

# STARMAX

The world's leading battery brand



## DEEP CYCLE GEL BATTERIES

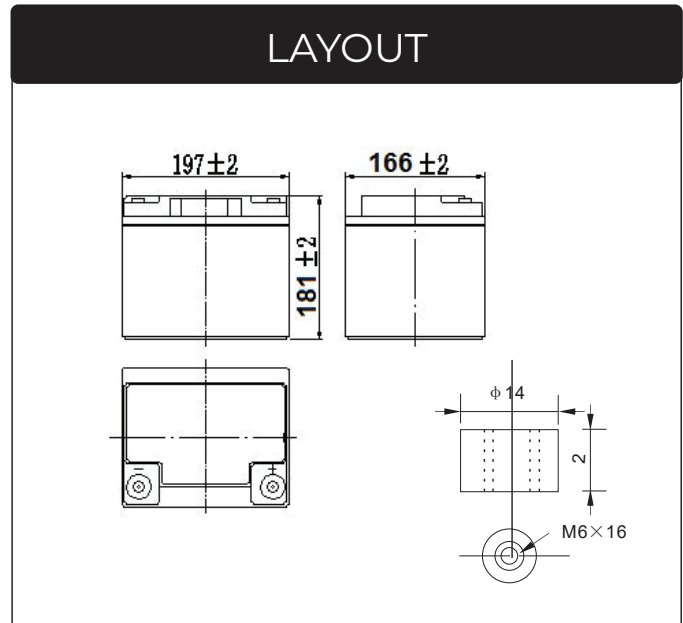
STG12-40 (12V 40Ah)



[www.starmaxbatteries.com](http://www.starmaxbatteries.com)

# STG SERIES-GEL BATTERIES

## STG12-40



## General Features

- ✓ Battery design life up to 12 years
- ✓ Special plate design guarantees battery floating life more than 4000 times
- ✓ High thermal capacity reduce the risk of thermal out of control and drying hard, and the battery can be used in bad environment
- ✓ Little water losing, and no electrolyte stratification phenomenon

## Applications

- ✓ Telecommunications
- ✓ Solar system
- ✓ Wind power system
- ✓ Engine starting
- ✓ Wheelchair, Floor cleaning machines, Golf trolley, Boats

## Standards

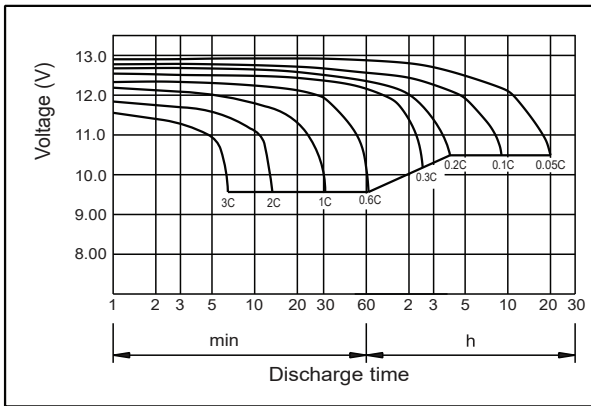
- ✓ IEC 60896 Certified
- ✓ Classified as "Long Life" according to Eurobat
- ✓ UL Certified
- ✓ Manufactured at Starmax® IATF16949, ISO 9001, ISO 14001 and ISO 45001 certified production facilities



