

# Ultracell®

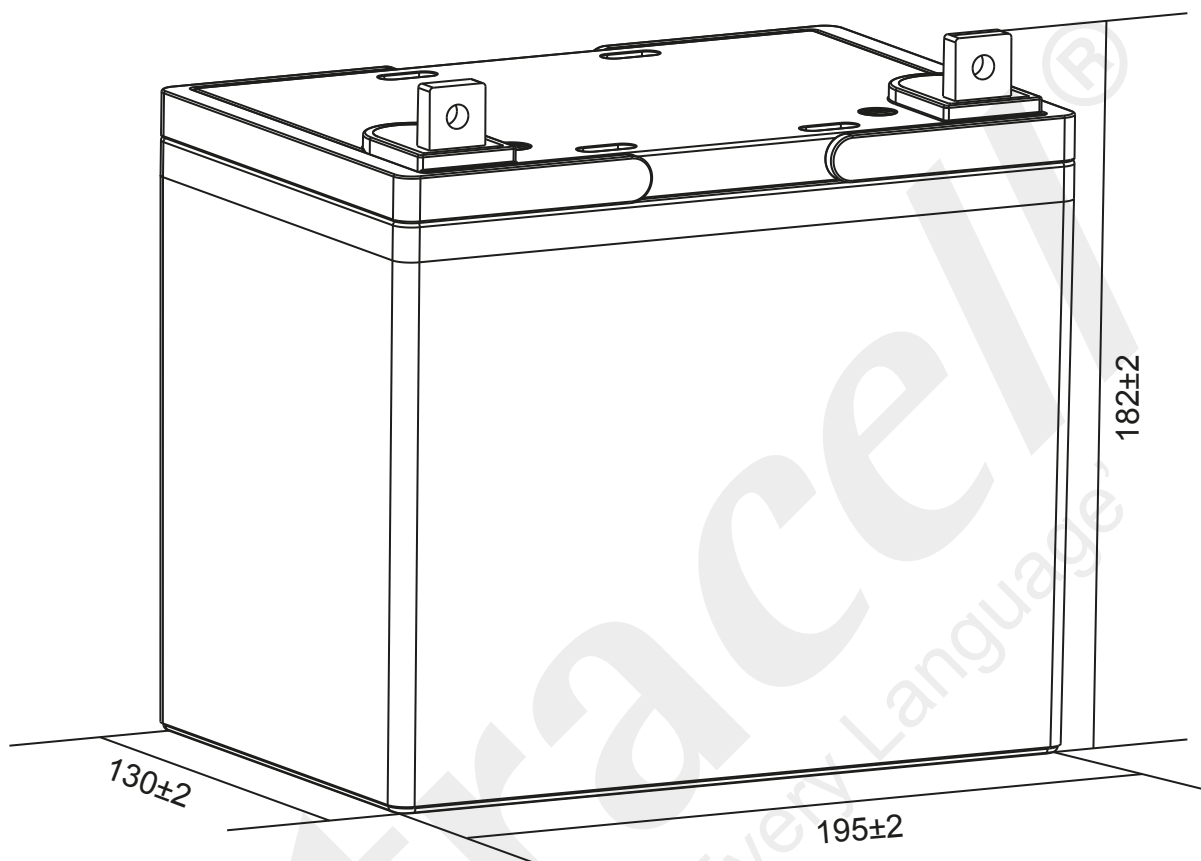
'Quality in Every Language'

## UCG35-12

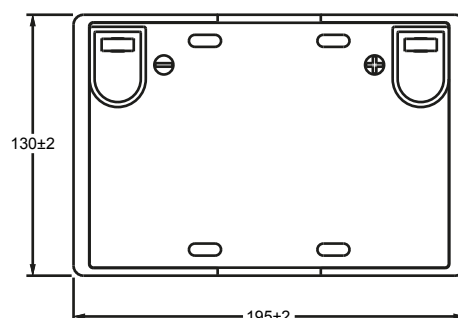
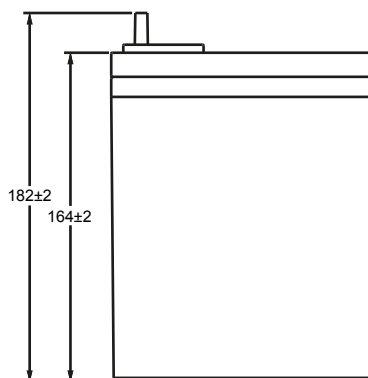
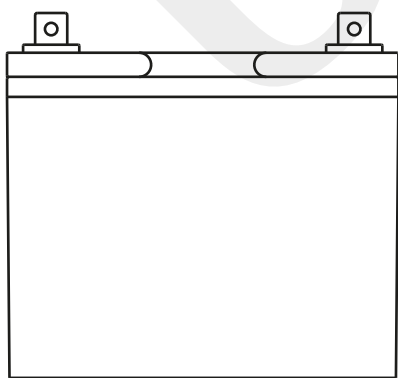
12V 35Ah (C<sub>20</sub>)

