



G Series - GEL Battery

G12-40 (12v 38Ahr)

Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	38.0AH	
Dimension	Length	197 ± 1mm (7.76 inches)
	Width	165 ± 1mm (6.50 inches)
	Container Height	170 ± 1mm (6.69 inches)
	Total Height (with Terminal)	170 ± 1mm (6.69 inches)
Approx Weight	Approx 13.5 kg (29.77lbs)	
Terminal	T6	
Container Material	ABS	
Rated Capacity	38.0 AH/1.90A	(20hr, 1.80V/cell, 25°C/77°F)
	35.3 AH/3.53A	(10hr, 1.75V/cell, 25°C/77°F)
	30.4 AH/6.08A	(5hr, 1.75V/cell, 25°C/77°F)
	26.5 AH/8.82A	(3hr, 1.75V/cell, 25°C/77°F)
	20.9 AH/20.9A	(1hr, 1.67V/cell, 25°C/77°F)
Max. Discharge Current	380A (5s)	
Internal Resistance	Approx 10.5mΩ	
Operating Temp. Range	Discharge	-20~55°C (-4~131°F)
	Charge	0~40°C (32~104°F)
	Storage	-20~50°C (-4~122°F)
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 9.5A. Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Synergy G series batteries may be stored for up to 9 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



Applications

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



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

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	32.1	25.2	19.3	16.1	10.2	7.79	6.45	5.57	4.81	4.26	3.84	3.51	3.32	1.82
1.80V/cell	36.8	28.2	21.2	17.8	11.1	8.35	6.84	5.85	5.05	4.46	4.02	3.69	3.47	1.90
1.75V/cell	41.4	31.0	23.0	19.0	11.7	8.82	7.16	6.08	5.23	4.61	4.15	3.80	3.53	1.94
1.70V/cell	44.6	33.2	24.4	20.1	12.4	9.18	7.40	6.27	5.41	4.77	4.28	3.90	3.62	1.96
1.67V/cell	46.4	34.5	25.2	20.9	12.7	9.47	7.58	6.40	5.50	4.84	4.34	3.95	3.66	1.98
1.60V/cell	50.3	36.9	27.1	22.2	13.3	9.85	7.87	6.60	5.63	4.94	4.42	4.04	3.73	2.01

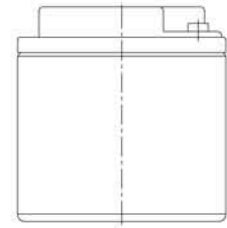
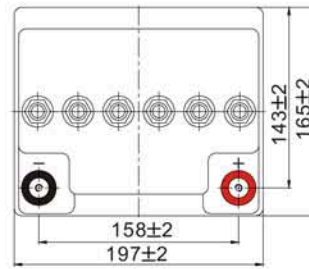
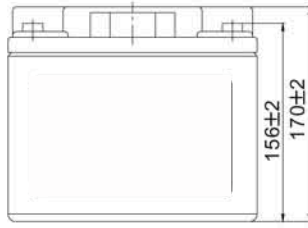
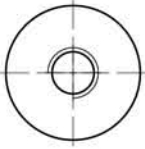
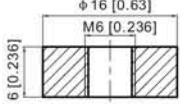
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	61.5	48.6	37.3	31.4	20.0	15.3	12.7	11.0	9.52	8.45	7.64	6.99	6.61	3.64
1.80V/cell	69.6	53.8	40.9	34.4	21.5	16.3	13.4	11.5	10.0	8.82	7.98	7.33	6.90	3.79
1.75V/cell	77.3	58.7	43.9	36.7	22.7	17.2	14.0	11.9	10.3	9.11	8.22	7.54	7.03	3.86
1.70V/cell	82.4	62.3	46.2	38.6	24.0	17.8	14.4	12.3	10.6	9.39	8.45	7.74	7.18	3.90
1.67V/cell	84.8	64.0	47.5	39.8	24.5	18.3	14.7	12.5	10.8	9.50	8.56	7.82	7.26	3.94
1.60V/cell	90.8	67.9	50.7	42.1	25.3	19.0	15.2	12.8	11.0	9.68	8.69	7.97	7.39	3.99

