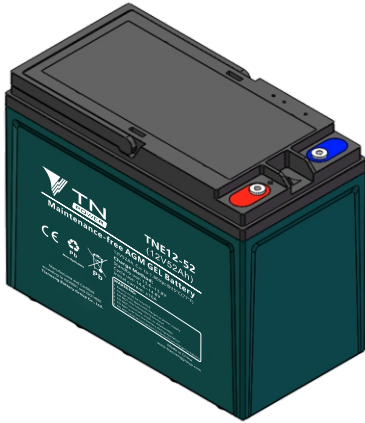


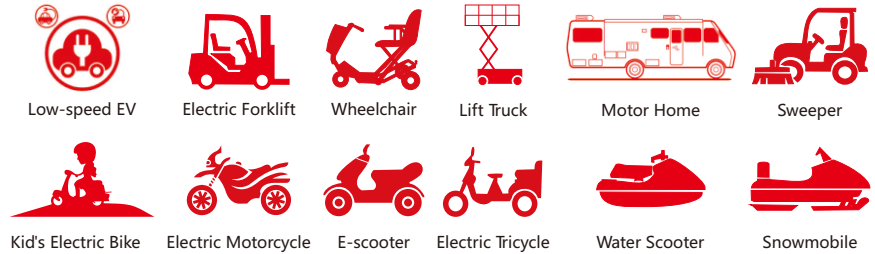
# TNE 12-52 [12V52Ah]



## 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
TNE12-52	Length	Width	Height	Total Height	12.0/26.5	M5	ABS UL94-HB (Optional: FR ABS UL94-V0)
	224/8.82	117/4.61	175/6.89	175/6.89			

## Product Specifications

Nominal Voltage	Rated Capacity 25°C/77°C	Operating Temp. Range	Capacity Effected Temp	Capacity vs Storage Time
12V	52Ah 20hr Rate (1.80V/cell) 49Ah 10hr Rate (1.75V/cell) 47Ah 5hr Rate (1.75V/cell) 45Ah 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	53.0	37.7	30.2	17.3	13.9	10.8	8.79	7.43	5.68	4.62	2.51
1.80V/cell	54.8	38.9	31.2	17.9	14.5	11.2	9.13	7.71	5.86	4.76	2.60
1.75V/cell	56.3	40.3	32.3	19.0	15.0	11.6	9.36	7.90	6.03	4.86	2.65
1.70V/cell	57.7	41.4	33.4	19.3	15.3	11.9	9.69	8.21	6.17	4.98	2.71
1.67V/cell	58.9	42.7	34.6	19.5	15.5	12.0	9.87	8.27	6.28	5.06	2.73
1.60V/cell	60.5	43.9	35.3	20.2	16.1	12.4	10.1	8.50	6.43	5.20	2.75

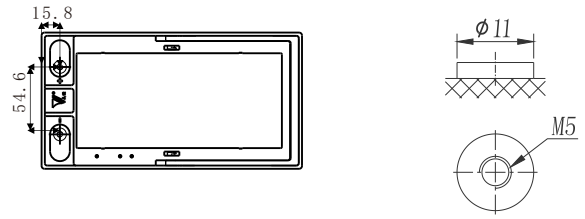
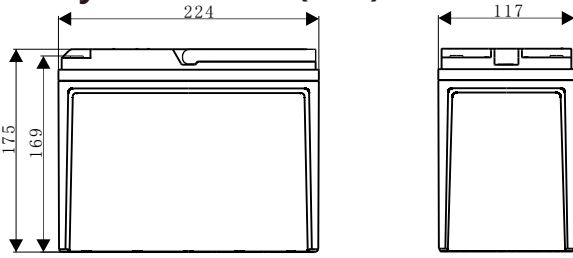
## Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	103	74.2	59.8	34.5	27.9	21.8	17.7	15.0	11.5	9.38	5.12
1.80V/cell	107	76.2	61.4	35.5	28.9	22.4	18.3	15.5	11.8	9.61	5.27
1.75V/cell	109	78.8	63.5	37.7	29.8	23.1	18.7	15.8	12.1	9.80	5.35
1.70V/cell	111	80.3	65.3	38.0	30.3	23.7	19.3	16.4	12.3	10.0	5.45
1.67V/cell	113	82.2	67.2	38.2	30.5	23.8	19.5	16.4	12.5	10.1	5.46
1.60V/cell	115	84.0	67.9	39.1	31.3	24.3	19.8	16.7	12.7	10.3	5.49

