AGM Valve Regulated Lead Acid Batteries

Upower
Unlimited power

UP Series
UP35-12
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)	12	
Nominal Capacity (20 Hr)	35.0 Ah	
Dimensions	Length:	195 ± 2mm (7.68 inches)
	Width:	130 ± 2mm (5.12 inches)
	Container Height:	164 ± 2mm (6.46 inches)
	Total Height (+terminal):	180 ± 2mm (7.09 inches)
Approx. Weight	11.2 Kg (24.7 lbs)	
Terminal	T5 / T2 / T6 / T10	
Container Material	ABS	
Rated Capacity	35.0 Ah / 1.75 A	(20hr, 1.80V/cell, 25ºC / 77ºF)
	32.6 Ah / 3.26 A	(10hr, 1.80V/cell, 25ºC / 77ºF)
	29.7 Ah / 5.95 A	(5hr, 1.75V/cell, 25ºC / 77ºF)
	26.8 Ah / 8.93 A	(3hr, 1.75V/cell, 25ºC / 77ºF)
	22.0 Ah / 22.0 A	(1hr, 1.60V/cell, 25ºC / 77ºF)
Maximum Discharge Current	525 A (5s)	
Internal Resistance	Approx. 11 mΩ	
Operating Temperature Range	Discharge:	-15 ~ 50ºC (5 ~ 122ºF)
	Charge:	0 ~ 40ºC (32 ~ 104ºF)
	Storage:	-15 ~ 40ºC (5 ~ 104ºF)
Nominal Operating Temperature Range	25 ± 3ºC (77 ± 5ºF)	
Cycle Use	Initial Charging Current less than 10.5 A Voltage. 14.4~15V at 25ºC (77ºF) Temp. Coefficient -30mV/ºC	
Standby Use	No limit on Initial Charging Current Voltage. 13.5~13.8V at 25ºC (77ºF) Temp. Coefficient -20mV/ºC	
Capacity affected by Temperature	40ºC (104ºF) 103%	
	25ºC (77ºF) 100%	
	0ºC (32ºF) 86%	
Self Discharge	Batteries may be stored for up to 6 months at 25ºC (77ºF) and then a freshening charge is requiered.	

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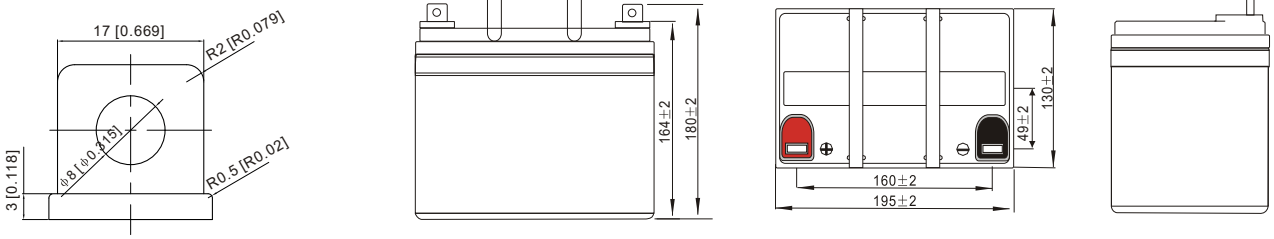
Battery Dimensions

Terminal T5
Unit: mm (inches)



Battery Discharge Tables

Constant Current Discharge (Amperes) at 25ºC (77ºF)															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	66.7	51.2	42.4	36.7	28.3	20.9	17.6	10.4	8.14	6.62	5.40	4.69	3.78	3.16	1.73
1.80V/cell	89.5	65.4	51.2	43.3	33.4	24.3	19.7	11.4	8.76	7.07	5.80	5.03	4.01	3.26	1.75
1.75V/cell	100.9	71.9	56.0	46.6	34.7	25.2	20.6	11.8	8.93	7.23	5.95	5.16	4.08	3.34	1.77
1.70V/cell	111.1	78.3	59.7	49.0	36.1	26.2	21.3	12.1	9.17	7.42	6.14	5.27	4.13	3.41	1.80
1.65V/cell	122.5	84.5	63.5	52.0	38.1	26.9	21.8	12.3	9.57	7.68	6.27	5.39	4.20	3.48	1.82
1.60V/cell	135.1	91.8	67.9	55.4	40.3	28.0	22.0	12.8	9.86	7.92	6.48	5.50	4.24	3.52	1.83

11.2 Kg (24.7 libras)
T5 / T2 / T6 / T10

Constant Power Discharge (Watts) at 25ºC (77ºF)															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	121.9	94.5	79.1	69.1	54.0	40.1	34.0	20.2	15.9	12.9	10.6	9.21	7.46	6.25	3.43
1.80V/cell	161.8	119.4	94.3	80.5	62.8	46.3	37.8	21.9	17.0	13.7	11.3	9.84	7.89	6.43	3.46
1.75V/cell	178.6	129.1	101.7	85.8	64.6	47.6	39.4	22.6	17.2	14.0	11.6	10.1	8.01	6.60	3.49
1.70V/cell	191.2	137.5	107.1	89.4	66.9	49.3	40.5	23.2	17.7	14.4	11.8	10.3	8.11	6.72	3.55
1.65V/cell	207.9	147.0	113.0	94.3	70.0	50.1	41.1	23.4	18.4	14.8	12.1	10.5	8.22	6.85	3.60
1.60V/cell	224.0	156.0	118.9	99.4	73.4	51.9	41.3	24.2	18.8	15.2	12.5	10.7	8.28	6.91	3.61