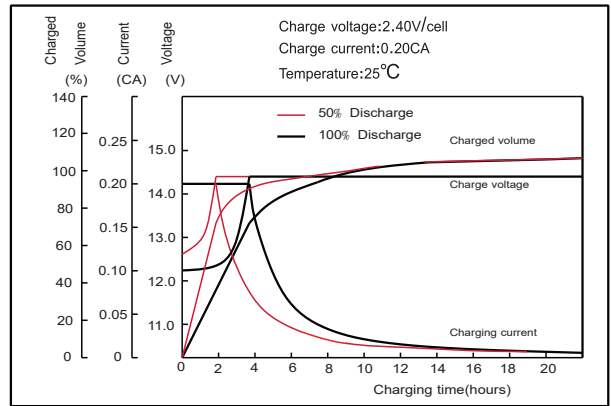
# SPECIFICATIONS

Rated Voltage	12V	
Nominal Capacity	(C <sub>20</sub> ,1.80V/cell)	40Ah
Dimensions	Length	197±2mm(7.73inch)
	Width	166±2mm(6.54inch)
	Container height	174±2mm(6.85inch)
	Total height	181±2mm(7.13inch)
Approx. weight	13.5kg(29.7lbs)±3%	
Terminal	T14	
Container material	ABS	
Rated capacity (25°C)	40.0 Ah	C20(1.90A,1.80V/cell)
	35.0 Ah	C10(3.50A,1.80V/cell)
	31.0 Ah	C5(6.20A,1.75V/cell)
	27.7 Ah	C3(9.22A,1.75V/cell)
	22.2 Ah	C1(22.2A,1.60V/cell)
Max. discharge current	400A(5 sec.)	
Internal resistance (25°C)	Approx.8.5m Ω	
Operating temp. range	Discharge	-15~50°C (5~122°F)
	Charge	-10~50°C (14~104°F)
	Storage	-20~50°C (-4~122°F)
Nominal operating temp. range	25±3°C (77±5°F)	
Standby Use	Initial Charging Current less than 9.5A. Voltage 2.23V~2.27V at 25°C (77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 9.5A. Voltage 2.30V~2.37V at 25°C (77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 9.5A. Voltage 2.40V~2.50V at 25°C (77°F)Temp. Coefficient -5mV/°C	
Effect of temp. to Capacity	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
Self discharge	STG series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

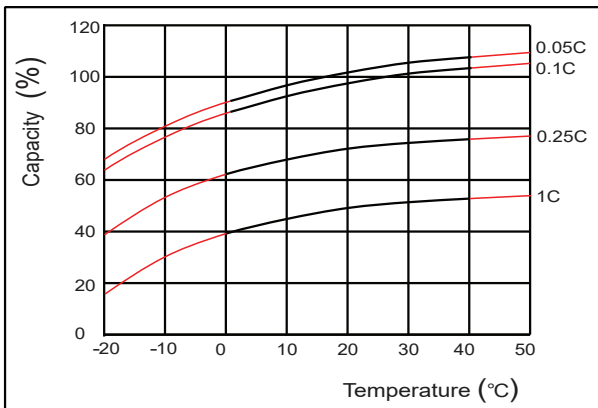
● Discharge characteristics(25°C)



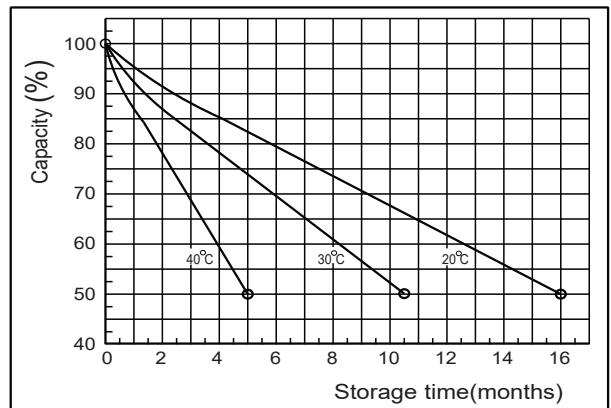
● Charging characteristics (25°C)



