

TNEP 12-60[12V60Ah]



Product Features

Deep Cycle Long Life Series 400~500 Cycle Times @100%DOD		
↑10% Capacity Improve the content and utilization of active substances, Direct Bar-welding	Carbon Fiber	Rare-earth alloy
	↑15% Discharge Power Positive Carbon Fiber	↓50% Grid Corrosion Rare-earth patent alloy

Product Applications



Physical Specification

Model	Dimensions (±2mm/inch)				Weight (±2%kg/lbs)	Terminal	Container
TNEP12-60	Length	Width	Height	Total Height	16/35.3	13	ABS UL94-HB (Optional: FR ABS UL94-V0)
	229/9.02	138.5/5.45	211/8.31	216/8.50			

Product Specifications

Nominal Voltage	Rated Capacity 25°C/77°C	Operating Temp. Range	Capacity Effected Temp	Capacity vs Storage Time
12V	60Ah 20hr Rate (1.80V/cell) 53Ah 10hr Rate (1.75V/cell) 49Ah 5hr Rate (1.75V/cell) 46Ah 3hr Rate (1.75V/cell)	Discharge: -15~50°C (5~122°F) Charge: 0~40°C (32~104°F) Storage: -15~40°C (5~104°F) Optimum: 25±3°C (77±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	61.1	43.5	34.9	20.0	14.2	11.36	9.32	7.96	6.17	5.07	2.90
1.80V/cell	63.3	44.8	36.0	20.6	14.8	11.7	9.69	8.26	6.34	5.19	3.00
1.75V/cell	65.0	46.5	37.3	21.9	15.3	12.1	9.89	8.42	6.52	5.29	3.06
1.70V/cell	66.6	47.7	38.6	22.3	15.7	12.6	10.3	8.86	6.67	5.43	3.13
1.68V/cell	67.9	49.2	40.0	22.5	15.9	12.7	10.6	8.90	6.83	5.53	3.15
1.60V/cell	69.8	50.7	40.8	23.3	16.4	13.0	10.8	9.18	7.01	5.73	3.18

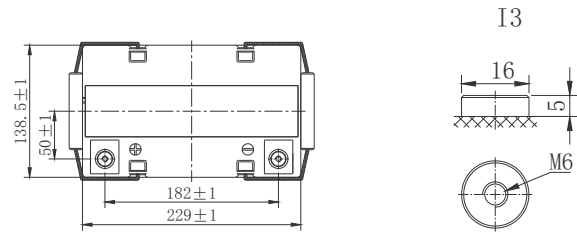
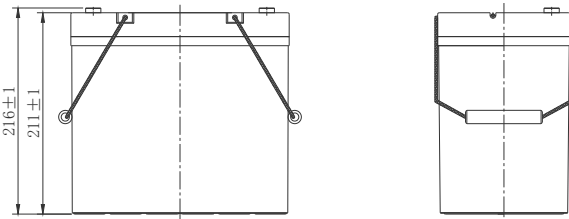
Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	119	85.7	69.0	39.8	28.6	22.9	18.8	16.1	12.5	10.3	5.91
1.80V/cell	123	87.9	70.9	41.0	29.5	23.4	19.4	16.6	12.8	10.5	6.08
1.75V/cell	126	90.9	73.3	43.5	30.5	24.2	19.8	16.9	13.1	10.7	6.18
1.70V/cell	128	92.6	75.4	43.9	31.0	24.9	20.6	17.7	13.3	10.9	6.29
1.68V/cell	130	94.9	77.6	44.1	31.2	25.0	20.9	17.6	13.6	11.0	6.30
1.60V/cell	132	97.0	78.4	45.2	32.0	25.5	21.2	18.0	13.8	11.3	6.34

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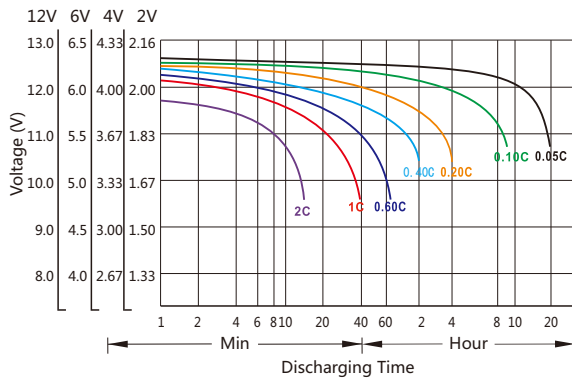


