

TN12-9.0 [12V 9.0Ah]



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
TN12-9.0	Length	Width	Height	Total Height	2.50/5.51	T2	ABS UL94-HB (Optional: FR ABS UL94-V0)
	151/5.94	65/2.56	93.5/3.68	99.5/3.92			

Product Specifications

Nominal Voltage	Rated Capacity@25°C/77°F	Internal Resistance	Max. Discharge Current	Operating Temp. Range
12V	9.00Ah 20hr Rate (1.80V/cell) 8.53Ah 10hr Rate (1.80V/cell) 7.50Ah 5hr Rate (1.75V/cell) 6.54Ah 3hr Rate (1.70V/cell)	20mΩ@25°C/77°F	135A (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	29.1	18.9	15.7	12.9	9.03	6.27	4.88	2.76	2.01	1.66	1.42	1.24	1.00	0.833	0.444
1.80V/cell	31.4	20.0	16.3	13.2	9.27	6.42	5.00	2.81	2.07	1.70	1.46	1.28	1.03	0.853	0.450
1.75V/cell	32.5	20.5	16.8	13.6	9.49	6.59	5.12	2.88	2.13	1.74	1.50	1.31	1.06	0.871	0.462
1.70V/cell	33.8	21.0	17.1	13.9	9.70	6.79	5.28	2.97	2.18	1.79	1.53	1.35	1.09	0.891	0.470
1.67V/cell	34.6	21.6	17.5	14.3	9.90	6.93	5.39	3.04	2.23	1.83	1.57	1.37	1.10	0.904	0.478
1.60V/cell	35.7	22.6	18.1	14.7	10.2	7.10	5.52	3.16	2.31	1.88	1.61	1.41	1.13	0.926	0.487

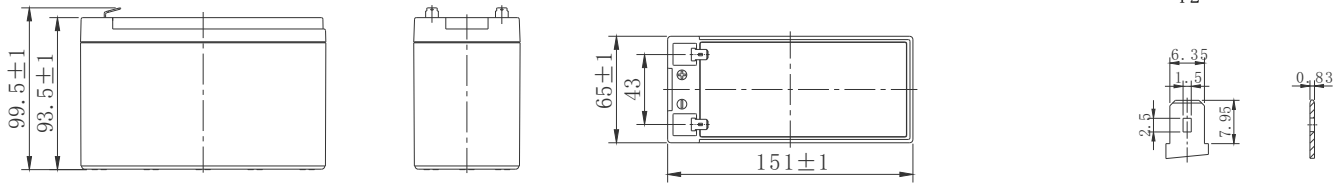
Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	54.2	35.8	30.2	25.1	17.8	12.4	9.72	5.54	4.07	3.36	2.90	2.54	2.06	1.71	0.914
1.80V/cell	58.4	37.7	31.3	25.6	18.2	12.7	9.93	5.63	4.17	3.44	2.97	2.61	2.11	1.75	0.924
1.75V/cell	60.4	38.6	31.9	26.1	18.6	13.0	10.1	5.75	4.28	3.52	3.03	2.66	2.16	1.78	0.945
1.70V/cell	62.5	39.4	32.5	26.7	18.9	13.4	10.4	5.91	4.37	3.60	3.10	2.72	2.21	1.81	0.958
1.67V/cell	64.0	40.5	33.1	27.3	19.3	13.6	10.6	6.04	4.46	3.66	3.16	2.77	2.24	1.84	0.973
1.60V/cell	65.7	42.0	34.2	28.0	19.7	13.9	10.8	6.26	4.59	3.76	3.22	2.83	2.29	1.87	0.987

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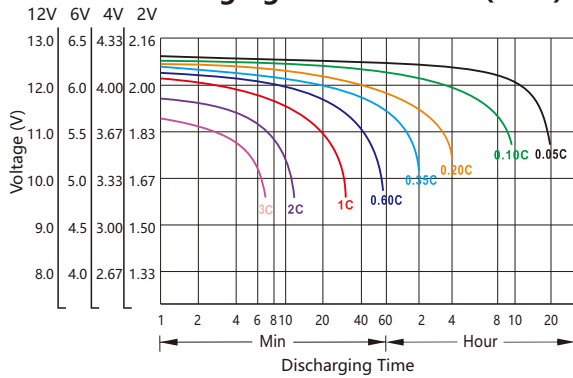


Battery Dimensions(mm)

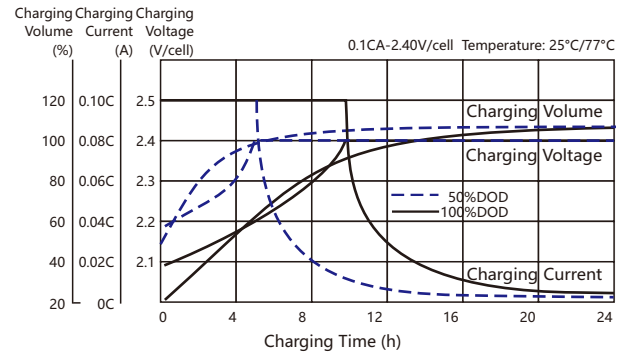


Electrical Characteristics

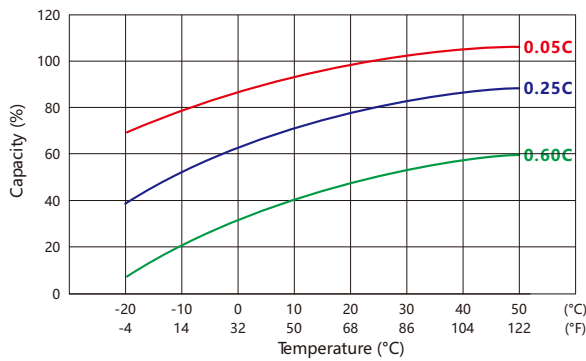
Discharging Characteristics(25°C)



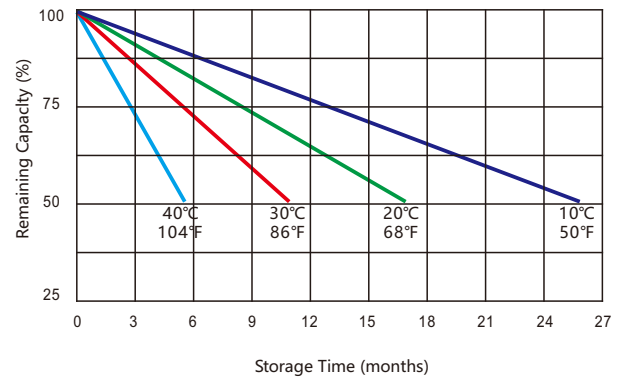
Charging Characteristics(25°C)



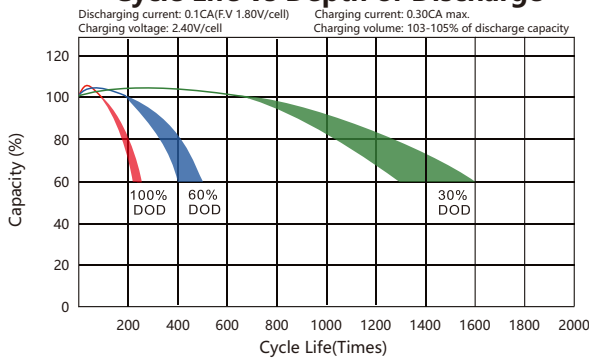
Capacity vs Temperature



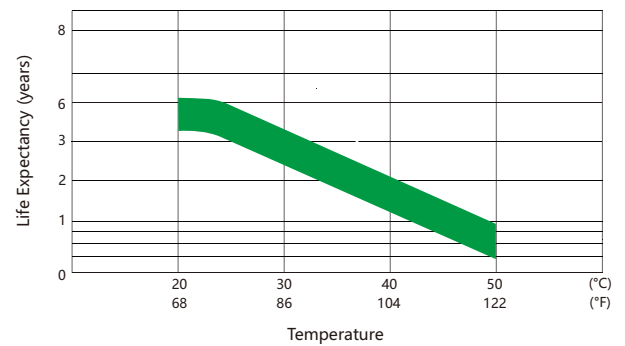
Self-discharge vs Time



Cycle Life vs Depth of Discharge



Floating Life vs Temperature



Usage and Maintenance

Charge Current	Equalization Charge	Float Charge
Limited current: ≤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