# TNE 12-52 [12V52Ah]

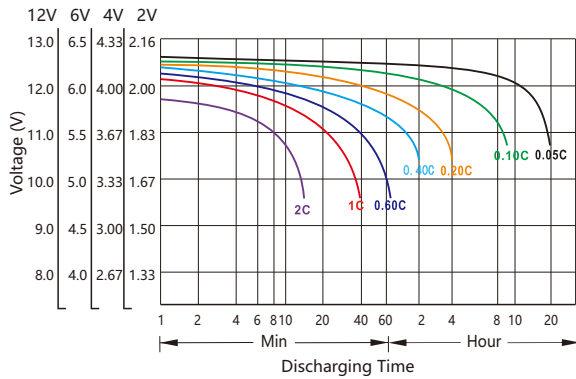


## Battery Dimensions(mm)

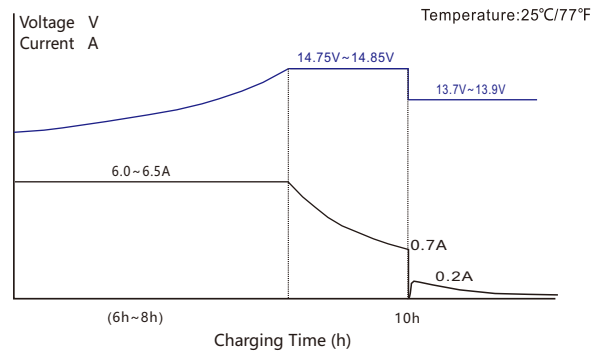


## Electrical Characteristics

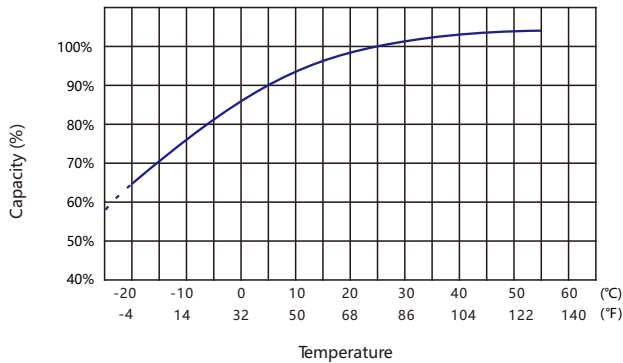
### Discharging Characteristics@25°C(77°F)



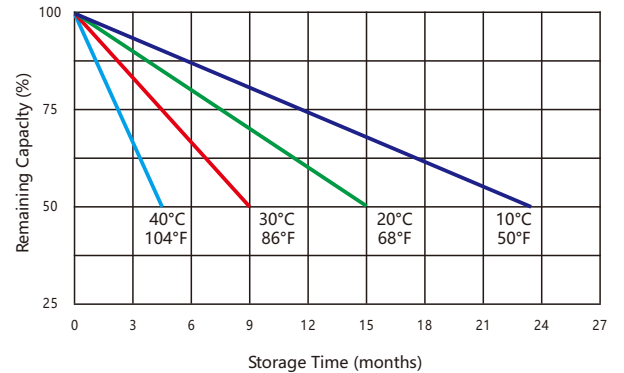
### Charging Characteristics@25°C(77°F)



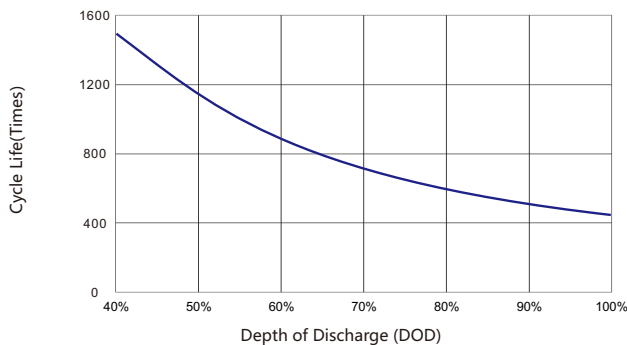
### Capacity vs Temperature



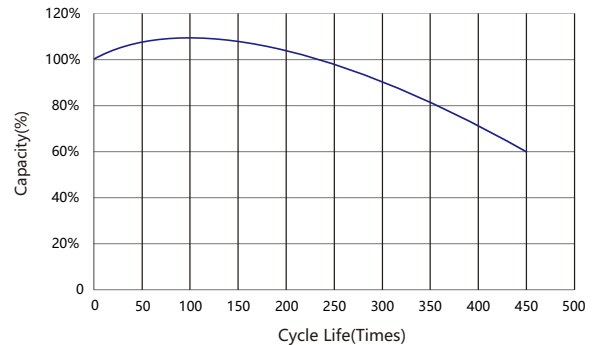
### Self-discharge vs Time



### 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 current:  $\leq 0.2C_5A$

### Limited Voltage

14.75V~14.85V@25°C(77°F)  
Temp.Coefficient:-24mV/°C

### Floating Voltage

13.7V~13.9V@25°C(77°F)  
Temp.Coefficient:-18mV/°C