

# TNE12-45L [12V45Ah]



## Product Features

### Deep Cycle High Power Series 400~600 Cycle Times @100%DOD

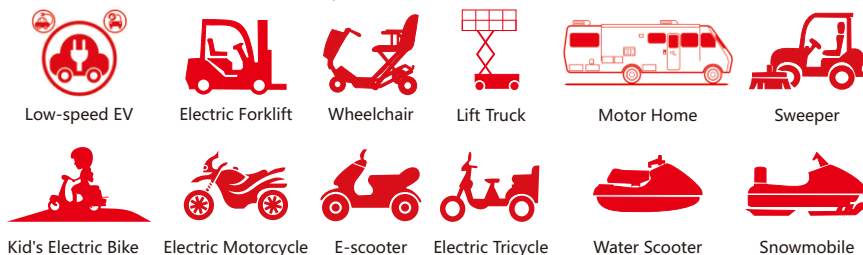
**↑10%W/2hr**  
Discharging Power  
High Rate Formula

**>40Wh/kg**  
Energy Density  
Special Paste Formula

**↑40%**  
Power Output Area  
High Density Grouping

**↓50%**  
Grid Corrosion  
Rare-earth patent alloy

## Product Applications



## Physical Specifications

Model	Dimensions (mm/inch)				Weight (kg/lbs)	Terminal	Container
TNE12-45	Length	Width	Height	Total Height	11.2/24.70	I10	ABS UL94-HB (Optional: FR ABS UL94-V0)
	222/8.74	106/4.17	173/6.77	173/6.77			

## Product Specifications

Nominal Voltage	Rated Capacity 25°C/77°C	Operating Temp. Range	Capacity Effected Temp	Capacity vs Storage Time
38V	45.0Ah 20hr Rate (1.80V/cell) 42.8Ah 10hr Rate (1.80V/cell) 41.7Ah 5hr Rate (1.75V/cell) 40.4Ah 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	53.1	43.4	31.7	18.1	13.13	10.15	8.22	6.88	5.21	4.21	2.21
1.80V/cell	54.4	44.3	32.3	18.4	13.31	10.25	8.29	6.96	5.28	4.28	2.25
1.75V/cell	55.5	45.1	32.8	18.6	13.46	10.33	8.34	7.00	5.30	4.29	2.26
1.70V/cell	56.5	45.7	33.2	18.8	13.55	10.38	8.39	7.04	5.33	4.31	2.27
1.67V/cell	57.5	46.4	33.6	18.9	13.62	10.42	8.41	7.05	5.34	4.32	2.27
1.60V/cell	59.0	47.2	33.9	19.2	13.70	10.46	8.43	7.07	5.36	4.33	2.27

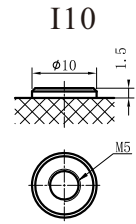
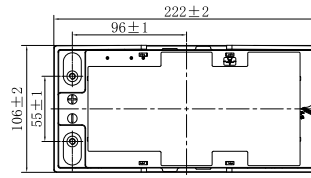
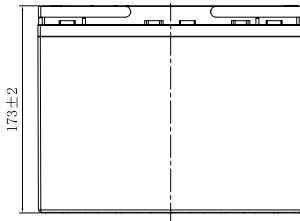
## Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	104.6	86.09	63.04	36.27	26.27	20.32	16.45	13.78	10.44	8.43	4.42
1.80V/cell	107.0	87.69	64.15	36.81	26.61	20.51	16.59	13.92	10.56	8.55	4.50
1.75V/cell	109.2	89.32	65.14	37.20	26.89	20.65	16.68	13.99	10.60	8.58	4.51
1.70V/cell	111.0	90.51	65.94	37.55	27.05	20.73	16.74	14.05	10.65	8.61	4.53
1.67V/cell	112.9	91.80	66.70	37.78	27.15	20.78	16.77	14.07	10.66	8.62	4.53
1.60V/cell	115.6	93.09	67.21	38.28	27.27	20.84	16.80	14.09	10.68	8.63	4.53

