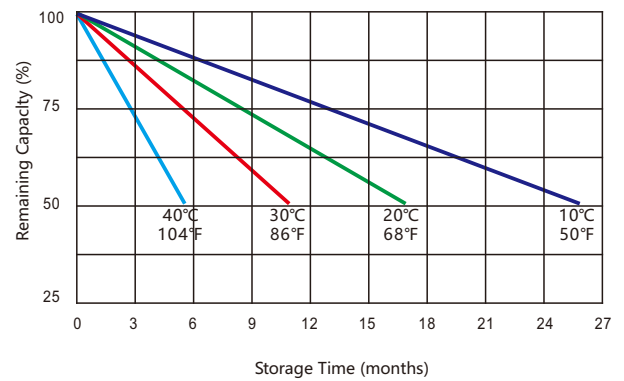
### Charging Characteristics(25°C)



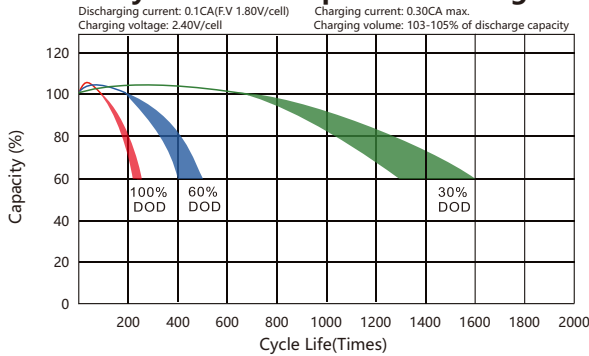
### Capacity vs Temperature



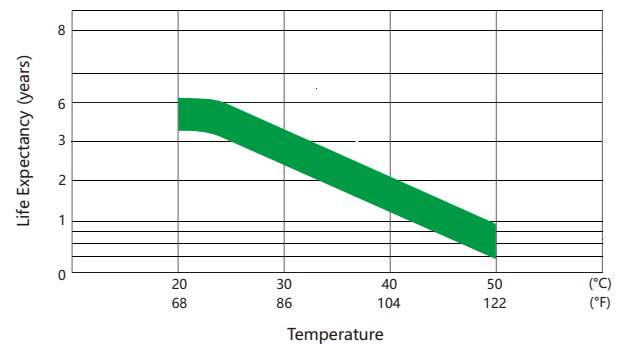
### Self-discharge vs Time



### 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