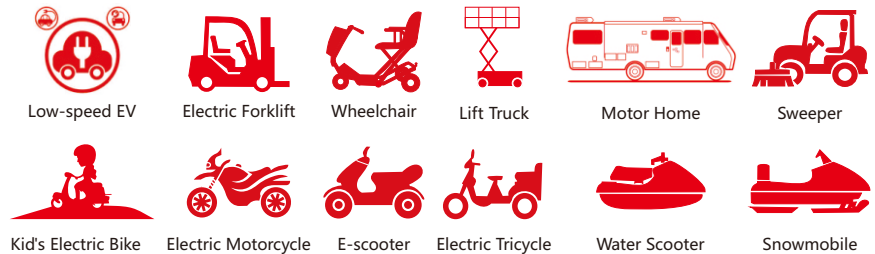




## Product Features

Deep Cycle Series		400~600 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 Specification

Model	Dimensions (mm/inch)				Weight (kg/lbs)	Terminal	Container
	Length	Width	Height	Total Height			
TNE12-38	267/10.5	77/3.03	171/6.73	171/6.73	9.20/20.3	110	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	38Ah 20hr Rate (1.80V/cell) 35Ah 10hr Rate (1.75V/cell) 34Ah 5hr Rate (1.75V/cell) 32.6Ah 3hr 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%

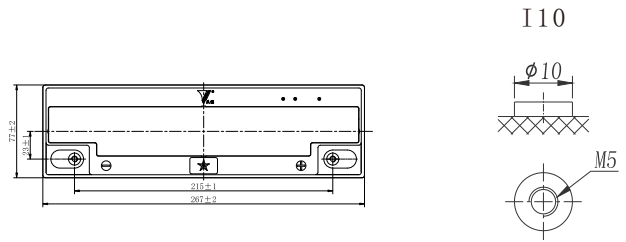
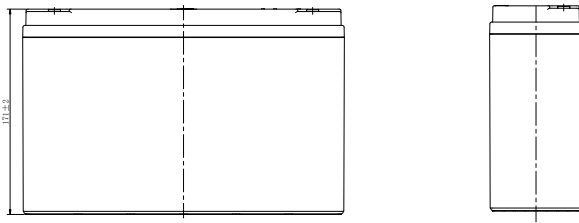
## Constant Current Discharge (A)@25°C (77°F)

F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	40.7	29.0	23.3	13.3	10.1	7.86	6.38	5.40	4.13	3.37	1.84
1.80V/cell	42.2	29.9	24.0	13.8	10.5	8.11	6.63	5.60	4.26	3.46	1.90
1.75V/cell	43.3	31.0	24.9	14.6	10.9	8.39	6.80	5.74	4.39	3.54	1.94
1.70V/cell	44.4	31.8	25.7	14.9	11.1	8.65	7.04	5.97	4.49	3.63	1.98
1.67V/cell	45.3	32.8	26.6	15.0	11.2	8.74	7.18	6.01	4.57	3.68	2.00
1.60V/cell	46.5	33.8	27.2	15.5	11.6	9.00	7.34	6.18	4.68	3.79	2.01

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

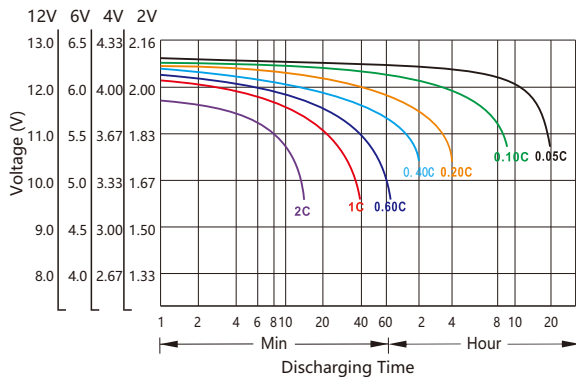
F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	79.6	57.1	46.0	26.5	20.2	15.8	12.9	10.9	8.38	6.83	3.74
1.80V/cell	82.1	58.6	47.2	27.3	20.9	16.3	13.3	11.3	8.60	7.00	3.85
1.75V/cell	84.0	60.6	48.8	29.0	21.6	16.8	13.6	11.5	8.82	7.13	3.91
1.70V/cell	85.6	61.8	50.2	29.2	22.0	17.2	14.0	11.9	8.98	7.27	3.98
1.67V/cell	86.6	63.2	51.7	29.4	22.1	17.2	14.2	11.9	9.07	7.32	3.99
1.60V/cell	88.2	64.6	52.2	30.1	22.7	17.6	14.4	12.1	9.22	7.48	4.01

