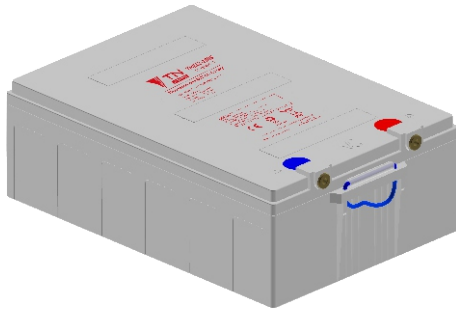


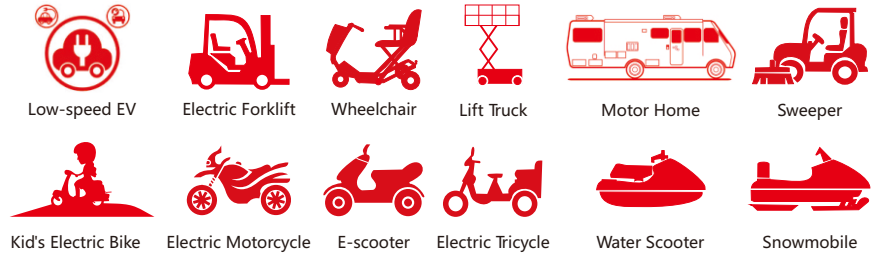
TNE 12-190S [12V190Ah]



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
TNE12-190S	Length	Width	Height	Total Height	52.5/115.7	I11	ABS UL94-HB (Optional: FR ABS UL94-V0)
	453/17.8	300/11.8	146/5.75	152/5.98			

Product Specifications

Nominal Voltage	Rated Capacity ^{25°C/77°C}	Operating Temp. Range	Capacity Effected Temp	Capacity vs Storage Time
12V	190Ah 20hr Rate (1.80V/cell) 170Ah 10hr Rate (1.75V/cell) 160Ah 5hr Rate (1.75V/cell) 150Ah 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	203.7	145.2	116.3	66.5	46.4	36.81	30.12	25.66	19.82	16.25	9.19
1.80V/cell	210.9	149.5	119.9	68.8	48.2	37.88	31.29	26.61	20.38	16.66	9.50
1.75V/cell	216.6	155.0	124.3	73.2	50.0	39.24	31.99	27.16	20.97	16.99	9.68
1.70V/cell	221.9	159.1	128.6	74.3	51.1	40.63	33.34	28.52	21.46	17.43	9.90
1.67V/cell	226.5	164.2	133.2	75.1	51.8	41.00	34.12	28.66	21.95	17.74	9.98
1.60V/cell	232.6	169.0	135.9	77.6	53.6	42.23	34.87	29.52	22.49	18.34	10.06

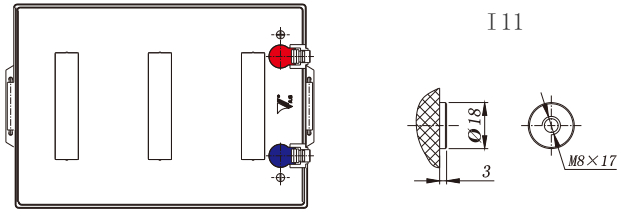
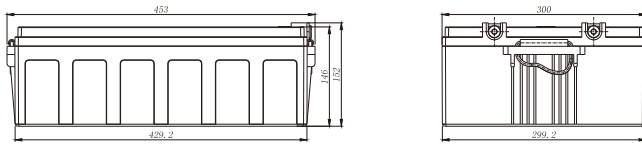
Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	397.8	285.5	230.0	132.6	93.1	74.1	60.8	51.8	40.15	32.96	18.70
1.80V/cell	410.3	292.9	236.2	136.6	96.2	75.9	62.8	53.6	41.12	33.68	19.26
1.75V/cell	419.8	303.1	244.2	144.8	99.5	78.3	64.0	54.4	42.14	34.22	19.56
1.70V/cell	427.9	308.8	251.2	146.2	101.2	80.6	66.3	56.8	42.92	34.91	19.91
1.67V/cell	433.2	316.2	258.6	147.0	101.8	80.9	67.4	56.7	43.53	35.28	19.96
1.60V/cell	441.1	323.2	261.2	150.6	104.4	82.6	68.3	58.0	44.31	36.19	20.07

TNE 12-190S [12V190Ah]

