

## UP-HR3.2-12



Specification	
Nominal Voltage	12V
Watts(15min Rate)	12.2 W at 1.67V/cell
Dimension	Length 134±2mm (5.28 inches)
	Width 67±1mm (2.64 inches)
	Container Height 60.5±1mm (2.38 inches)
	Total Height (with Terminal) 66.5±1mm (2.62 inches)
Approx Weight	Approx 1.35 kg (2.98lbs)
Terminal	T1 / T2
Container Material	ABS
Rated Capacity	3.24 AH/0.324A (10hr, 1.80V/cell, 25°C/77°F)
	3.20 AH/0.40A (8hr, 1.80V/cell, 25°C/77°F)
	2.91 AH/0.582A (5hr, 1.75V/cell, 25°C/77°F)
	2.67 AH/0.89A (3hr, 1.75V/cell, 25°C/77°F)
	2.47 AH/2.47A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	48A (5s)
Internal Resistance	Approx 45mΩ
Operating Temperature Range	Discharge: -15~50°C (5~122°F)
	Change : 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 0.96A. 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	Batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required.

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	9.57	6.51	4.91	4.25	3.37	2.53	2.03	1.14	0.813	0.642	0.545	0.461	0.380	0.312	0.172
1.80V/cell	10.9	7.24	5.34	4.57	3.61	2.68	2.14	1.21	0.875	0.686	0.569	0.485	0.400	0.324	0.173
1.75V/cell	12.3	7.95	5.85	4.92	3.74	2.78	2.24	1.25	0.890	0.700	0.582	0.499	0.406	0.330	0.175
1.70V/cell	13.6	8.67	6.24	5.17	3.90	2.89	2.31	1.31	0.916	0.719	0.596	0.509	0.416	0.337	0.178
1.65V/cell	14.9	9.36	6.63	5.49	4.11	2.97	2.39	1.34	0.954	0.744	0.608	0.520	0.423	0.344	0.181
1.60V/cell	16.5	9.99	6.96	5.85	4.35	3.09	2.47	1.39	0.985	0.767	0.625	0.532	0.427	0.348	0.181

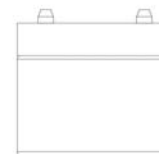
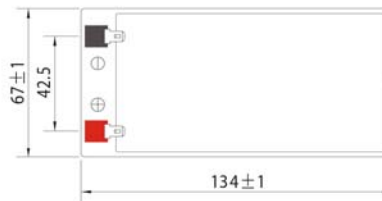
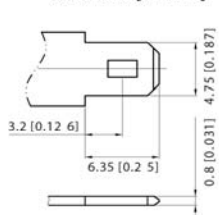
Constant Power Discharge (Watts) at 25°C (77°F)															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	17.5	12.0	9.19	8.01	6.41	4.87	3.91	2.22	1.59	1.27	1.09	0.922	0.745	0.616	0.341
1.80V/cell	19.7	13.2	9.89	8.49	6.77	5.11	4.10	2.34	1.71	1.35	1.13	0.970	0.780	0.640	0.344
1.75V/cell	21.7	14.3	10.7	9.05	6.97	5.26	4.28	2.42	1.73	1.37	1.14	0.989	0.791	0.650	0.346
1.70V/cell	23.3	15.2	11.3	9.44	7.22	5.44	4.40	2.50	1.78	1.41	1.17	1.009	0.810	0.664	0.353
1.65V/cell	25.3	16.3	11.8	9.99	7.56	5.53	4.52	2.56	1.84	1.45	1.19	1.028	0.821	0.677	0.357
1.60V/cell	27.4	17.0	12.2	10.5	7.92	5.73	4.65	2.63	1.89	1.48	1.22	1.048	0.827	0.683	0.359



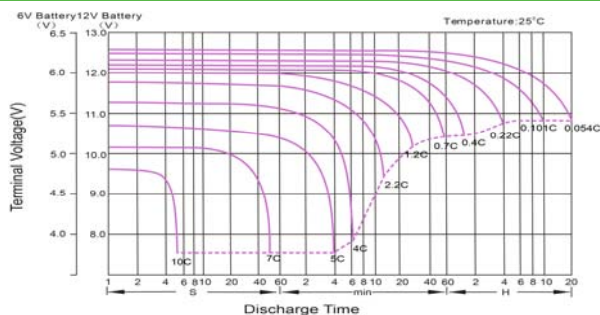
**UP-HR3.2-12**

**Dimensions**

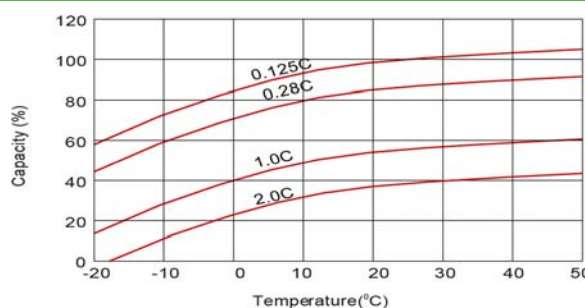
**T1 Terminal**  
Unit: mm [inches]



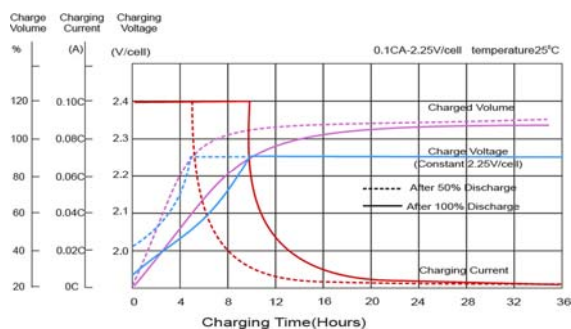
**Discharge Characteristics**



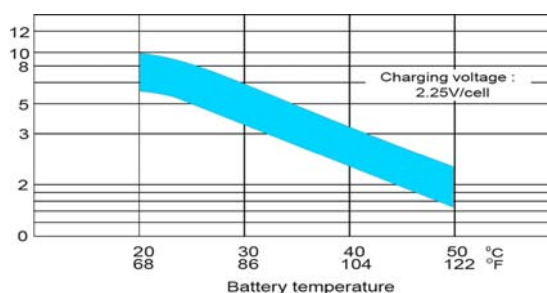
**Temperature Effects in Relation to Battery Capacity**



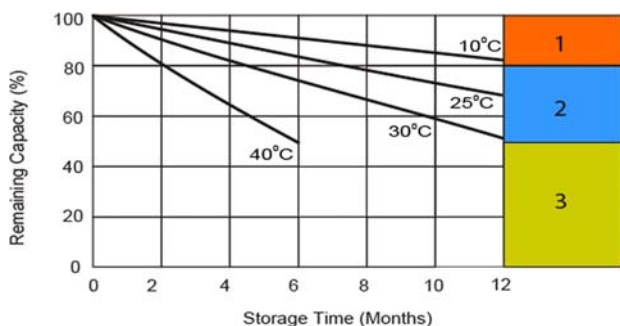
**Float Charging Characteristics**



**Effect of Temperature on Long Term Float Life**



**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.

