



General Features

- ◆ Sealed and maintenance free operation.
- ◆ Non-Spillable construction design.
- ◆ ABS containers and covers(UL94HB, UL94V-0) optional.
- ◆ Safety valve installation for explosion proof.
- ◆ High quality and high reliability.
- ◆ Exceptional deep discharge recovery performance.
- ◆ Low self discharge characteristic.
- ◆ Flexibility design for multiple install positions.



Battery Type	Valve-Regulated, Absorbed Glass Mat (AGM) Technology			
Nominal Voltage	12V			
Capacity (20°C)	20HR(0.155A, 1.8V/cell)	10HR(0.289A, 1.80V)	5HR(0.522A, 1.75V)	1HR(11.91A, 1.60V)
	3.10AH	2.89AH	2.61AH	1.91AH
Dimensions	Length	Width	Height	Total Height
	134mm(5.28inches)	67mm(2.64inches)	60.5mm(2.38inches)	66.5mm(2.62inches)
Approx Weight	Approx 1.35 kg (2.98lbs)			
Internal Resistance	Full Charged at 20°C: Approx 45m Ω			
Self Discharge	3% of capacity declined per month at 20°C			
Capacity affected by Temperature (10HR)	40°C	25°C	0°C	-15°C
	103%	100%	86%	65%
Charging Voltage (V)	Cycle use		Float use	
	14.4V~15.0V at 20 °C. T emp. Coefficient -30mV/ °C		13.5V~13.8V at 20 °C. Temp. Coefficient (-20mV/ °C)	
Current	Max. Discharge Current		Initial Charging Current	
	48A		Less than 0.96A	
Operating Temp. Range	Discharge		Charging	
	-15 ~ 50°C (5 ~ 122°F)		0 ~ 40°C (32 ~ 104°F)	
			Storage	
			-15 ~ 40°C (5 ~ 104°F)	

Constant Current Discharge (Amperes) at 20°C (68°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	5.79	4.45	3.68	3.18	2.46	1.81	1.53	0.91	0.715	0.581	0.474	0.416	0.335	0.280	0.154
1.80V/cell	7.77	5.68	4.45	3.76	2.91	2.11	1.71	1.00	0.769	0.621	0.509	0.446	0.355	0.289	0.155
1.75V/cell	8.76	6.24	4.86	4.05	3.02	2.19	1.79	1.03	0.783	0.634	0.522	0.458	0.362	0.296	0.157
1.70V/cell	9.65	6.80	5.19	4.26	3.14	2.28	1.85	1.06	0.805	0.651	0.535	0.467	0.367	0.302	0.160
1.65V/cell	10.6	7.34	5.52	4.52	3.31	2.33	1.89	1.08	0.840	0.674	0.550	0.478	0.372	0.309	0.162
1.60V/cell	11.7	7.97	5.90	4.82	3.50	2.43	1.91	1.12	0.865	0.695	0.568	0.488	0.376	0.312	0.163

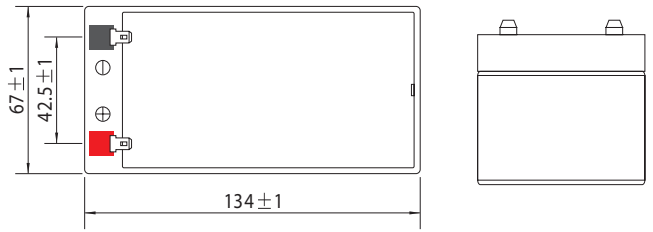
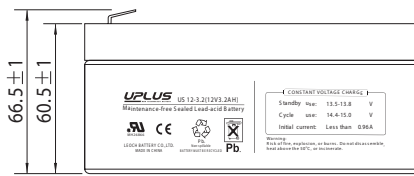
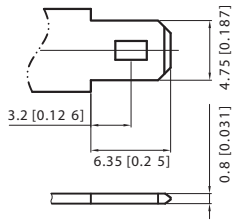
Constant Power Discharge (Watts) at 20°C (68°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	10.6	8.21	6.87	6.00	4.69	3.49	2.95	1.77	1.39	1.14	0.93	0.817	0.662	0.554	0.304
1.80V/cell	14.1	10.4	8.19	6.99	5.45	4.02	3.29	1.92	1.49	1.21	0.99	0.873	0.700	0.570	0.307
1.75V/cell	15.5	11.2	8.84	7.45	5.61	4.14	3.42	1.99	1.51	1.23	1.02	0.894	0.710	0.585	0.310
1.70V/cell	16.6	11.9	9.30	7.77	5.81	4.28	3.52	2.03	1.55	1.26	1.04	0.911	0.719	0.596	0.315
1.65V/cell	18.1	12.8	9.82	8.19	6.08	4.35	3.57	2.05	1.61	1.30	1.06	0.928	0.729	0.608	0.319
1.60V/cell	19.5	13.5	10.3	8.63	6.37	4.51	3.59	2.13	1.65	1.33	1.10	0.945	0.734	0.613	0.320

