

Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	45.0AH	
Dimension	Length	257±3mm (10.12 inches)
	Width	132±2mm (5.20 inches)
	Container Height	200±2mm (7.87 inches)
	Total Height (with Terminal)	200±2mm (7.87 inches)
Approx Weight	Approx 16.2 kg (35.72lbs)	
Terminal	T6	
Container Material	ABS	
Rated Capacity	45.0 AH/2.25A	(20hr, 1.80V/cell, 25°C/77°F)
	41.5 AH/4.15A	(10hr, 1.80V/cell, 25°C/77°F)
	36.35 AH/7.27A	(5hr, 1.75V/cell, 25°C/77°F)
	32.1 AH/10.7A	(3hr, 1.75V/cell, 25°C/77°F)
	26.7 AH/26.7A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	450A (5s)	
Internal Resistance	Approx 11.3mΩ	
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 12A.	
	Voltage 14.1V~14.4V (14.1V is optimum) at 25°C(77°F).	
Standby Use	No limit on Initial Charging Current. Voltage 13.5V~13.8V (13.5V is optimum) at 25°C(77°F). Coefficient -18mV/°C	
	Capacity affected by Temperature	40°C (104°F) 103%
Self Discharge	25°C (77°F)	100%
	0°C (32°F)	86%
	GEL 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.	



Typical Applications

- ◆ Railway and marine systems
- ◆ Electric tools
- ◆ Vehicle in place of walking
- ◆ Lawn mowers
- ◆ Golf trolleys and golfcart
- ◆ Electric toys
- ◆ Portable power
- ◆ Wheelchairs
- ◆ Medical equipments.



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

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	54.8	46.5	40.6	31.4	23.9	20.0	12.5	9.46	7.74	6.63	5.76	4.65	3.94	2.19
1.80V/cell	67.4	55.2	47.5	35.8	26.9	22.2	13.6	10.2	8.30	7.05	6.11	4.90	4.15	2.25
1.75V/cell	75.7	61.5	52.0	38.7	28.7	23.5	14.3	10.7	8.63	7.27	6.30	5.02	4.21	2.28
1.70V/cell	84.5	66.9	55.5	40.7	30.0	24.6	15.0	11.0	8.88	7.48	6.47	5.13	4.28	2.32
1.67V/cell	90.5	70.5	58.3	42.6	31.1	25.4	15.4	11.4	9.08	7.66	6.60	5.21	4.35	2.34
1.60V/cell	98.7	75.6	62.4	45.1	32.9	26.7	16.0	11.7	9.36	7.87	6.75	5.28	4.41	2.37

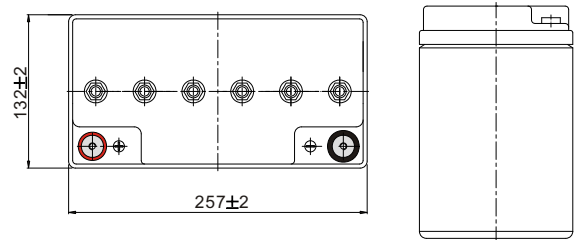
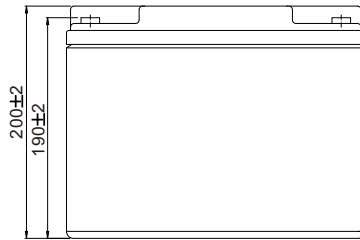
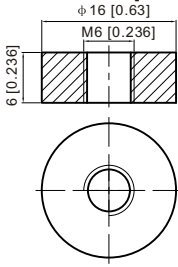
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	102.9	88.0	77.5	60.5	46.4	38.9	24.5	18.5	15.2	13.1	11.4	9.22	7.83	4.38
1.80V/cell	124.7	102.9	89.4	68.2	51.7	43.0	26.5	19.9	16.2	13.8	12.0	9.70	8.23	4.49
1.75V/cell	138.1	113.4	97.0	73.2	54.8	45.3	27.7	20.8	16.8	14.2	12.4	9.92	8.35	4.55
1.70V/cell	151.7	122.0	102.6	76.5	57.0	47.1	28.9	21.4	17.3	14.6	12.7	10.1	8.48	4.61
1.67V/cell	160.7	127.3	107.0	79.4	58.9	48.6	29.6	22.0	17.6	14.9	12.9	10.3	8.60	4.66
1.60V/cell	172.3	134.6	113.4	83.3	61.7	50.6	30.5	22.6	18.1	15.3	13.2	10.4	8.72	4.70

