

# UP Series UP4.0-6 GENERAL PURPOSE AGM



## Main Features

- **High Reliability**

Extensive control processes, from raw materials to delivery to the end customer, within the international quality standards implemented in the company.

- **Valve Regulated Lead Acid batteries**

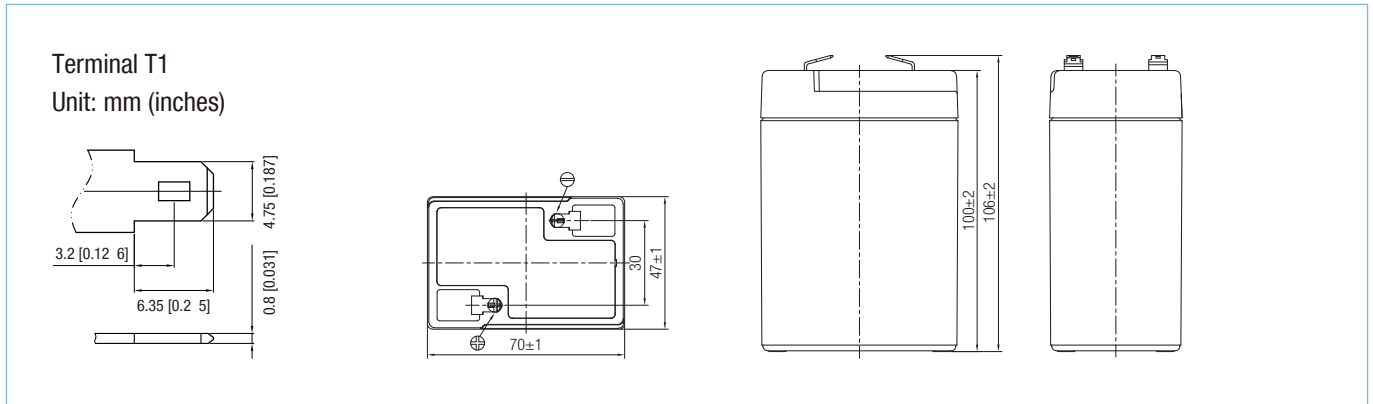
Designed for better gas recombination, with minimal hydrogen losses, aid to inner pressure regulation, increasing its performance and security.

## Technical Specifications

Nominal Voltage (V)	6
Nominal Capacity (20 Hr)	4.0 Ah
Dimensions	Length: 70 ± 1mm (2.76 inches)
	Width: 47 ± 1mm (1.85 inches)
	Height: 100 ± 2mm (3.94 inches)
	Total Height (+ terminal): 106 ± 2mm (4.17 inches)
Approx. Weight	0.65 Kg (1.43 lbs)
Terminal	T1
Container Material	ABS
Rated Capacity	4.00 Ah / 0.200 A (20hr, 1.75V/cell, 25°C / 77°F)
	3.72 Ah / 0.372 A (10hr, 1.75V/cell, 25°C / 77°F)
	3.39 Ah / 0.679 A (5hr, 1.75V/cell, 25°C / 77°F)
	3.03 Ah / 1.01 A (3hr, 1.75V/cell, 25°C / 77°F)
	2.33 Ah / 2.33 A (1hr, 1.60V/cell, 25°C / 77°F)
Maximum Discharge Current	60 A (5s)
Internal Resistance	Approx. 30 mΩ
Operating Temperature Range	Discharge: -15 ~ 50°C (5 ~ 122°F)
	Charge: 0 ~ 40°C (32 ~ 104°F)
	Storage: -15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temperature Range	25 ± 3°C (77 ± 5°F)
Cycle Use	Initial Charging Current less than 1.2 A Voltage. 7.2~7.5V at 25°C (77°F) Temp. Coefficient -15mV/°C
Standby Use	Initial Charging Current less than 1.2 A Voltage. 6.75~6.9V at 25°C (77°F) Temp. Coefficient -10mV/°C
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	Batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required.



## Battery Dimensions



## Battery Discharge Tables

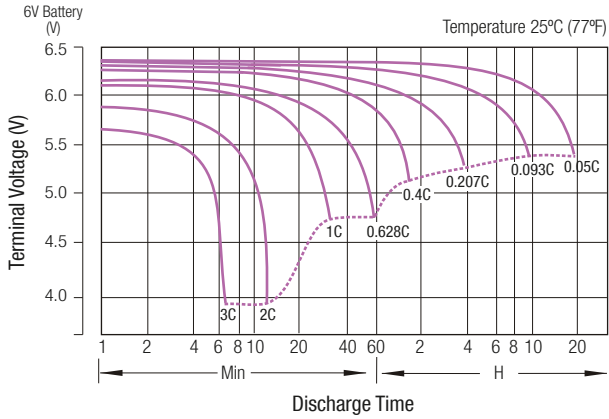
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	9.60	7.09	5.63	4.66	3.46	2.62	2.14	1.36	0.978	0.778	0.662	0.566	0.445	0.363	0.195
1.80V/cell	10.5	7.45	5.85	4.80	3.55	2.67	2.18	1.38	0.993	0.789	0.671	0.574	0.450	0.367	0.198
1.75V/cell	11.3	7.81	6.06	4.94	3.64	2.72	2.22	1.40	1.01	0.799	0.679	0.581	0.456	0.372	0.200
1.70V/cell	12.1	8.18	6.27	5.09	3.72	2.77	2.26	1.43	1.02	0.811	0.688	0.589	0.461	0.376	0.202
1.65V/cell	12.6	8.40	6.41	5.18	3.77	2.81	2.28	1.44	1.03	0.817	0.694	0.593	0.465	0.379	0.203
1.60V/cell	13.8	8.91	6.70	5.38	3.88	2.88	2.33	1.47	1.05	0.833	0.706	0.603	0.472	0.385	0.206

