

# Ultracell®

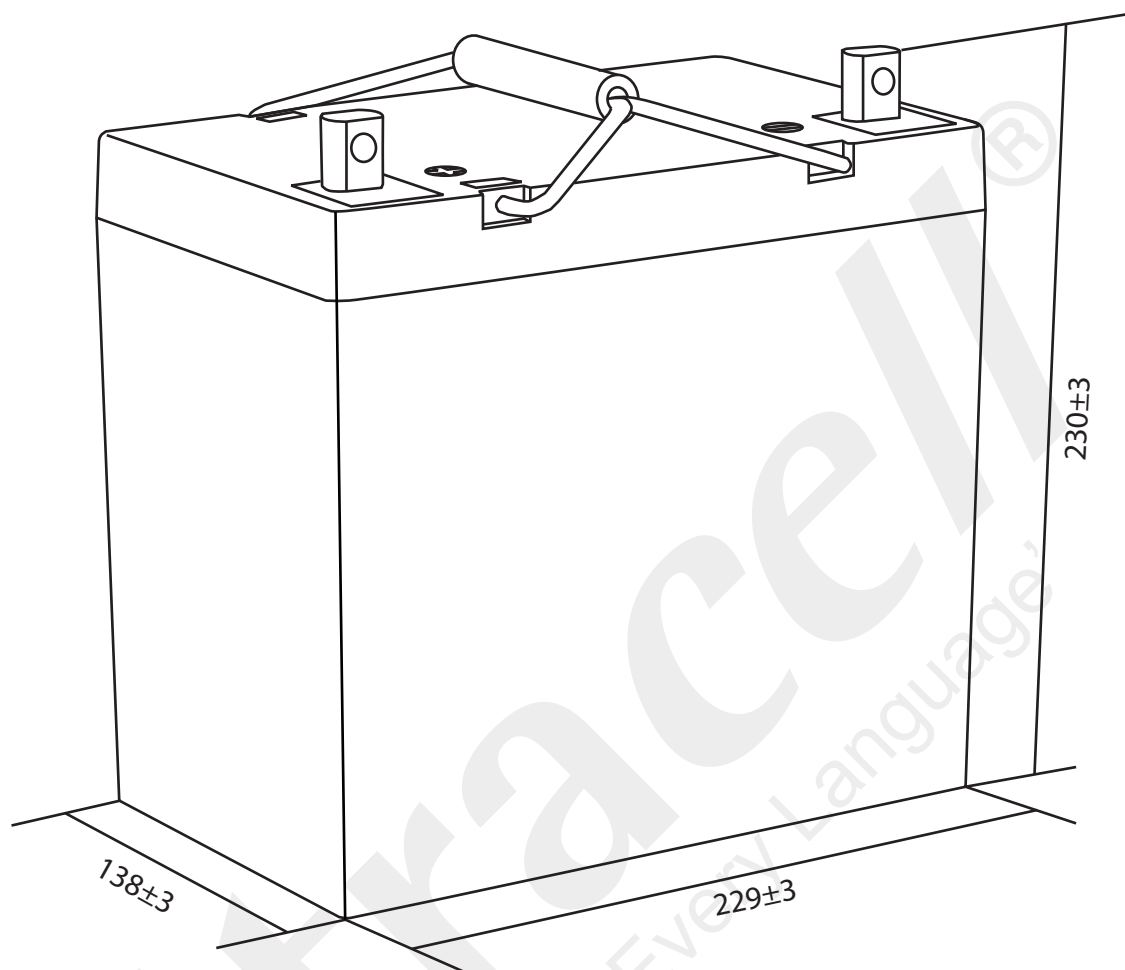
'Quality in Every Language'