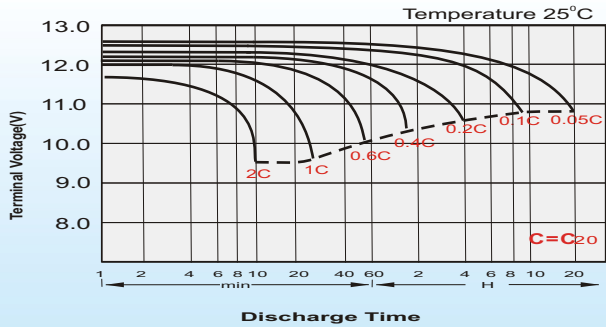
Dimensions

T6 Terminal

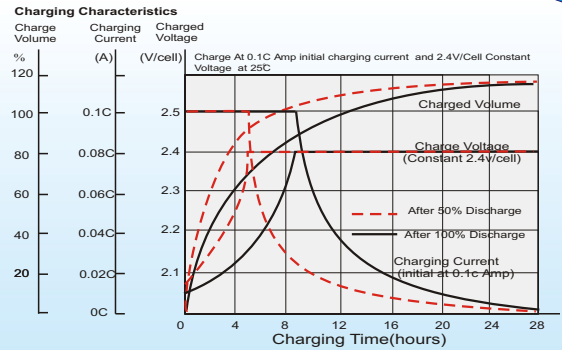
Unit: mm [inches]



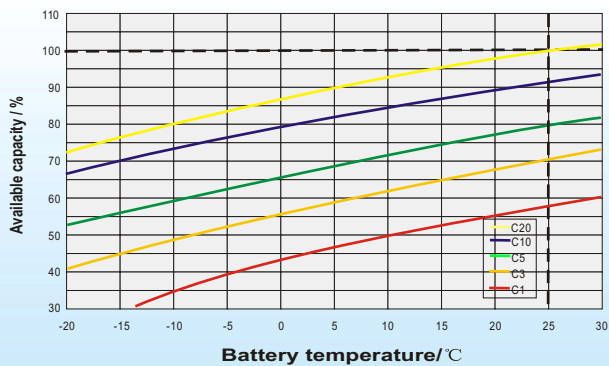
Discharge Characteristics



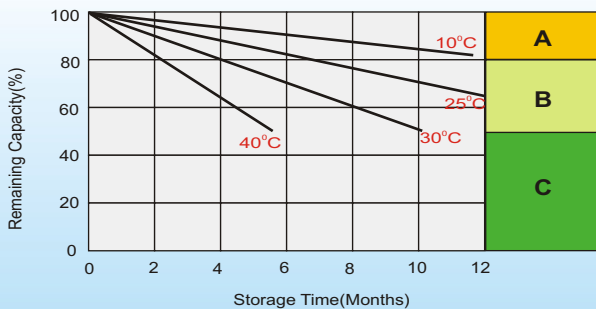
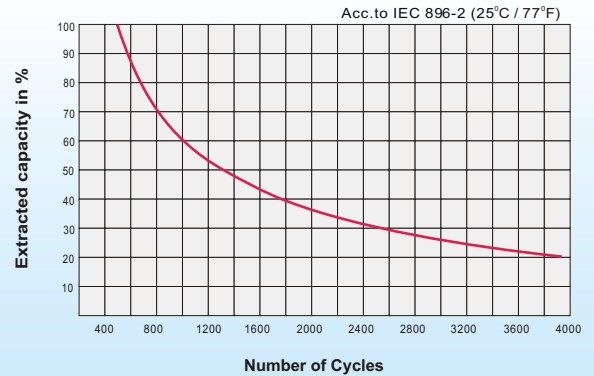
Charging Characteristics (cycle use)



Temperature Effects in Relation to Battery Capacity



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics

- A** No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
 1. Charged for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
 2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
 3. Charged for 8-10hours at limited current 0.05CA .
- C** Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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