

STARMAX

The world's leading battery brand



DEEP CYCLE GEL BATTERIES

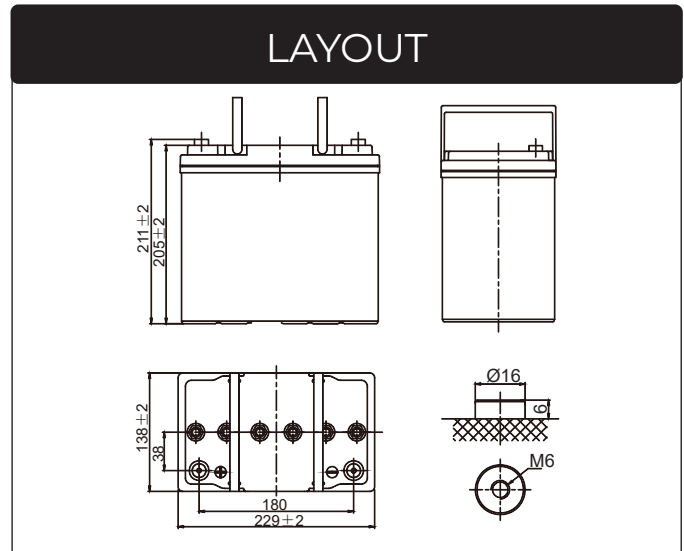
STG12-50 (12V 50AH)



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STG SERIES-GEL BATTERIES

STG12-50



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 ₂₀ ,1.80V/cell)	50Ah
Dimensions	Length	229±2mm (9.02 inches)
	Width	138±2mm (5.43 inches)
	Container height	205±2mm (8.07 inches)
	Total height	211±2mm (8.31 inches)
Approx. weight	16.1kg (35.5 lbs)	
Terminal	M6	
Container material	ABS	
Rated capacity (25°C)	50.0 Ah	C20(2.50A,1.80V/cell)
	47.0 Ah	C10(4.70A,1.80V/cell)
	40.0 Ah	C5(8.00A,1.75V/cell)
	35.1 Ah	C3(11.7A,1.75V/cell)
	30.9 Ah	C1(30.9A,1.60V/cell)
Max. discharge current	550A (5s)	
Internal resistance (25°C)	Approx 12.1mΩ	
Operating temp. range	Discharge	-20~55°C (-4~131°F)
	Charge	-20~40°C (-4~104°F)
	Storage	-15~50°C (5~122°F)
Nominal operating temp. range	25±3°C (77±5°F)	
Standby Use	Initial Charging Current less than 12.5A. Voltage 2.23V~2.27V at 25°C (77°F)Temp. Coefficient -3mV/°C	
Equalization Use	Initial Charging Current less than 12.5A. Voltage 2.30V~2.37V at 25°C (77°F)Temp. Coefficient -4mV/°C	
Cycle Use	Initial Charging Current less than 12.5A. Voltage 2.40V~2.50V at 25°C (77°F)Temp. Coefficient -5mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
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.	

