

# TNE 12-9.0 [12V9.0Ah]

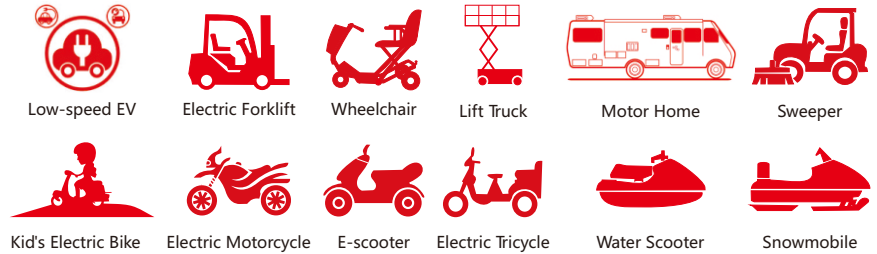


## Product Features



Deep Cycle Series		200~300 Cycle Times @100%DOD	
↑10% Energy Density Patent negative pasting formula	↓50% Grid Corrosion Rare-earth patent alloy	0% Acid stratification Nano silica gel technology	

## Product Applications



## Physical Specifications

Model	Dimensions (±2mm/inch)				Weight (±2%kg/lbs)	Terminal	Container
	Length	Width	Height	Total Height			
TNE12-9.0	151/5.94	65/2.55	94/3.70	100/3.94	2.40/5.29	T1/T2	ABS UL94-HB (Optional: FR ABS UL94-V0)

## Product Specifications

Nominal Voltage	Rated Capacity 25°C/77°C	Operating Temp. Range	Capacity Effected Temp	Capacity vs Storage Time
12V	9.00Ah 20hr Rate (1.75V/cell) 8.19Ah 10hr Rate (1.75V/cell) 8.00Ah 5hr Rate (1.75V/cell) 7.06Ah 2hr Rate (1.75V/cell)	Discharge:-15°C~50°C (5°F~122°F) Charge:0°C~40°C (32°F~104°F) Storage:-15°C~40°C (5°F~104°F) Optimum:25°C±2°C (77°F±5°F)	40°C (104°F):106% 25°C (77°F):100% 0°C (32°F):85% -15°C (5°F):72%	Three months : 90% Six months : 80% Nine months : 60%

## Constant Current Discharge (A)@25°C (77°F)

F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	9.94	7.10	5.62	3.21	2.25	1.74	1.44	1.23	0.959	0.782	0.427
1.80V/cell	10.3	7.29	5.79	3.32	2.30	1.80	1.50	1.28	0.986	0.802	0.442
1.75V/cell	10.6	7.58	6.01	3.53	2.43	1.86	1.60	1.34	1.01	0.819	0.450
1.70V/cell	10.8	7.77	6.21	3.59	2.48	1.92	1.61	1.37	1.04	0.840	0.460
1.67V/cell	11.1	8.03	6.44	3.63	2.51	1.97	1.66	1.40	1.06	0.854	0.464
1.60V/cell	11.4	8.24	6.56	3.75	2.60	2.03	1.68	1.43	1.09	0.882	0.468

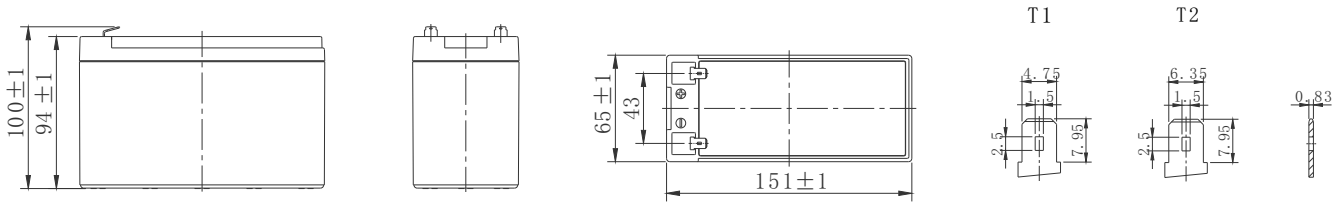
## Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	19.4	14.0	11.1	6.41	4.52	3.51	2.91	2.49	1.94	1.59	0.869
1.80V/cell	20.0	14.3	11.4	6.60	4.60	3.60	3.02	2.57	1.99	1.62	0.895
1.75V/cell	20.5	14.8	11.8	6.99	4.83	3.71	3.19	2.69	2.04	1.65	0.909
1.70V/cell	20.9	15.1	12.1	7.07	4.90	3.82	3.20	2.72	2.08	1.68	0.925
1.67V/cell	21.2	15.5	12.5	7.10	4.94	3.89	3.28	2.76	2.11	1.70	0.928
1.60V/cell	21.6	15.8	12.6	7.27	5.06	3.97	3.30	2.81	2.14	1.74	0.933