12V 41Ah (C<sub>100</sub>)

Solar Series



### Technical Dimensions (mm)



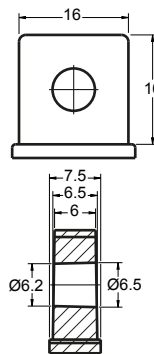


Image

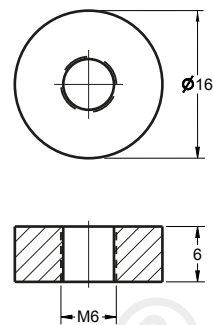


Terminal Dimensions (mm)

Standard Terminal: F5



Standard Terminal: F6



Technical Specification

<b>Output</b>	Nominal Voltage	12V
	Nominal Capacity (20HR)	35Ah
<b>Terminal Type</b>	Standard Terminal	F5
	Optional Terminal	F6
<b>Container Material</b>	Standard Option	ABS
	Flame Retardant Option (FR)	ABS (UL94:VO)
<b>Rated Capacity</b>	(100HR 1.80V/cell, 25°C)	41 Ah/0.41A
	(20HR 1.80V/cell, 25°C)	35 Ah/1.65A
	(10HR 1.80V/cell, 25°C)	32.6 Ah/3.06A
	(5HR 1.75V/cell, 25°C)	28.8 Ah/5.56A
	(3HR 1.75V/cell, 25°C)	26.6 Ah/8.2A
	(1HR 1.60V/cell, 25°C)	22.4 Ah/20.4A
<b>Max Discharge Current</b>	420A (5s)	
<b>Internal Resistance</b>	Approx 12mΩ	
<b>Discharge Characteristics</b>	Operating Temp Range	Discharge: -15 ~ 50°C Charge: 0 ~ 40°C Storage: -15 ~ 40°C
	Nominal Operating Temp Range	25 ± 3°C
	Cycle Use	Initial Charging Current less than 10.5A. Voltage 14.4V ~ 15.0V @ 25°C Temp. Coefficient -30mV/°C
	Standby Use	No limit on initial charging current. Voltage 13.5V ~ 13.8V @ 25°C Temp. Coefficient -20mV/°C
	Capacity affected by Temperature	40°C 103% 25°C 100% 0°C 86%
<b>Design Floating Life at 20°C</b>	12 Years	

Self Discharge

Ultracell® UCG batteries may be stored for up to 6 months at 25°C and then a refresh charge is required. For higher temperatures the time intervals will be shorter.

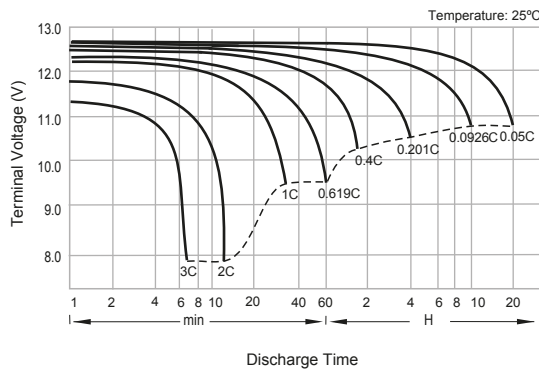
Constant Current Discharge / Constant Power Discharge At 25°C (Amperes & Watts/Cell)

A = Amperes W = Watts

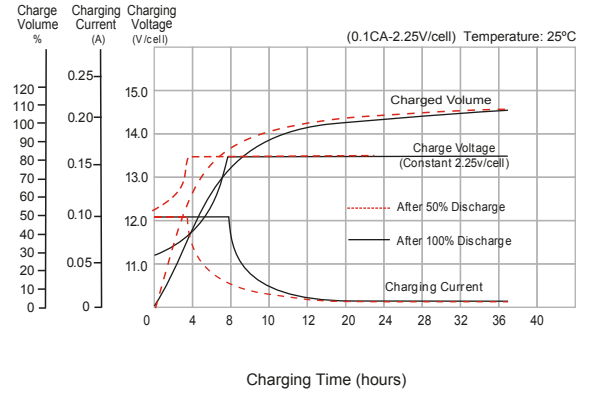
F.V/TIME	5 min	10 min	15 min	20 min	30 min	45 min	60 min	2 hours	3 hours	4 hours	5 hours	6 hours	8 hours	10 hours	20 hours
A	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
1.85V/cell	57.9	44.4	36.8	31.8	24.8	18.5	15.6	9.53	7.36	6.04	5.08	4.33	3.47	2.94	1.61
1.80V/cell	109.1	84.0	70.0	60.8	47.7	35.9	30.4	18.6	14.4	11.88	10.02	8.57	6.90	5.86	3.21
1.75V/cell	76.5	56.0	43.8	37.1	28.5	21.1	17.4	10.36	7.91	6.43	5.38	4.58	3.66	3.06	1.65
1.70V/cell	141.7	104.3	82.1	70.1	54.4	40.6	33.6	20.2	15.4	12.59	10.58	9.05	7.26	6.08	3.29
1.65V/cell	88.1	62.8	48.9	40.7	30.4	22.3	18.3	10.86	8.20	6.66	5.56	4.72	3.74	3.12	1.68
1.60V/cell	159.8	115.0	90.3	76.0	57.4	42.5	35.4	21.1	16.0	13.00	10.89	9.29	7.41	6.21	3.34
1.70V/cell	98.1	69.2	52.7	43.3	32.1	23.4	19.2	11.31	8.48	6.85	5.72	4.86	3.82	3.20	1.70
1.65V/cell	174.5	124.6	96.0	79.9	60.2	44.4	36.7	21.8	16.5	13.34	11.17	9.54	7.55	6.35	3.39
1.60V/cell	107.2	74.0	55.6	45.5	33.6	24.1	19.7	11.55	8.79	7.06	5.84	4.95	3.89	3.25	1.72
1.60V/cell	187.4	131.1	99.7	83.1	62.3	45.4	37.5	22.2	17.0	13.71	11.39	9.69	7.67	6.44	3.42
1.60V/cell	119.1	80.8	59.8	48.9	35.7	25.5	20.4	12.02	9.10	7.29	6.04	5.07	3.94	3.30	1.74
1.60V/cell	204.1	140.5	105.6	88.3	65.6	47.6	38.7	23.0	17.5	14.11	11.75	9.89	7.75	6.53	3.45