# TNE12-45L [12V45Ah]

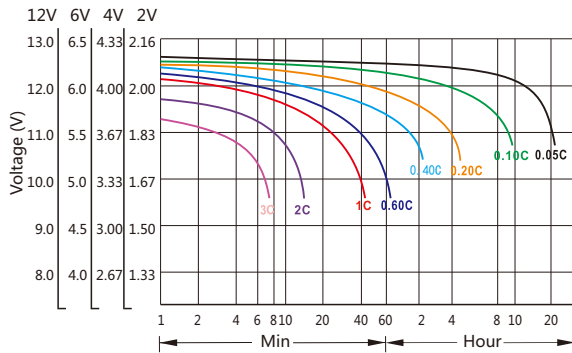


## Battery Dimensions(mm)

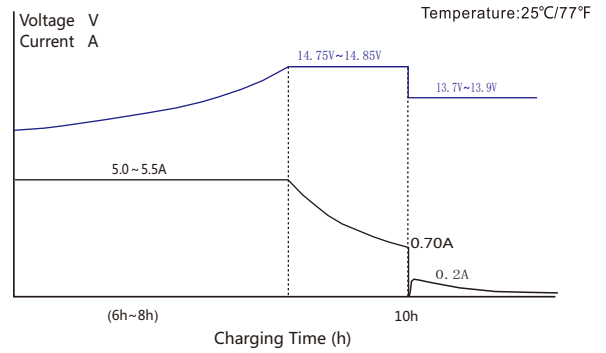


## Electrical Characteristics

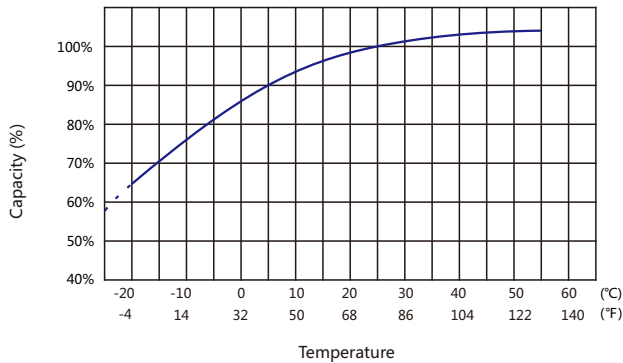
### Discharging Characteristics@25°C(77°F)



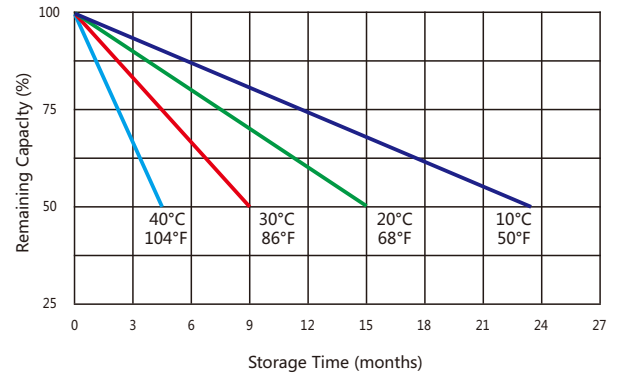
### Charging Characteristics@25°C(77°F)



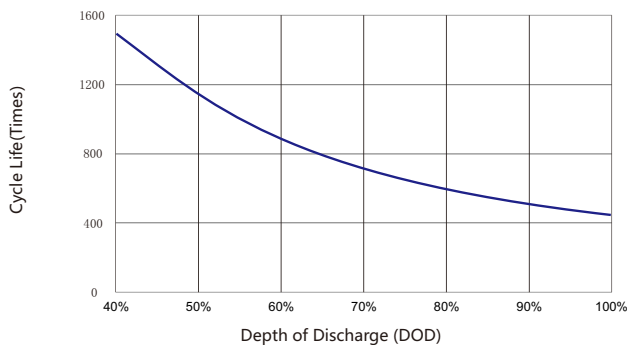
### Capacity vs Temperature



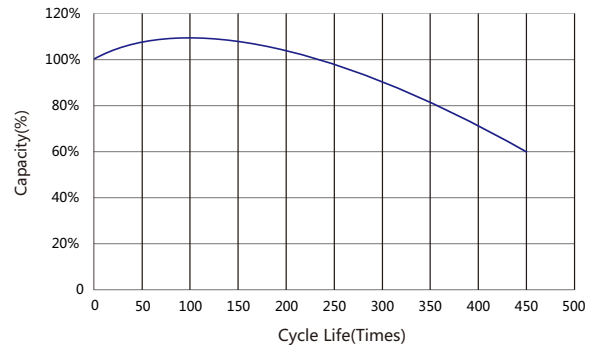
### Self-discharge vs Time



### 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 :  $\leq 0.12CA$

### 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