# TNE 12-9.0 [12V9.0Ah]

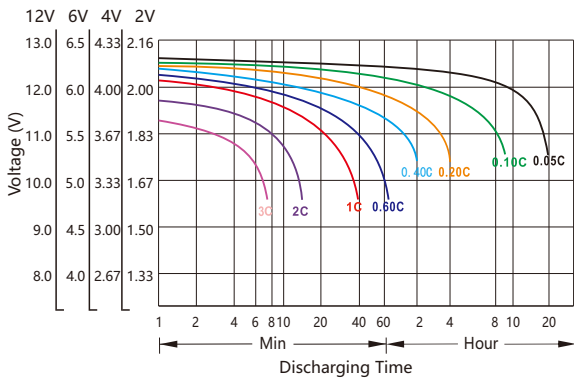


## Battery Dimensions(mm)

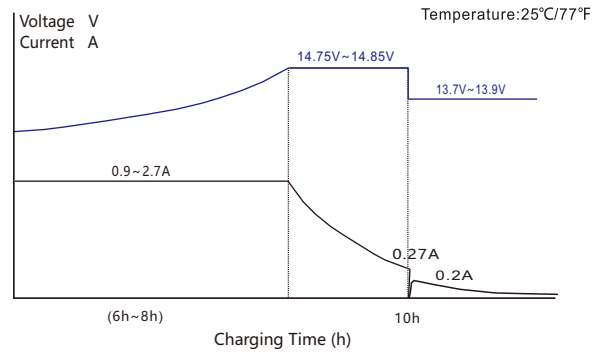


## Electrical Characteristics

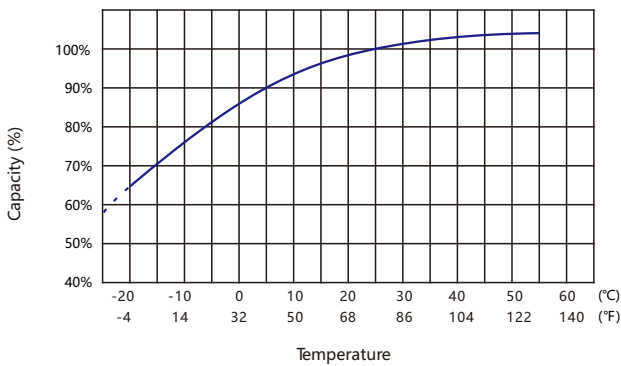
### Discharging Characteristics@25°C(77°F)



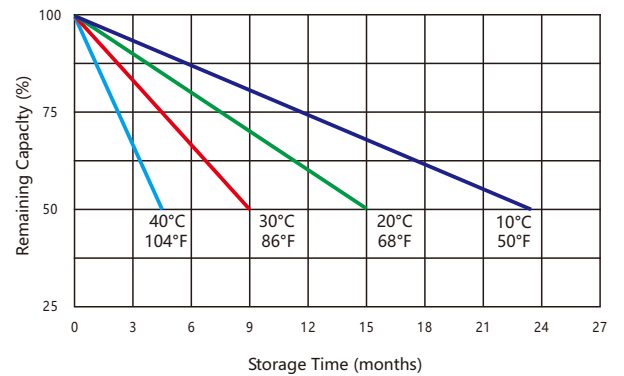
### Charging Characteristics@25°C(77°F)



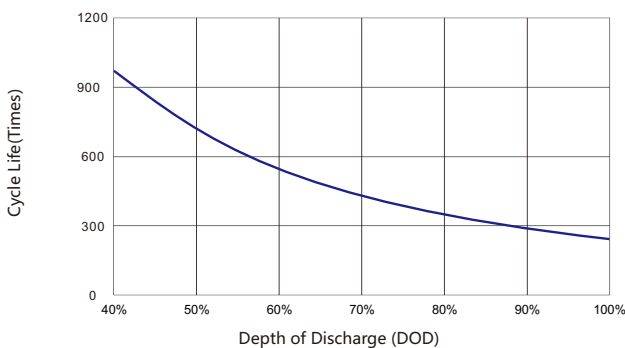
### Capacity vs Temperature



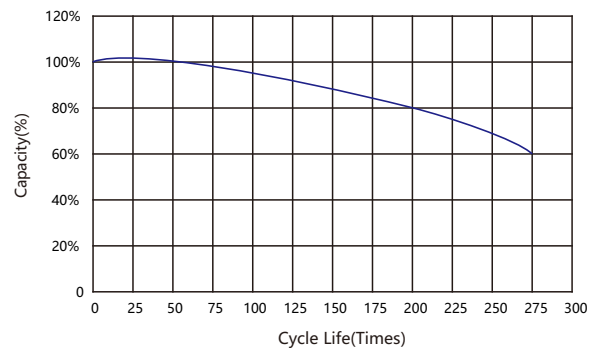
### Self-discharge vs Time



### Cycle Life vs Depth of Discharge@25°C(77°F)



### Cycle Life vs Remaining Capacity@25°C(77°F)



## Usage and Maintenance

Limited Current	Limited Voltage	Floating Voltage
Limited current: $\leq 0.3C_{20A}$	14.75V~14.85V@25°C(77°F) Temp.Coefficient:-24mV/°C	13.7V~13.9V@25°C(77°F) Temp.Coefficient:-18mV/°C