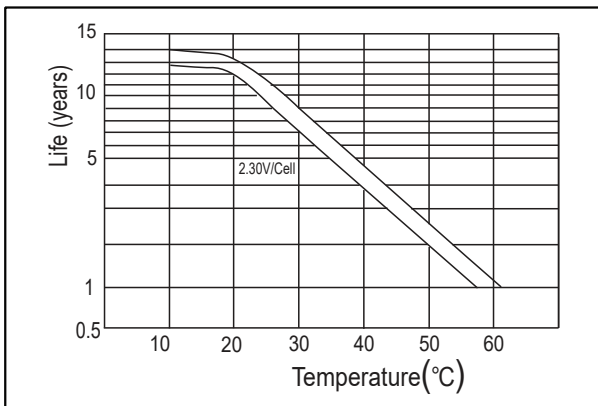
● Temperature effects on Capacity



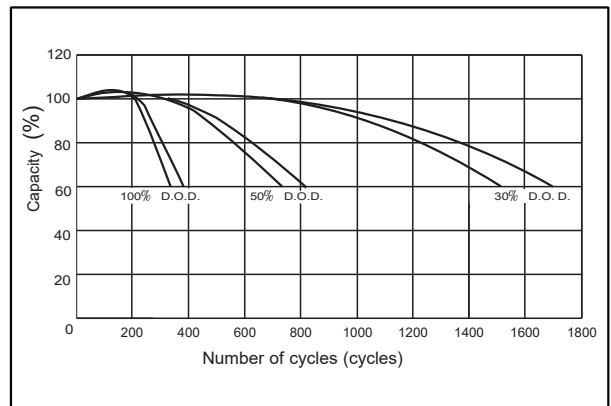
● Self-discharge characteristics



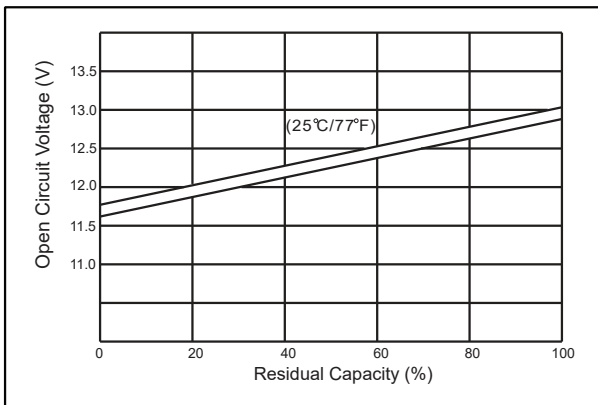
● Floating life on Temperature



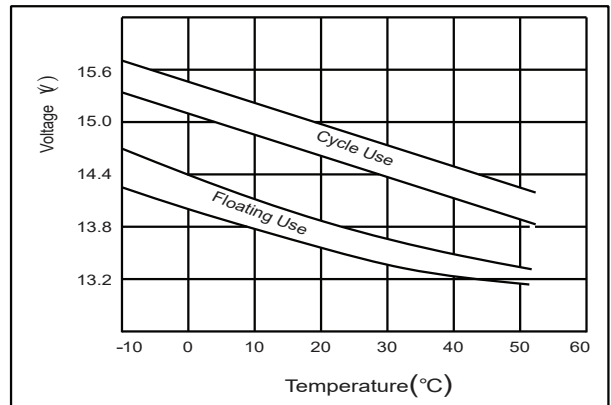
● Cycle life on D.O.D (25°C)



● The relationship for OCV and Capacity (25°C)



● The relationship for Charging voltage and Temperature



### Constant Current Discharge Characteristics Unit:A(25°C,77°F)

F.V/Time	10min	15min	30min	60min	2h	2h	4h	5h	8h	10h	20h
9.60V	78.0	64.0	38.8	24.0	14.6	10.4	8.16	6.94	4.90	4.07	2.16
9.90V	75.7	62.5	38.0	23.6	14.5	10.3	8.11	6.90	4.87	4.06	2.15
10.2V	72.5	60.2	36.9	23.0	14.4	10.3	8.06	6.85	4.83	4.05	2.15
10.5V	69.4	58.1	36.0	22.3	14.2	10.2	8.00	6.80	4.80	4.03	2.13
10.8V	65.5	55.0	34.6	21.6	13.8	10.0	7.76	6.60	4.66	4.00	2.12

### Constant Power Discharge Characteristics Unit:W(25°C,77°F)

F.V/Time	10min	15min	30min	60min	2h	2h	4h	5h	8h	10h	20h
9.60V	842	703	435	274	169	122	96.0	82.0	58.2	48.6	25.9
9.90V	817	686	427	269	168	122	95.4	81.5	57.8	48.5	25.8
10.2V	783	661	414	263	167	121	94.7	80.9	57.4	48.4	25.8
10.5V	750	638	404	254	164	120	94.1	80.4	57.0	48.1	25.6
10.8V	708	604	389	246	160	118	91.3	78.0	55.3	47.8	25.4



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