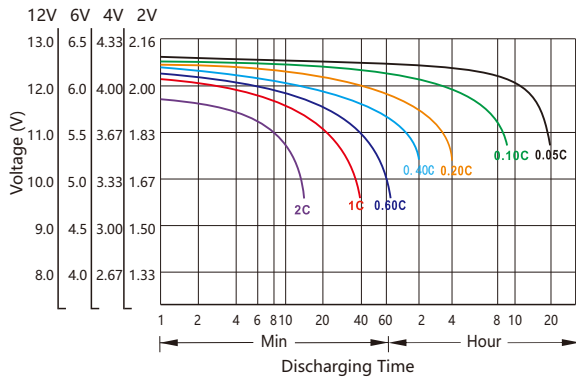


Battery Dimensions(mm)

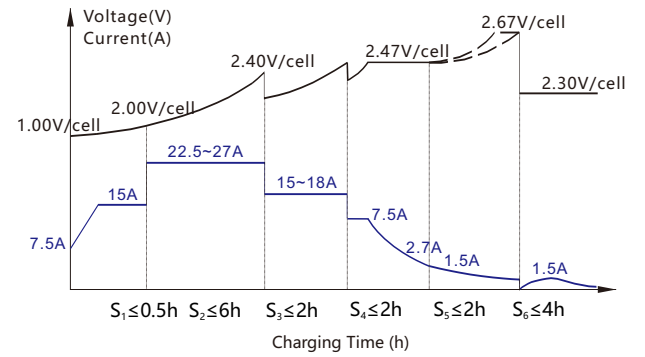


Electrical Characteristics

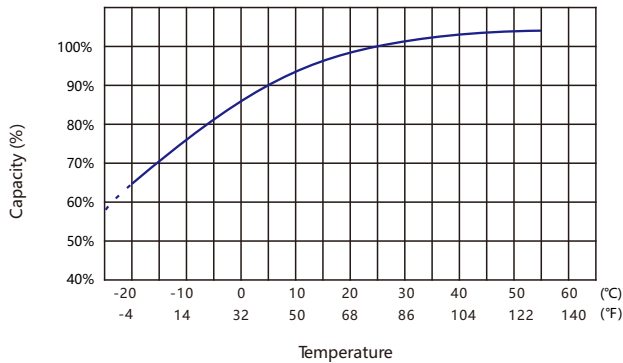
Discharging Characteristics@25°C(77°F)



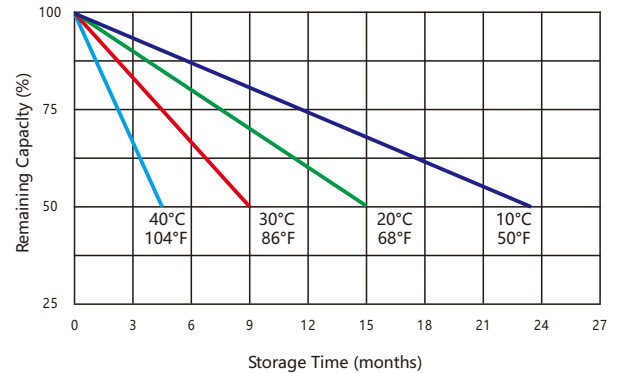
Charging Characteristics@25°C(77°F)



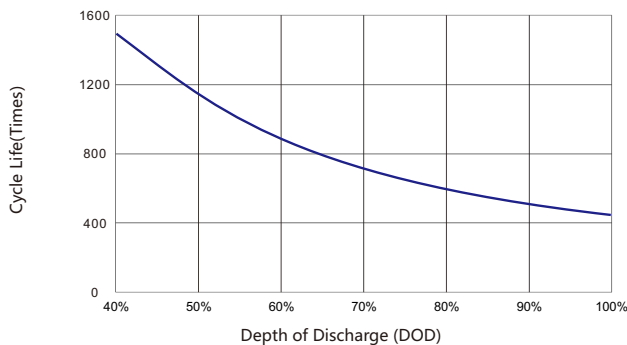
Capacity vs Temperature



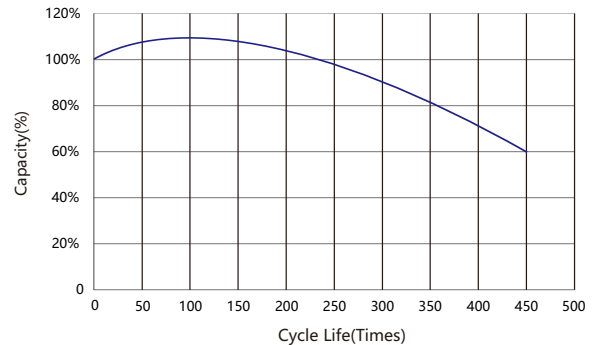
Self-discharge vs Time



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: ≤0.2C ₅ A	14.4V~14.8V@25°C(77°F) Temp.Coefficient:-24mV/°C	13.5V~13.8V@25°C(77°F) Temp.Coefficient:-18mV/°C