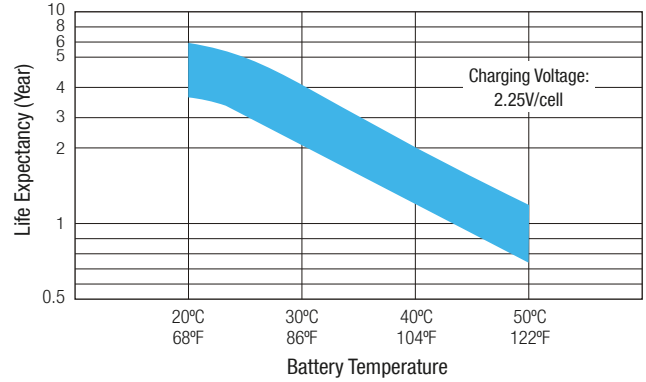
Constant Power Discharge (Watts) at 25°C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	18.3	13.6	10.8	8.96	6.70	5.07	4.16	2.66	1.92	1.53	1.31	1.12	0.88	0.721	0.391
1.80V/cell	19.7	14.2	11.2	9.20	6.83	5.16	4.22	2.70	1.95	1.55	1.32	1.13	0.89	0.730	0.395
1.75V/cell	21.2	14.8	11.5	9.40	6.97	5.24	4.28	2.73	1.97	1.57	1.34	1.15	0.90	0.738	0.399
1.70V/cell	22.6	15.4	11.9	9.70	7.09	5.32	4.34	2.77	2.00	1.59	1.35	1.16	0.91	0.746	0.403
1.65V/cell	23.5	15.8	12.1	9.80	7.17	5.37	4.38	2.79	2.01	1.60	1.36	1.17	0.92	0.751	0.406
1.60V/cell	25.3	16.6	12.5	10.1	7.35	5.48	4.46	2.84	2.04	1.63	1.38	1.18	0.93	0.762	0.411

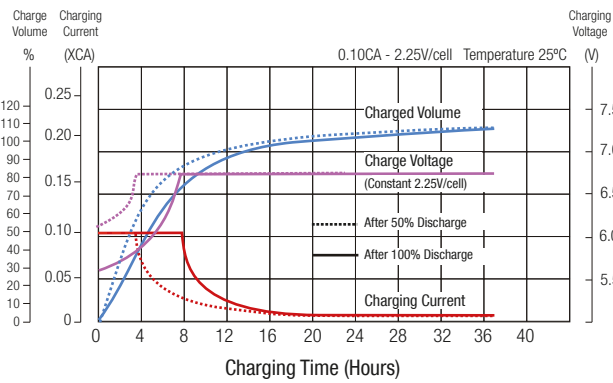
### Discharge Characteristics



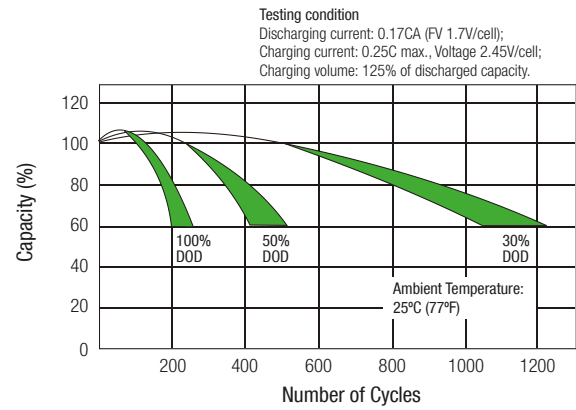
### Effect of Temperature on Long Term Float Life



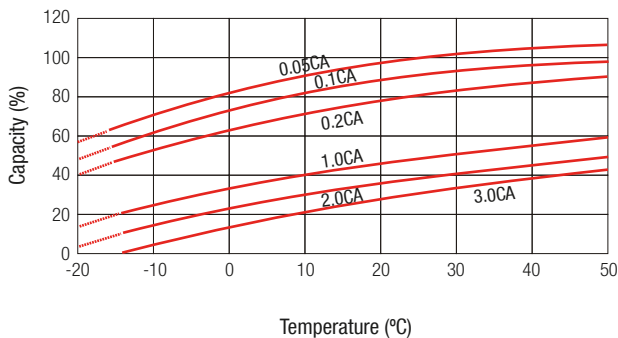
### Float Charging Characteristics



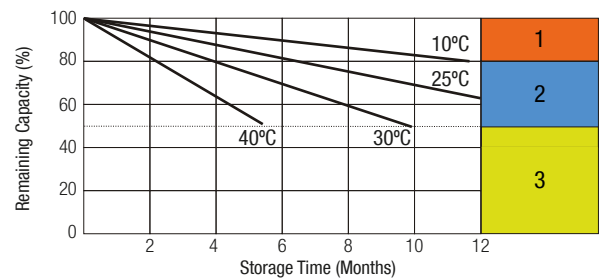
### Cycle Life in Relation to Depth of Discharge



### Temperature Effects in Relation to Battery Capacity



### Self Discharge Characteristics



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