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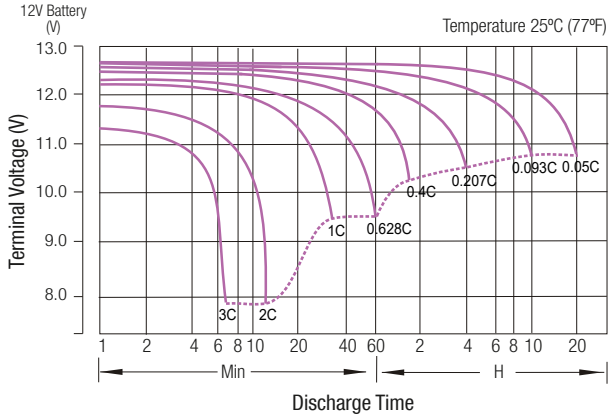
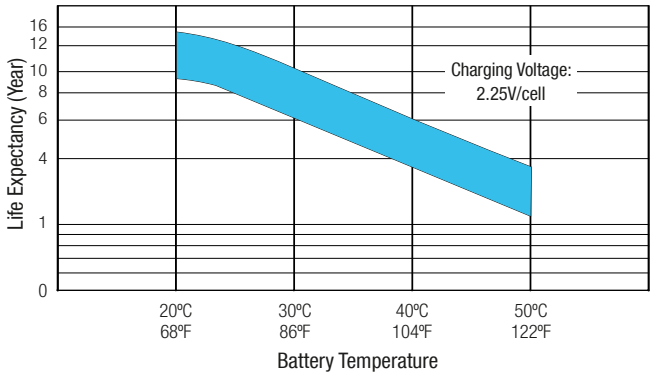
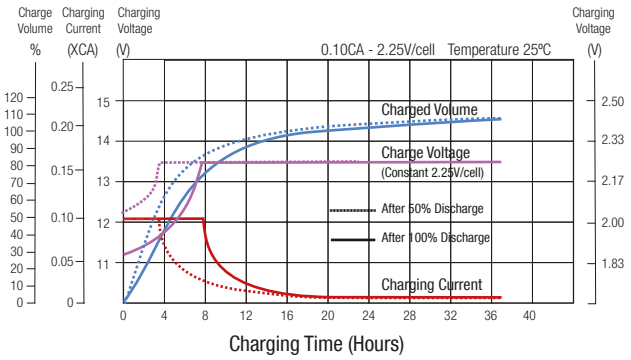
Discharge Characteristics



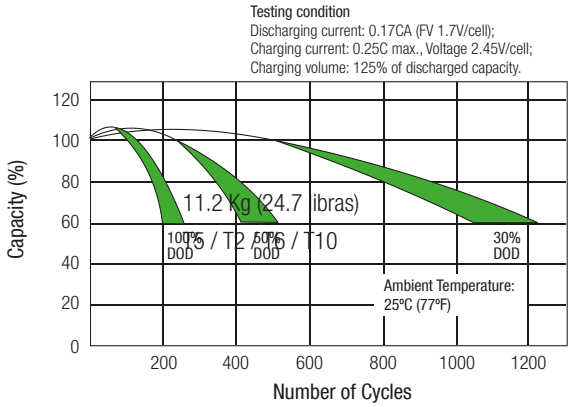
Effect of Temperature on Long Term Float Life



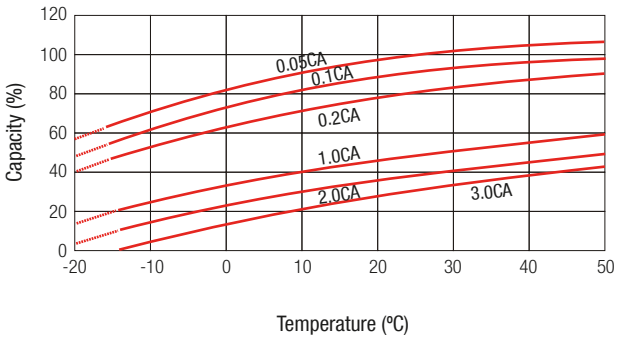
Float Charging Characteristics



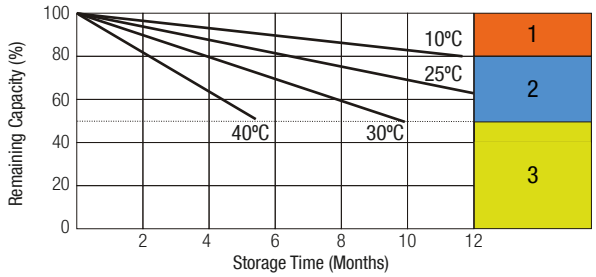
Cycle Life in Relation to Depth of Discharge



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 reached.

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