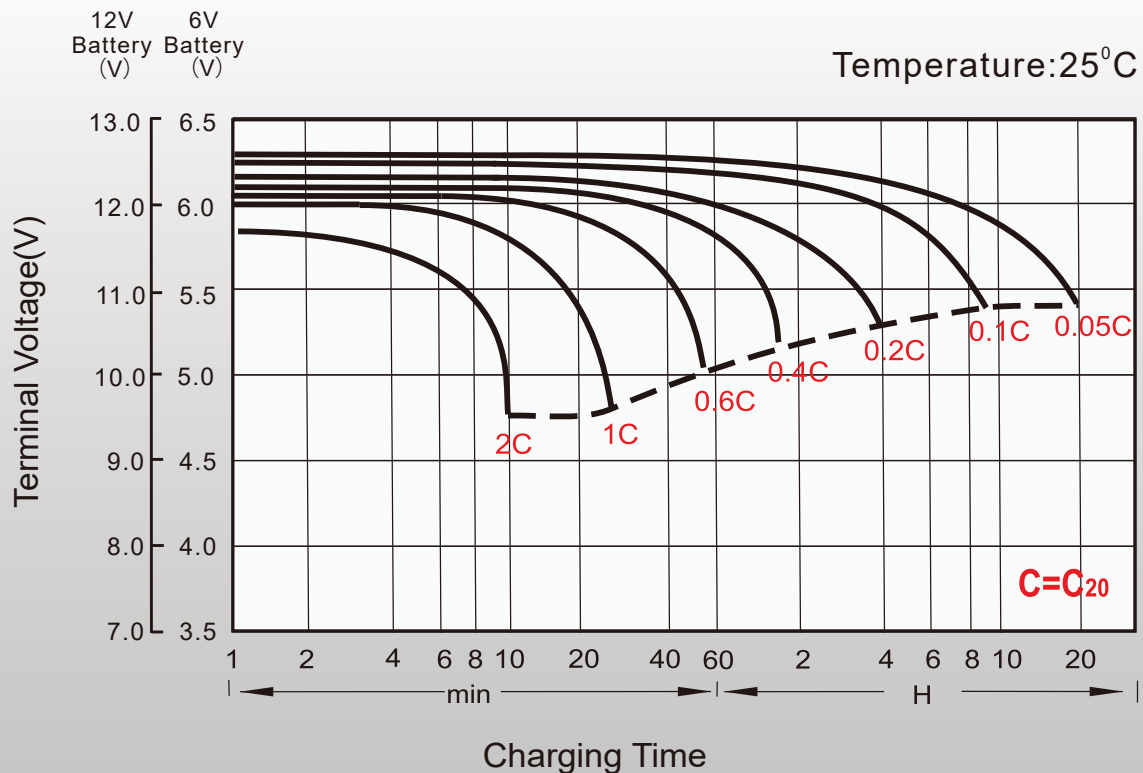
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	64.5	55.9	44.0	39.8	29.1	23.0	17.4	13.5	10.2	8.39	7.37	6.49	5.31	4.61	2.38
1.80V/cell	73.2	63.3	49.7	43.3	30.8	25.4	18.4	14.9	11.2	9.12	7.76	6.85	5.53	4.70	2.50
1.75V/cell	79.4	68.6	53.7	44.2	31.9	28.5	20.2	16.0	11.7	9.39	8.00	7.08	5.63	4.85	2.57
1.70V/cell	83.0	72.0	56.4	44.5	32.4	29.4	20.8	16.3	11.8	9.39	8.10	7.10	5.67	4.84	2.61
1.67V/cell	87.3	75.0	58.4	45.8	33.0	30.0	21.2	16.7	12.0	9.56	8.23	7.20	5.72	4.89	2.63
1.60V/cell	90.3	77.3	60.0	46.4	33.5	30.9	21.7	16.9	12.2	9.74	8.41	7.30	5.77	4.94	2.66

Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	121.3	105.8	83.6	76.0	56.0	44.7	33.9	26.4	20.0	16.5	14.6	12.8	10.6	9.15	4.57
1.80V/cell	135.7	118.4	93.6	82.1	58.9	49.1	35.8	29.0	21.8	17.9	15.3	13.4	10.9	9.30	4.78
1.75V/cell	144.8	126.4	99.9	83.1	60.7	54.6	38.9	30.9	22.6	18.3	15.6	13.9	11.1	9.59	4.92
1.70V/cell	148.9	131.0	103.8	82.9	61.1	55.9	39.6	31.3	22.9	18.2	15.8	13.9	11.1	9.49	4.99
1.67V/cell	154.7	135.0	106.6	84.7	61.9	56.8	40.3	31.8	23.2	18.5	16.0	14.1	11.2	9.59	5.03
1.60V/cell	156.9	136.9	108.2	85.1	62.2	58.0	40.9	32.3	23.3	18.8	16.3	14.2	11.3	9.68	5.08

