

# Ultracell®

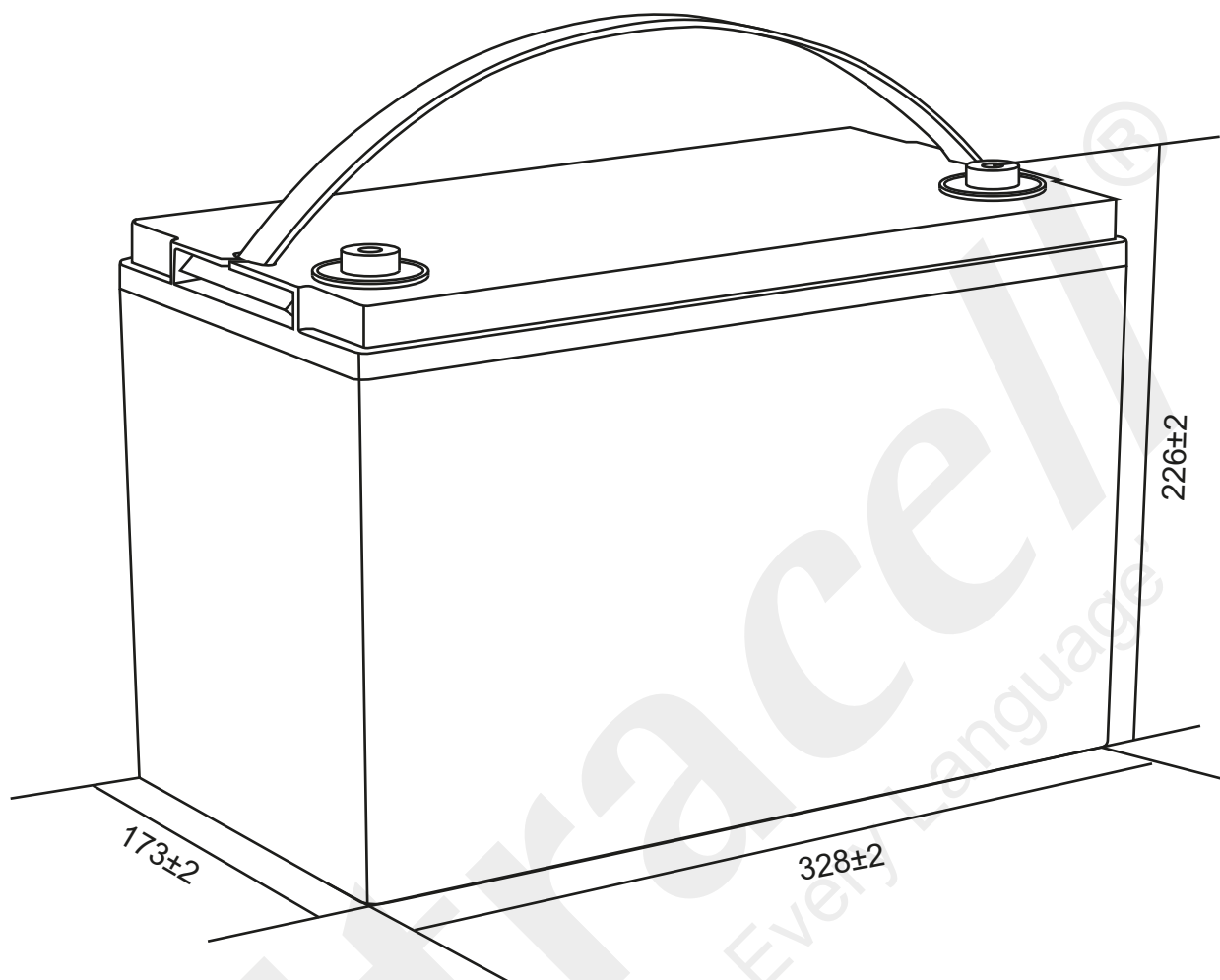
'Quality in Every Language'

UCG100-12

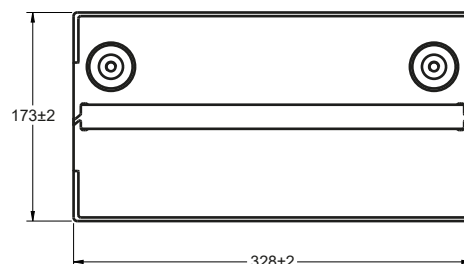
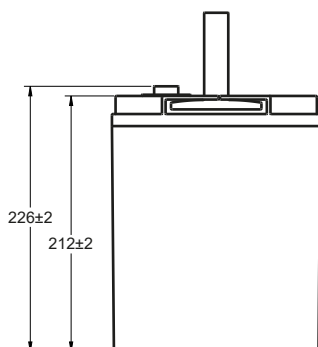
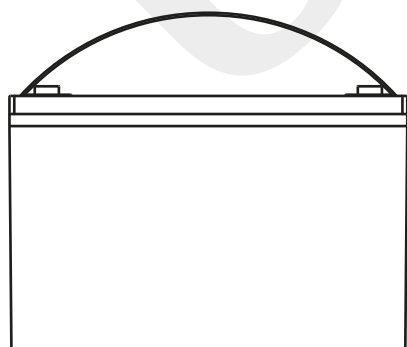
12V 100Ah (C<sub>10</sub>)

12V 115Ah (C<sub>100</sub>)

Solar Series



Technical Dimensions (mm)



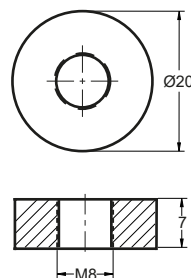


Image

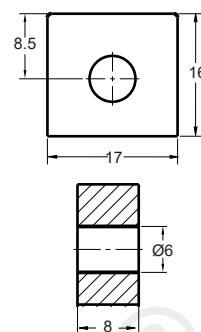


Terminal Dimensions (mm)

Standard Terminal: F11



Optional Terminal: F10



Technical Specification

<b>Output</b>	Nominal Voltage	12V
	Nominal Capacity (10HR)	100Ah
<b>Terminal Type</b>	Standard Terminal	F11
	Optional Terminal	F10
<b>Container Material</b>	Standard Option	ABS
	Flame Retardant Option (FR)	ABS (UL94:VO)
<b>Rated Capacity</b>	(100HR 1.80V/cell, 25°C)	115 Ah/1.15A
	(20HR 1.80V/cell, 25°C)	103 Ah/5.15A
	(10HR 1.80V/cell, 25°C)	100 Ah/10.0A
	(5HR 1.75V/cell, 25°C)	85 Ah/17.0A
	(3HR 1.75V/cell, 25°C)	73.8 Ah/24.6A
	(1HR 1.60V/cell, 25°C)	59.7 Ah/59.7A
<b>Max Discharge Current</b>	1200A (5s)	
<b>Internal Resistance</b>	Approx 5mΩ	
<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 30A. 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>	15 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.

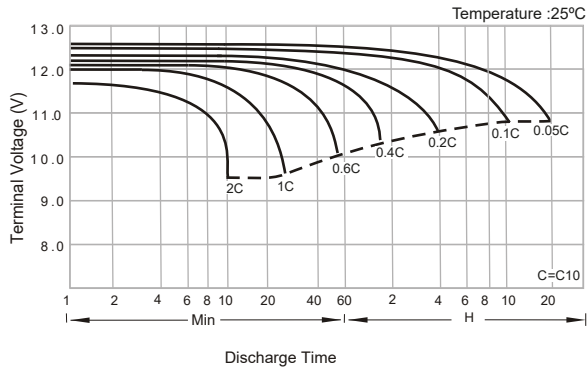
Constant Current Discharge / Constant Power Discharge At 25°C (Amperes & Watts/Cell)

A = Amperes W = Watts

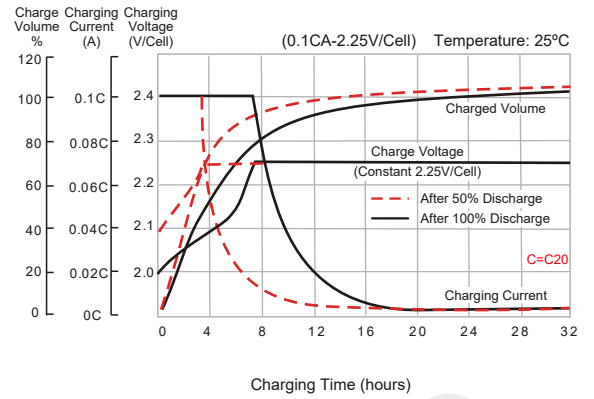
F.V/TIME	5 min	10 min	15 min	20 min	30 min	45 min	60 min	2 hours	3 hours	4 hours	5 hours	6 hours	8 hours	10 hours	20 hours
A															
W															
<b>1.85V/cell</b>	161.2	126.8	107.8	90.2	71.2	54.1	44.8	28.5	22.1	18.2	15.4	13.5	11.0	9.28	5.00
	297.0	235.9	202.7	171.2	136.5	104.5	86.8	55.4	43.2	35.7	30.4	26.5	21.7	18.4	9.94
<b>1.80V/cell</b>	213.3	159.6	128.3	105.0	82.0	61.4	49.8	30.9	23.8	19.4	16.6	14.4	11.7	10.0	5.15
	389.0	293.8	238.3	196.7	155.2	117.7	96.0	59.9	46.2	37.8	32.5	28.4	23.1	19.8	10.2
<b>1.75V/cell</b>	245.4	179.0	143.1	115.3	87.4	64.9	52.7	32.4	24.6	20.0	17.0	14.8	11.9	10.1	5.20
	437.8	324.0	262.2	213.7	164.0	123.4	101.1	62.6	47.7	38.9	33.2	29.1	23.4	20.0	10.3
<b>1.70V/cell</b>	273.4	197.4	154.5	122.6	92.2	68.2	55.0	34.0	25.5	20.6	17.5	15.2	12.0	10.2	5.30
	473.5	348.6	278.8	225.2	171.8	128.9	105.0	65.5	49.2	40.0	34.0	29.6	23.7	20.1	10.5
<b>1.65V/cell</b>	298.6	210.9	162.7	129.0	96.6	70.2	57.0	34.9	26.4	21.2	17.9	15.5	12.2	10.3	5.35
	508.8	368.4	290.7	234.7	178.2	131.7	108.1	66.9	50.9	41.0	34.7	30.2	24.0	20.3	10.6
<b>1.60V/cell</b>	332.0	230.9	175.5	138.5	102.6	74.3	59.7	36.2	27.3	21.7	18.2	15.8	12.4	10.4	5.40
	552.6	394.1	308.3	249.3	187.8	138.3	112.7	69.0	52.4	41.8	35.2	30.8	24.3	20.6	10.7