UCG55-12

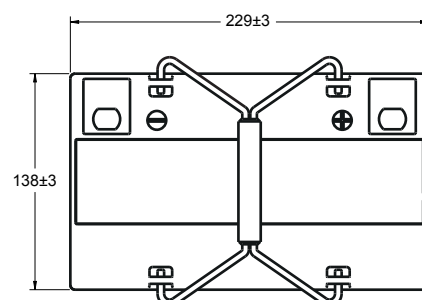
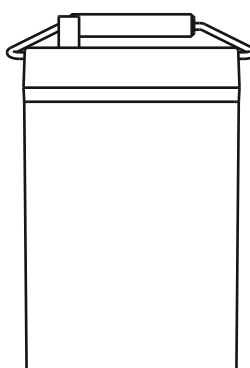
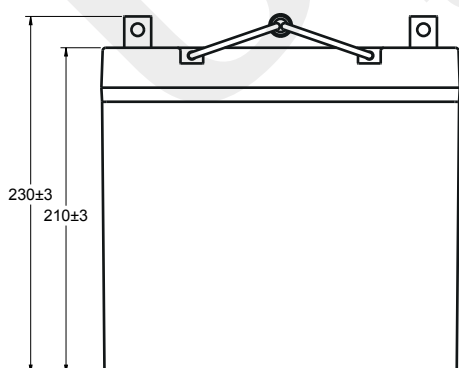
12V 55Ah (C<sub>10</sub>)

12V 65Ah (C<sub>100</sub>)

Solar Series



## Technical Dimensions (mm)



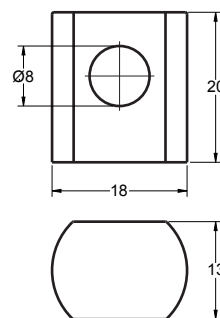


Image



Terminal Dimensions (mm)

Standard Terminal: F9



Technical Specification

<b>Output</b>	Nominal Voltage	12V
	Nominal Capacity (10HR)	55Ah
<b>Terminal Type</b>	Standard Terminal	F9
<b>Container Material</b>	Standard Option	ABS
	Flame Retardant Option (FR)	ABS (UL94:VO)
<b>Rated Capacity</b>	(100HR 1.80V/cell, 25°C)	63.0 Ah/0.63A
	(20HR 1.80V/cell, 25°C)	57.8 Ah/2.89A
	(10HR 1.80V/cell, 25°C)	55.0 Ah/5.50A
	(5HR 1.75V/cell, 25°C)	48.5 Ah/9.69A
	(3HR 1.75V/cell, 25°C)	42.0 Ah/14.0A
	(1HR 1.60V/cell, 25°C)	34.8 Ah/34.8A
<b>Max Discharge Current</b>	550A (5s)	
<b>Internal Resistance</b>	Approx 9mΩ	
<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 16.5A. Voltage 14.1V ~ 14.4V @ 25°C Temp. Coefficient -30mV/°C
	Standby Use	Initial Charging Current less than 16.5A. 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>	10 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.

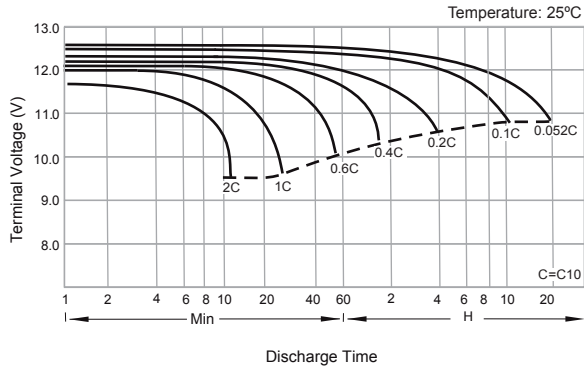
Constant Current Discharge / Constant Power Discharge At 25°C (Amperes & Watts/Cell)