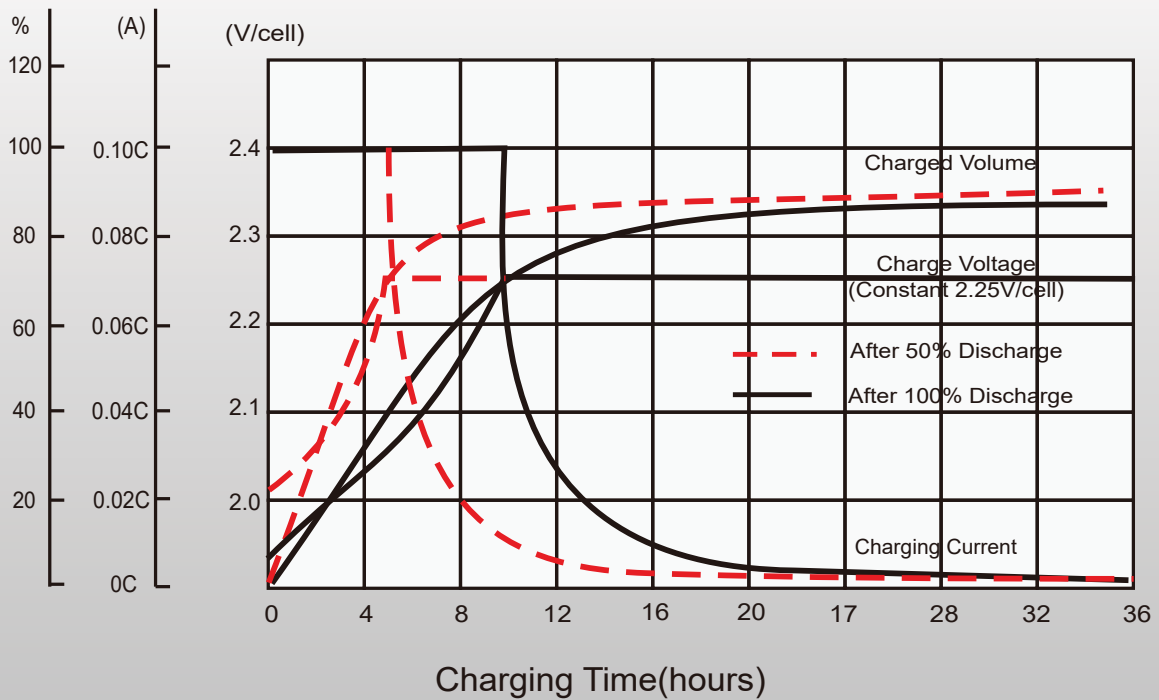
Discharge Characteristics



Float Charging Characteristics

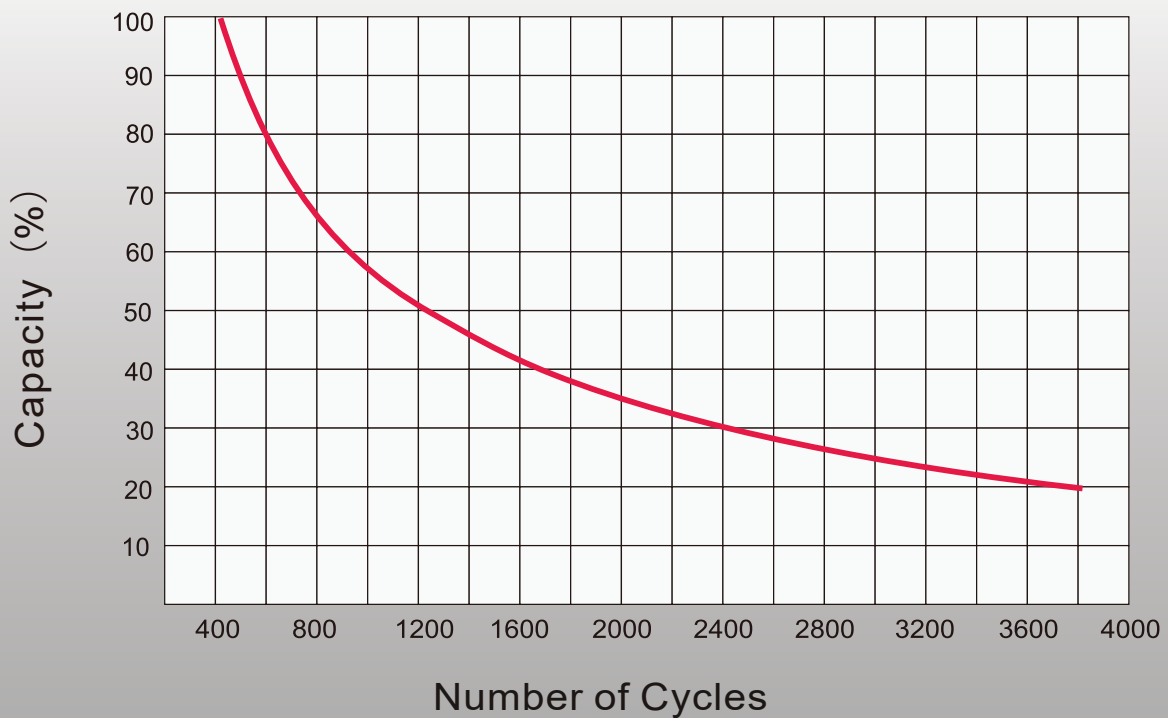
Charge Volume
Charging Current
Charging Voltage

