

# TNG12-40 [12V40Ah]



## Product Features

General Purpose (GEL)		260~300 Cycle Times @100%DOD	
↑20% Cycle Life High temperature curing	↑10% Low Temp. Capacity Nano gel electrolyte	↑20% Charge Acceptance Special negative additive	↓50% Grid Corrosion Rare-earth patent alloy

## Product Applications



## Physical Specification

Model	Dimensions (mm/inch)				Weight (kg/lbs)	Terminal	Container
TNG12-40	Length	Width	Height	Total Height	12.1/26.7	I3	ABS UL94-HB (Optional: FR ABS UL94-V0)
	198.5/7.81	166/6.54	169.5/6.67	169.5/6.67			

## Product Specifications

Nominal Voltage	Rated Capacity <sup>25°C/77°F</sup>	Internal Resistance	Max. Discharge Current	Operating Temp. Range
12V	42Ah 20hr Rate (1.80V/cell) 40Ah 10hr Rate (1.80V/cell) 35Ah 5hr Rate (1.75V/cell) 32Ah 3hr Rate (1.70V/cell)	10.5mΩ@25°C/77°F	280A (5s)	Discharge: -15~50°C (5~122°F) Charge: -0~40°C (32~104°F) Storage: -15~40°C (5~104°F) Optimum: 25±2°C (77±4°F)

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	72.8	57.5	44.1	36.9	28.2	21.8	17.9	11.5	8.87	7.29	6.27	5.57	4.56	3.90	2.08
1.80V/cell	80.7	63.6	50.0	42.1	32.2	24.2	19.9	12.3	9.46	7.70	6.61	5.83	4.78	4.00	2.12
1.75V/cell	87.0	69.7	54.7	46.4	35.2	26.2	21.4	13.3	10.1	8.20	6.97	6.06	4.92	4.08	2.16
1.70V/cell	91.5	74.5	58.5	49.6	37.4	27.6	22.4	13.9	10.5	8.44	7.16	6.21	5.02	4.18	2.21
1.67V/cell	98.8	78.3	61.9	52.4	39.6	28.7	23.3	14.4	10.7	8.62	7.32	6.35	5.10	4.24	2.25
1.60V/cell	109	84.2	67.1	57.3	41.7	30.5	24.7	14.8	11.1	8.96	7.54	6.54	5.24	4.34	2.29

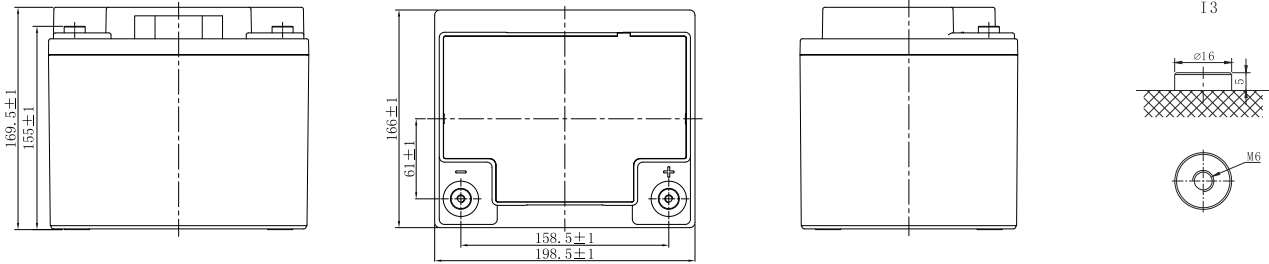
## Constant Power Discharge (W/cell)@25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	136	109	84.5	71.5	55.5	43.1	35.7	23.2	17.9	14.8	12.8	11.4	9.35	8.02	4.29
1.80V/cell	150	120	95.6	81.4	63.2	47.9	39.6	24.7	19.1	15.6	13.4	11.9	9.77	8.19	4.35
1.75V/cell	161	131	104	89.4	68.8	51.6	42.4	26.7	20.3	16.6	14.1	12.3	10.0	8.35	4.43
1.70V/cell	170	140	111	95.1	72.9	54.3	44.3	27.6	21.0	17.0	14.5	12.6	10.2	8.49	4.50
1.67V/cell	183	146	117	100	77.0	56.4	45.9	28.6	21.3	17.3	14.7	12.8	10.3	8.60	4.57
1.60V/cell	200	157	127	109	80.7	59.7	48.4	29.4	22.2	17.9	15.1	13.2	10.6	8.77	4.64