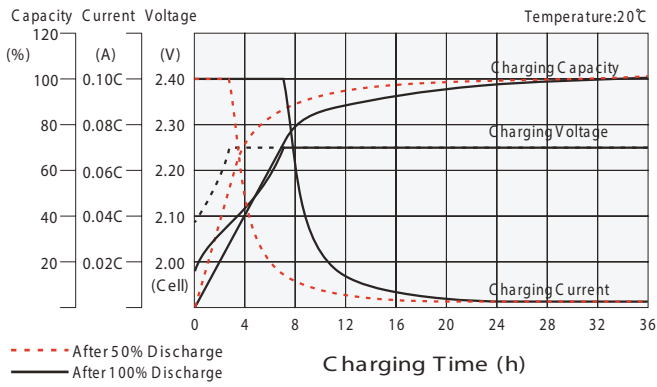
Dimensions

T1 Terminal

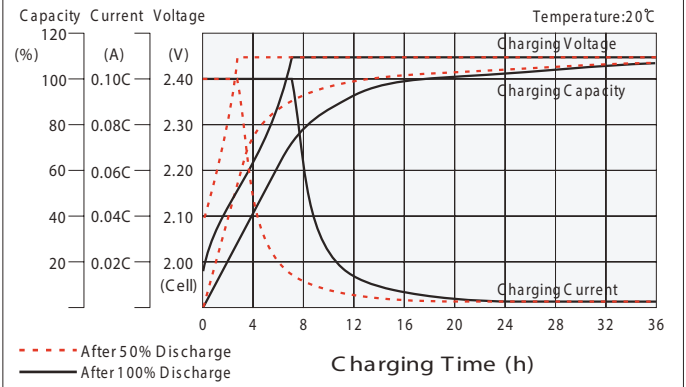
Unit: mm [inches]



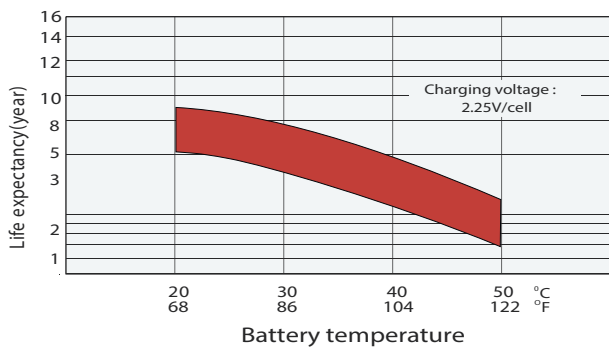
Float charging characteristics



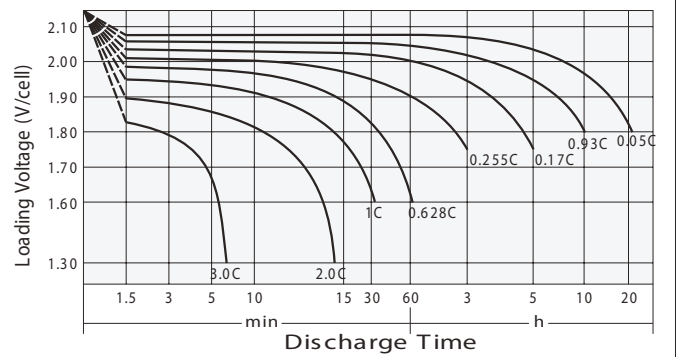
Cycle use charging characteristics



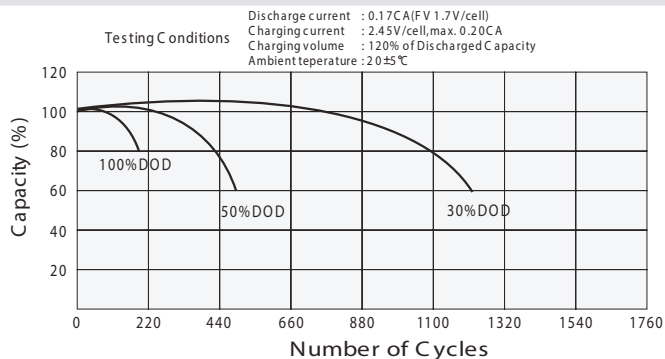
Effect of Temperature on Long Term Float Life



Discharge characteristics



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics