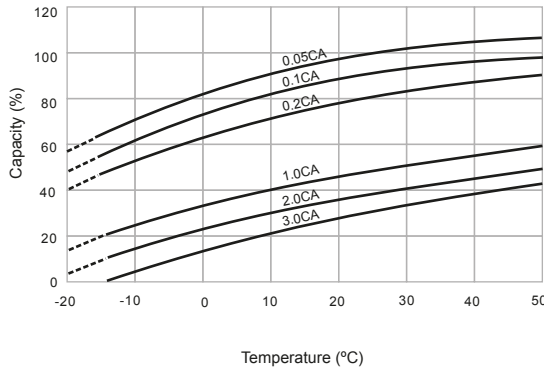
## Discharge Characteristics



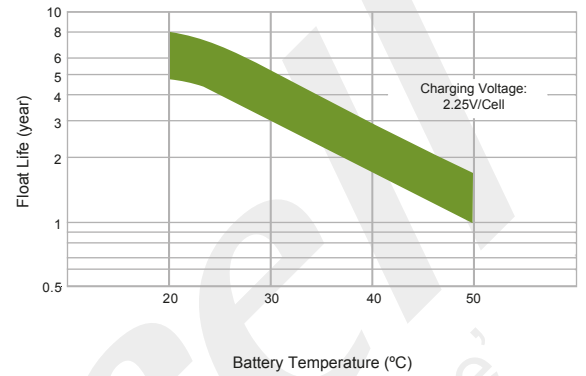
## Float Charging Characteristics



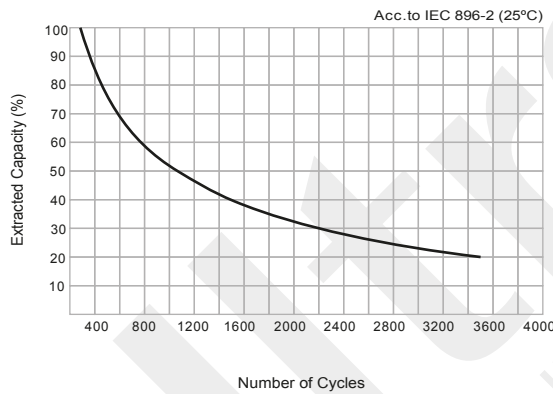
## Temperature Effects in Relation to Battery Capacity



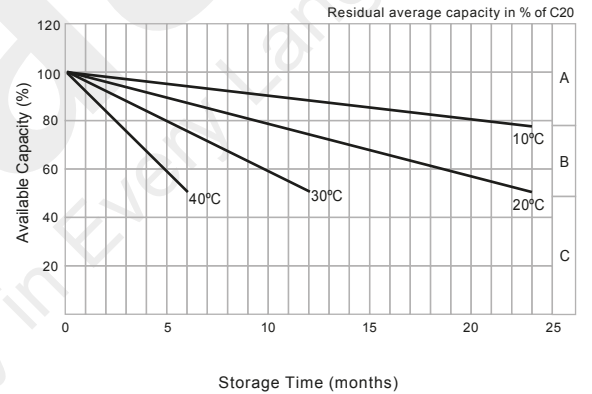
## Effects of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## General Relation of Capacity vs. Storage Time



## General Relation of Capacity vs. Storage Time (Notes)

- A) No supplementary charge required.  
(Carryout supplementary charge before use if 100% capacity is required.)
- B) 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 2.25V/cell.
  3. Charged for 8 ~ 10 hours at limited current 0.05 CA.
- C) Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.