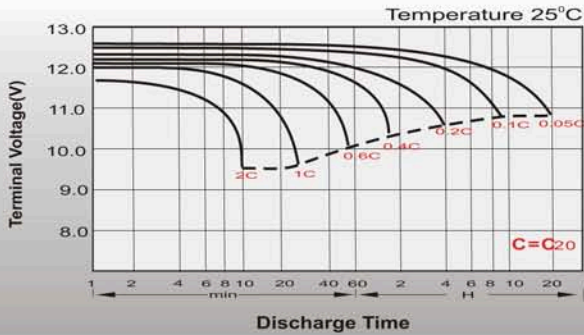
Dimensions

T6 Terminal

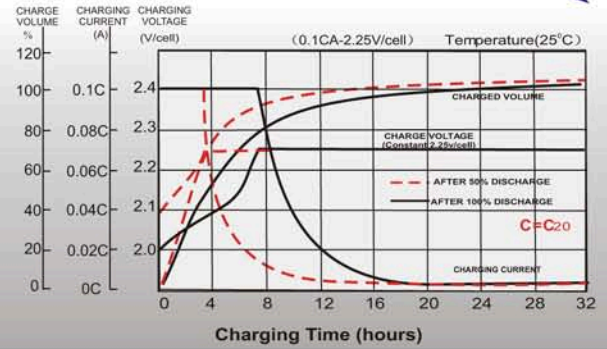
Unit: mm [inches]



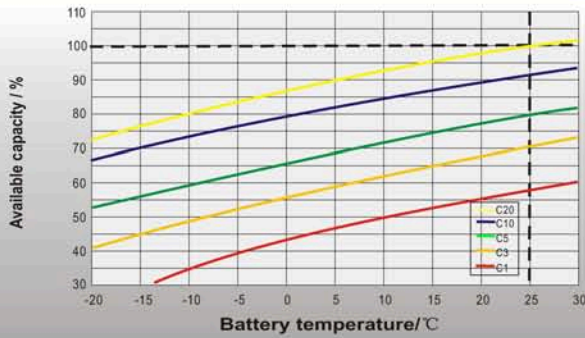
Discharge Characteristics



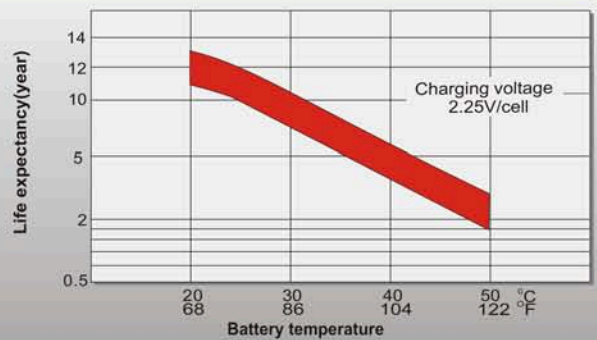
Float Charging Characteristics



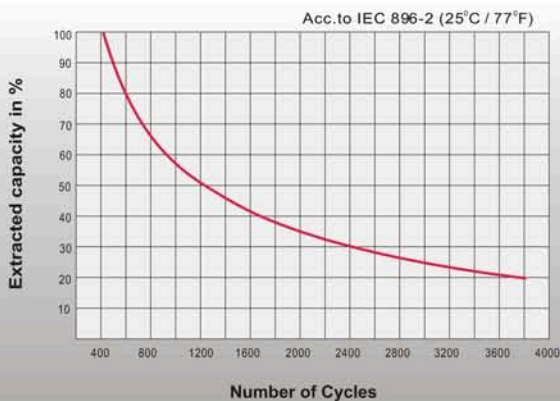
Temperature Effects in Relation to Battery Capacity



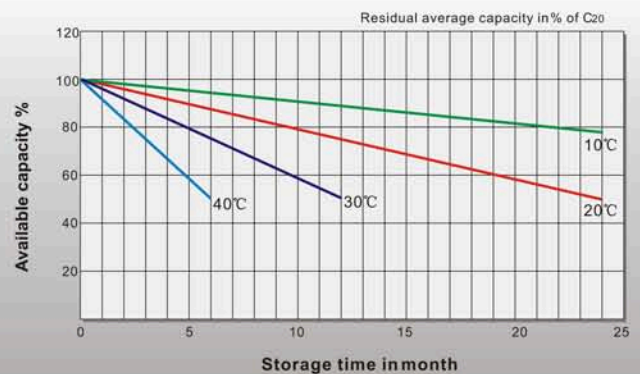
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



General Relation of Capacity VS. Storage Time



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