Battery Dimensions(mm)

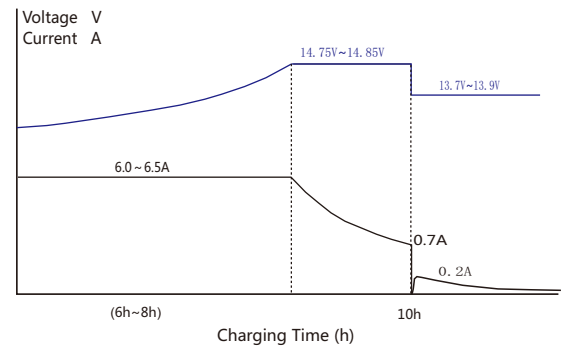


Electrical Characteristics

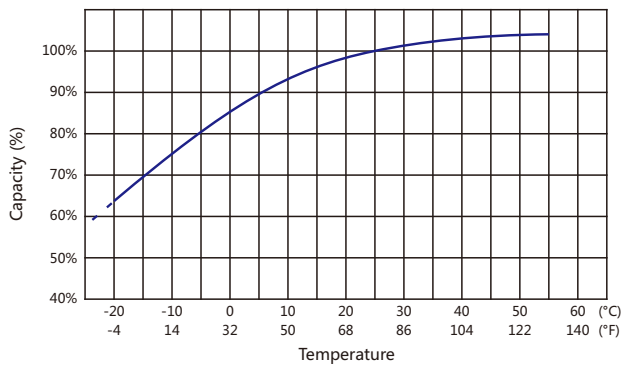
Discharging Characteristics@25°C(77°F)



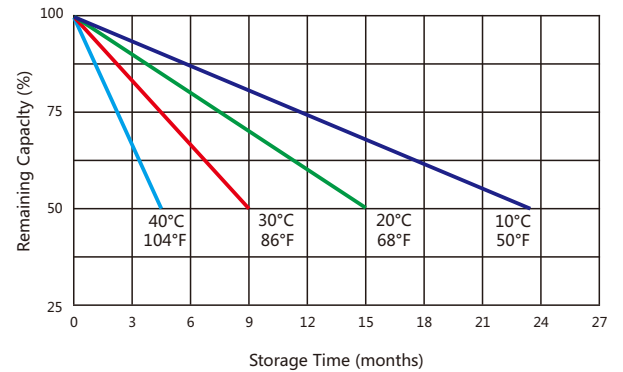
Charging Characteristics (25°C)



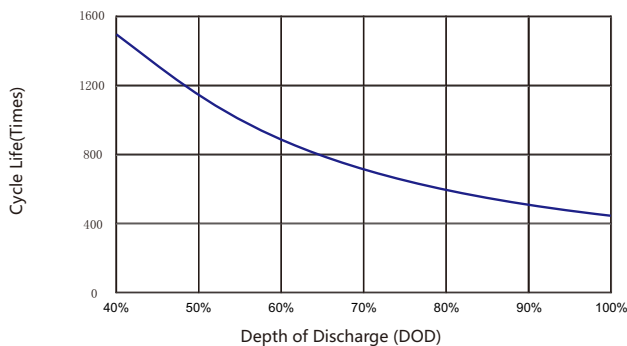
Capacity vs Temperature



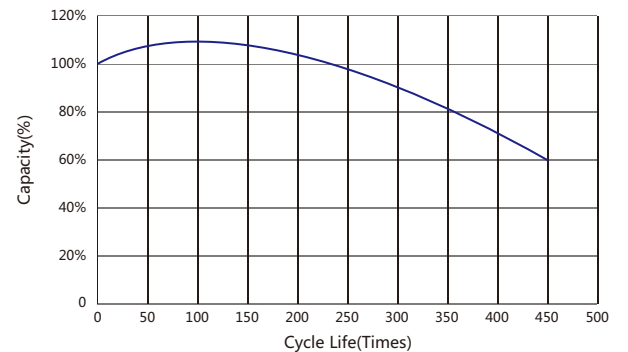
Self-discharge vs Time



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 : ≤0.2CA	14.75~14.85V@25°C(77°F) Temp.Coefficient:-24mV/°C	13.7~13.9V@25°C(77°F) Temp.Coefficient:-18mV/°C