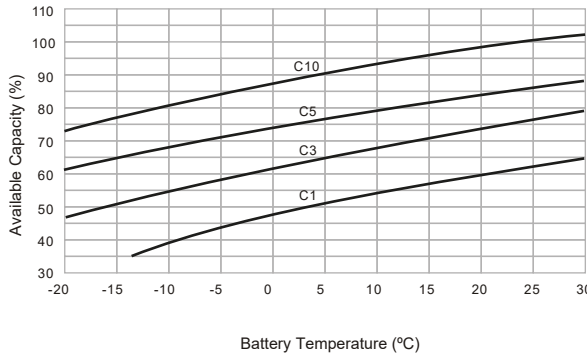
### Discharge Characteristics



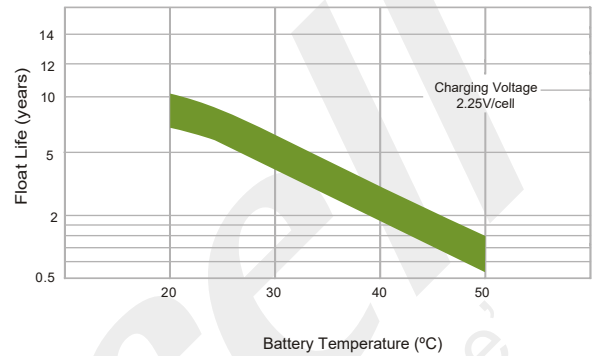
### Float Charging Characteristics



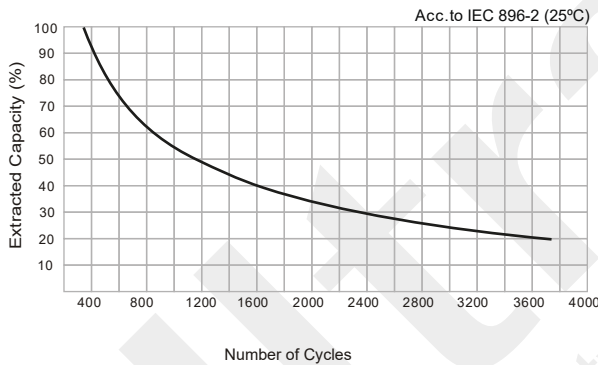
### Temperature Effects in Relation to Battery Capacity



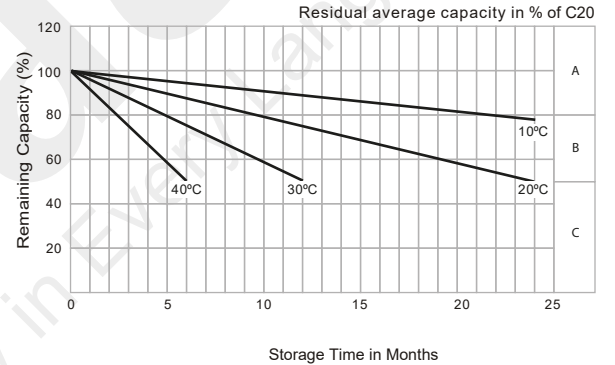
### Effect of Temperature on Long Term Float Life



### Cycle Life in Relation to Depth of Discharge



### General Relation of Capacity vs. Storage Time



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

- 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.