## Battery Dimensions(mm)

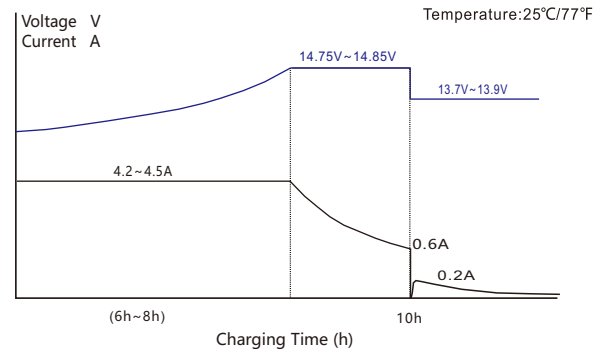


## Electrical Characteristics

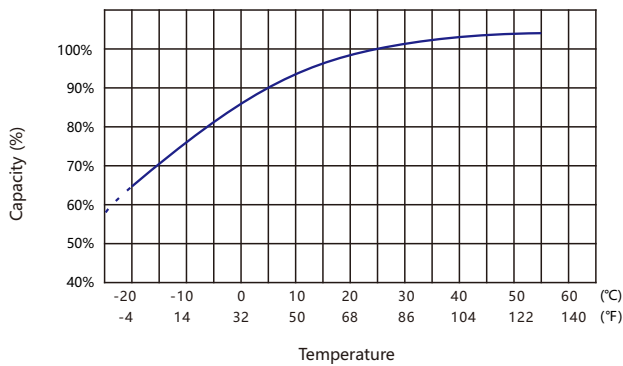
### Discharging Characteristics@25°C(77°F)



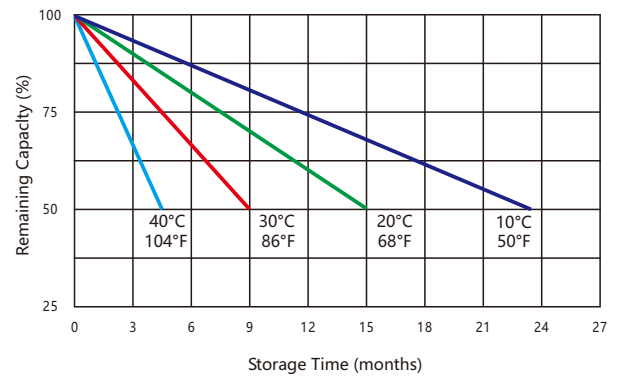
### Charging Characteristics@25°C(77°F)



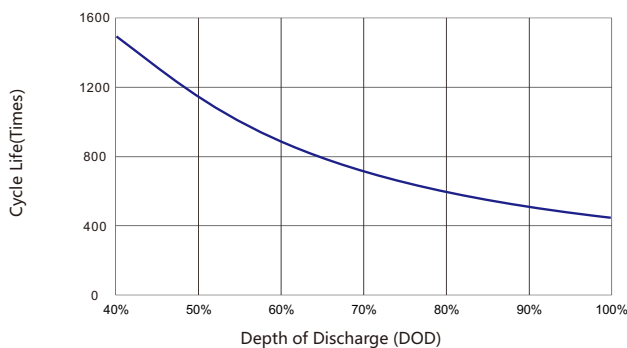
### Capacity vs Temperature



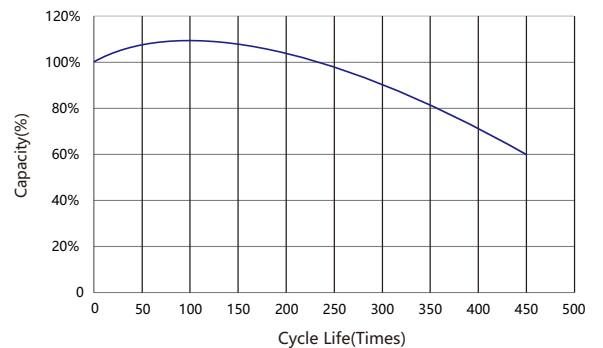
### Self-discharge vs Time



### 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	Limited Voltage
Limited current: $\leq 0.2C_3A$	14.75V~14.85V@25°C(77°F) Temp.Coefficient:-24mV/°C	13.7V~13.9V@25°C(77°F) Temp.Coefficient:-18mV/°C