# TNG12-40 [12V40Ah]

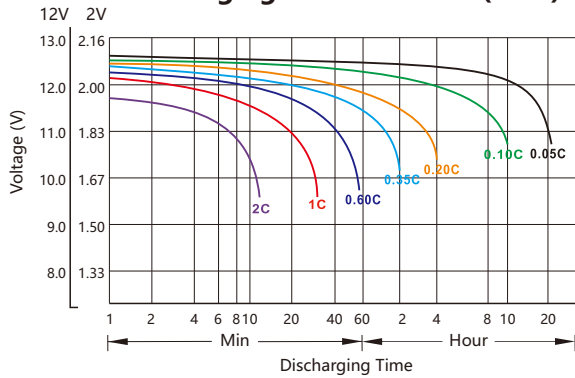


## Battery Dimensions(mm)

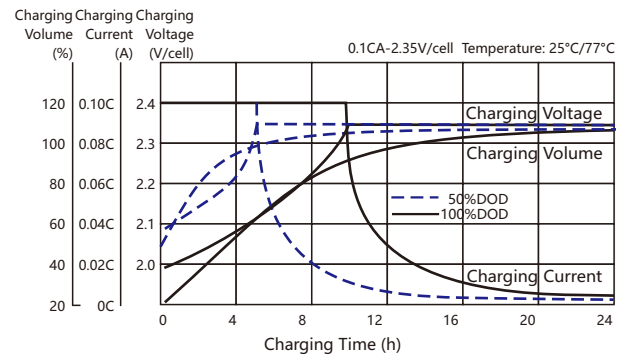


## Electrical Characteristics

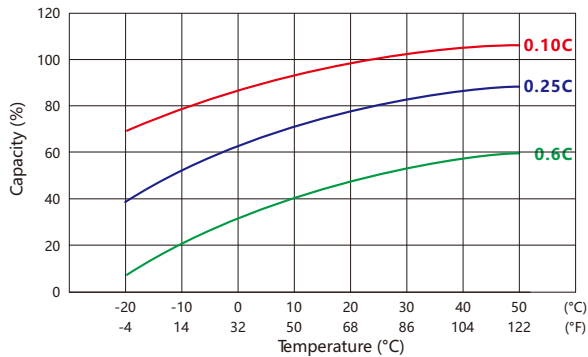
### Discharging Characteristics(25°C)



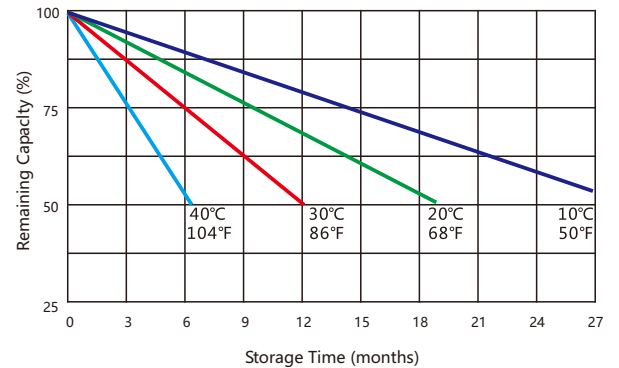
### Charging Characteristics(25°C)



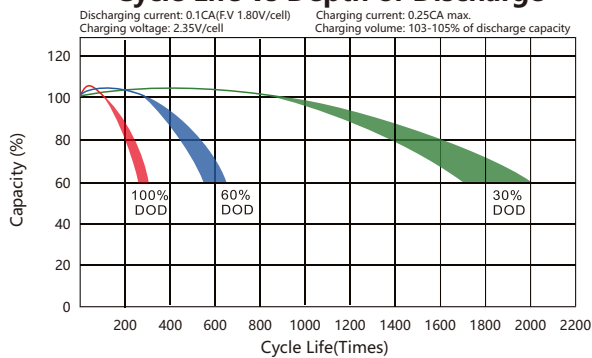
### Capacity vs Temperature



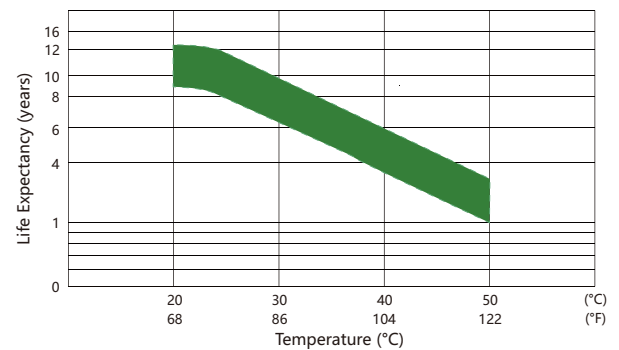
### Self-discharge vs Time



### Cycle Life vs Depth of Discharge



### Floating Life vs Temperature



## Usage and Maintenance

Charge Current	Equalization Charge	Float Charge
Limited current: $\leq 0.25C_{10}A$	Constant Voltage: 14.1~14.4V@25°C(77°F) Temp.Coefficient:-24mV/°C	Constant Voltage: 13.5~13.8V@25°C(77°F) Temp.Coefficient:-18mV/°C