

UP2.9-12



Specification		
Nominal Voltage	12V	
Nominal Capacity (20HR)	2.9AH	
Dimension	Length	79±1mm (3.11 inches)
	Width	56±1mm (2.20 inches)
	Container Height	99±1mm (3.90 inches)
	Total Height (with Terminal)	105±2mm (4.13 inches)
	Approx Weight	Approx 1.1 kg (2.43lbs)
Terminal	T1	
Container Material	ABS	
Rated Capacity	2.90 AH/0.145A	(20hr, 1.80V/cell, 25°C/77°F)
	2.70 AH/0.27A	(10hr, 1.80V/cell, 25°C/77°F)
	2.45 AH/0.49A	(5hr, 1.75V/cell, 25°C/77°F)
	2.22 AH/0.74A	(3hr, 1.75V/cell, 25°C/77°F)
	1.82 AH/1.82A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	43.5A (5s)	
Internal Resistance	Approx 55mΩ	
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 0.87A.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	5.52	4.24	3.51	3.04	2.35	1.73	1.46	0.86	0.67	0.55	0.447	0.388	0.313	0.262	0.144
1.80V/cell	7.41	5.42	4.24	3.59	2.77	2.01	1.63	0.94	0.73	0.59	0.480	0.416	0.332	0.270	0.145
1.75V/cell	8.36	5.95	4.64	3.86	2.88	2.09	1.71	0.98	0.74	0.60	0.493	0.428	0.338	0.277	0.146
1.70V/cell	9.20	6.49	4.95	4.06	2.99	2.17	1.76	1.00	0.76	0.61	0.505	0.437	0.343	0.282	0.149
1.65V/cell	10.15	7.00	5.26	4.31	3.16	2.23	1.80	1.02	0.79	0.64	0.519	0.446	0.348	0.288	0.151
1.60V/cell	11.19	7.60	5.63	4.59	3.34	2.32	1.82	1.06	0.82	0.66	0.537	0.456	0.351	0.291	0.152

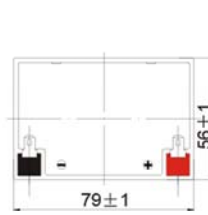
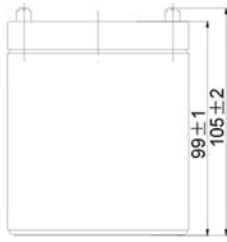
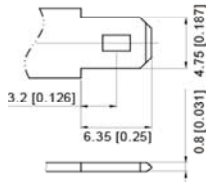
Constant Power Discharge (Watts) at 25°C (77°F)															
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	10.1	7.83	6.56	5.73	4.48	3.33	2.81	1.67	1.32	1.07	0.877	0.763	0.618	0.518	0.284
1.80V/cell	13.4	9.89	7.81	6.67	5.20	3.84	3.13	1.82	1.41	1.14	0.937	0.815	0.654	0.533	0.287
1.75V/cell	14.8	10.7	8.43	7.11	5.36	3.94	3.26	1.88	1.43	1.16	0.959	0.835	0.664	0.547	0.289
1.70V/cell	15.8	11.4	8.87	7.41	5.54	4.09	3.36	1.92	1.46	1.19	0.981	0.851	0.672	0.557	0.294
1.65V/cell	17.2	12.2	9.36	7.81	5.80	4.15	3.41	1.94	1.52	1.23	1.005	0.867	0.681	0.568	0.298
1.60V/cell	18.6	12.9	9.85	8.23	6.08	4.30	3.42	2.01	1.56	1.26	1.034	0.883	0.686	0.573	0.299



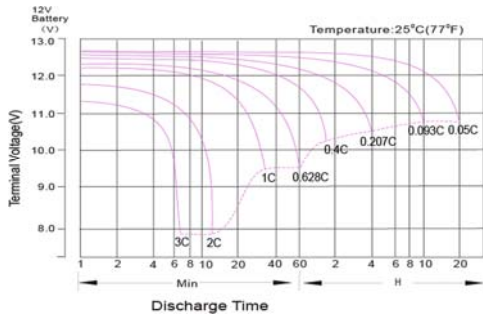
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Dimensions

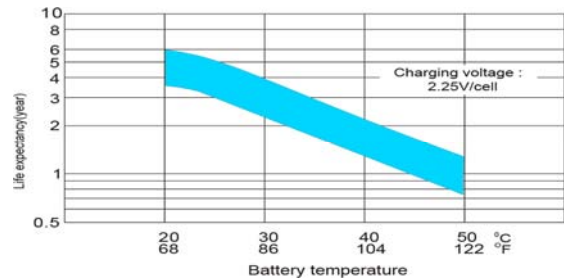
■ T1 Terminal
Unit: mm [inches]



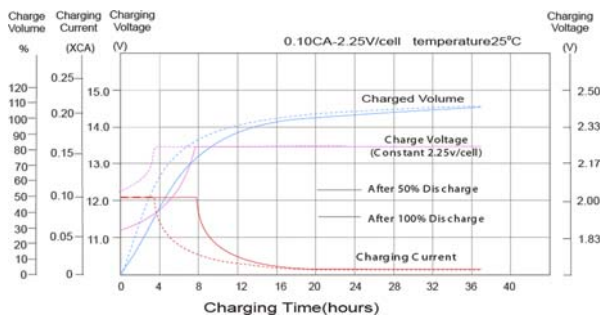
Discharge Characteristics



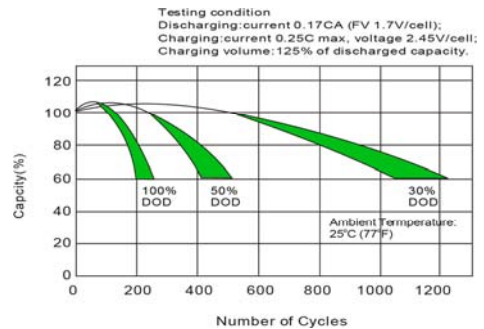
Effect of Temperature on Long Term Float Life



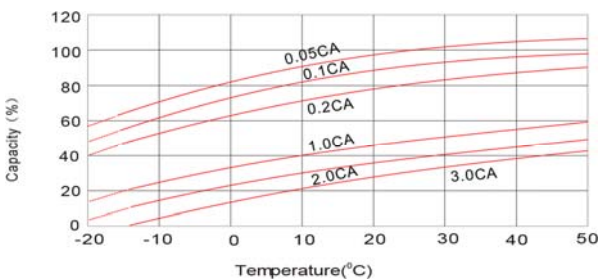
Float Charging Characteristics



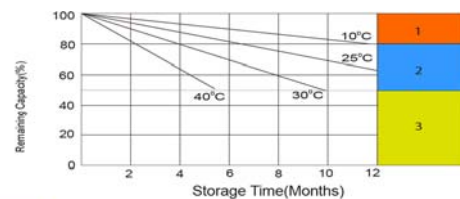
Cycle Life in Relation to Depth of Discharge



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.