A = Amperes W = Watts

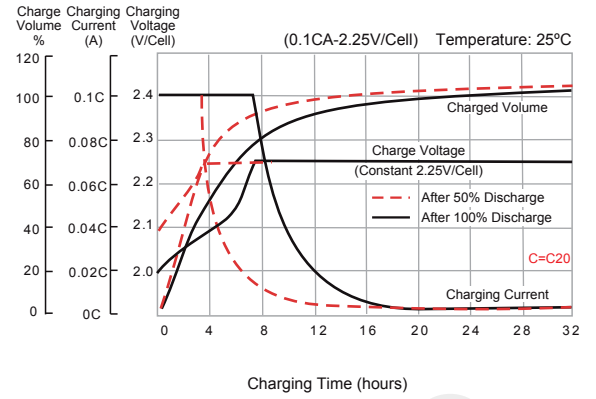
F.V/TIME	30 min	60 min	2 hours	3 hours	4 hours	5 hours	6 hours	8 hours	10 hours	20 hours
1.85V/cell	44.9	28.6	16.3	13.0	10.6	9.04	7.79	6.37	5.11	2.68
1.80V/cell	50.1	30.3	17.2	13.8	11.1	9.37	8.11	6.53	5.50	2.89
1.75V/cell	52.3	32.1	17.9	14.0	11.5	9.69	8.25	6.64	5.55	2.92
1.70V/cell	52.9	33.6	18.6	14.4	11.8	9.86	8.39	6.75	5.61	2.94
1.67V/cell	53.7	34.8	19.2	14.9	12.0	10.0	8.48	6.86	5.66	2.97
1.60V/cell	54.5	35.2	19.5	15.1	12.2	10.2	8.53	6.92	5.72	3.00



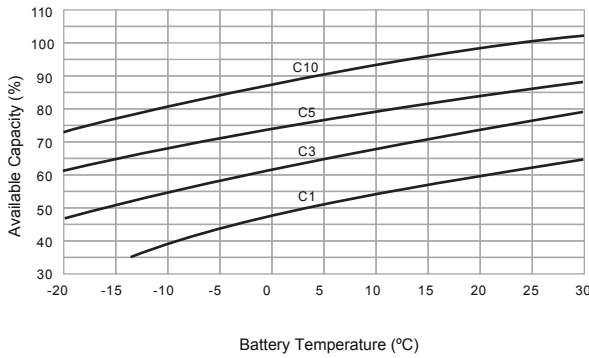
## Discharge Characteristics



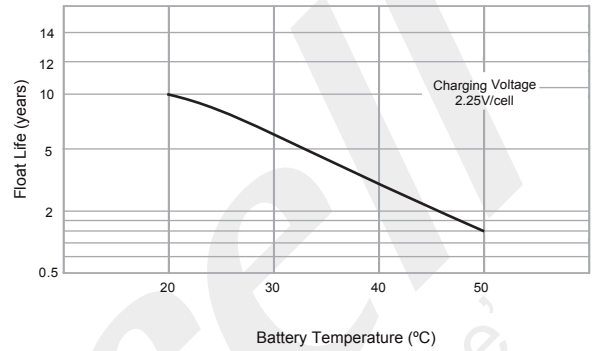
## Float Charging Characteristics



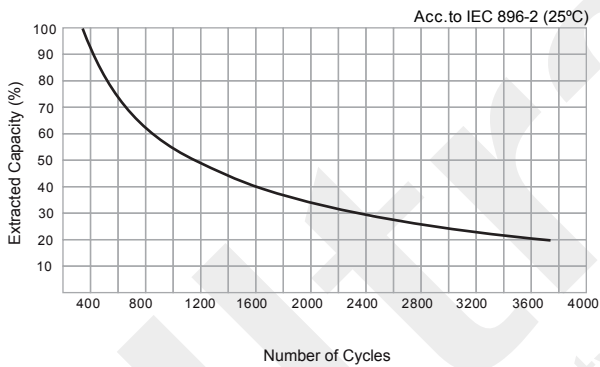
## Temperature Effects in Relation to Battery Capacity



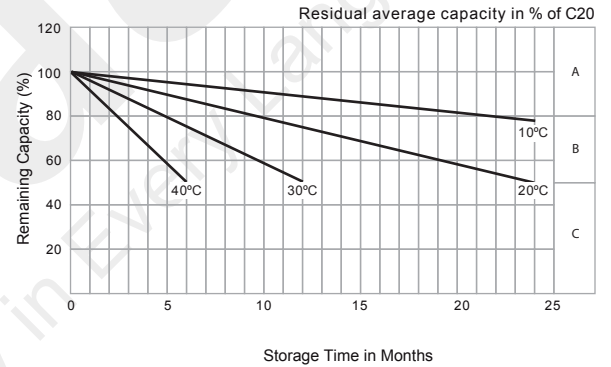
## Effect of Temperature on Long Term Float Life



## 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 2.45V/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.