0.1CA-2.25V/cell Temperature: 25°C

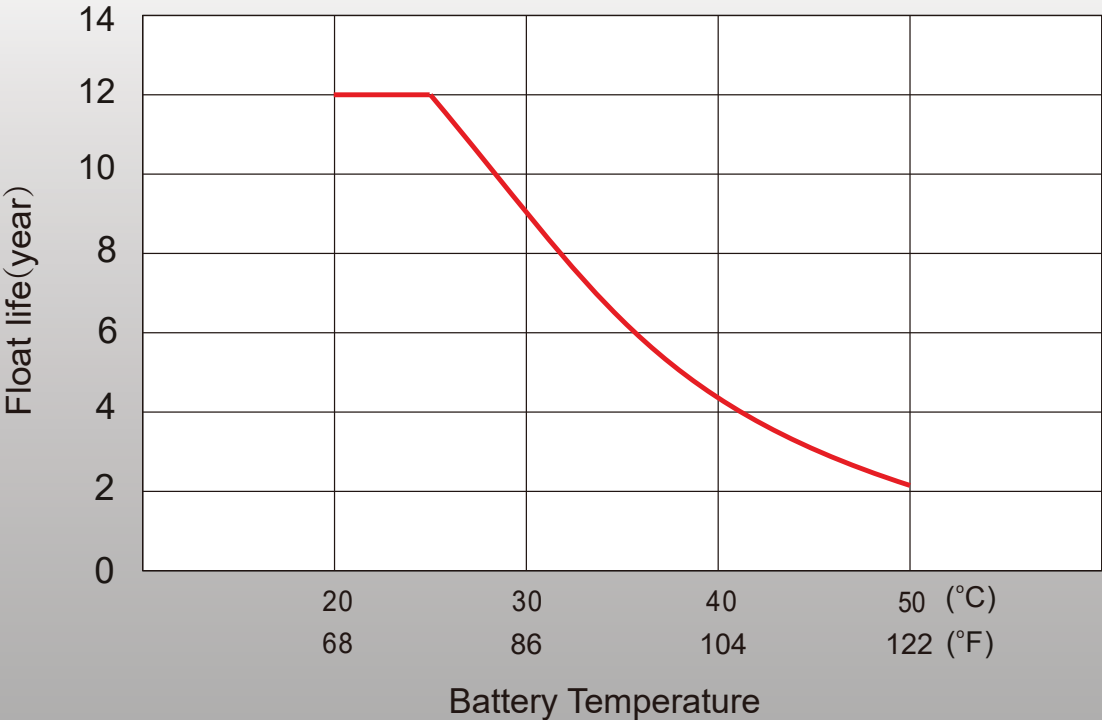


Cycle Life in Relation to Depth of Discharge

Acc.to IEC 896-2 (25°C / 77°F)



Effect of Temperature on Long Term Float Life





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