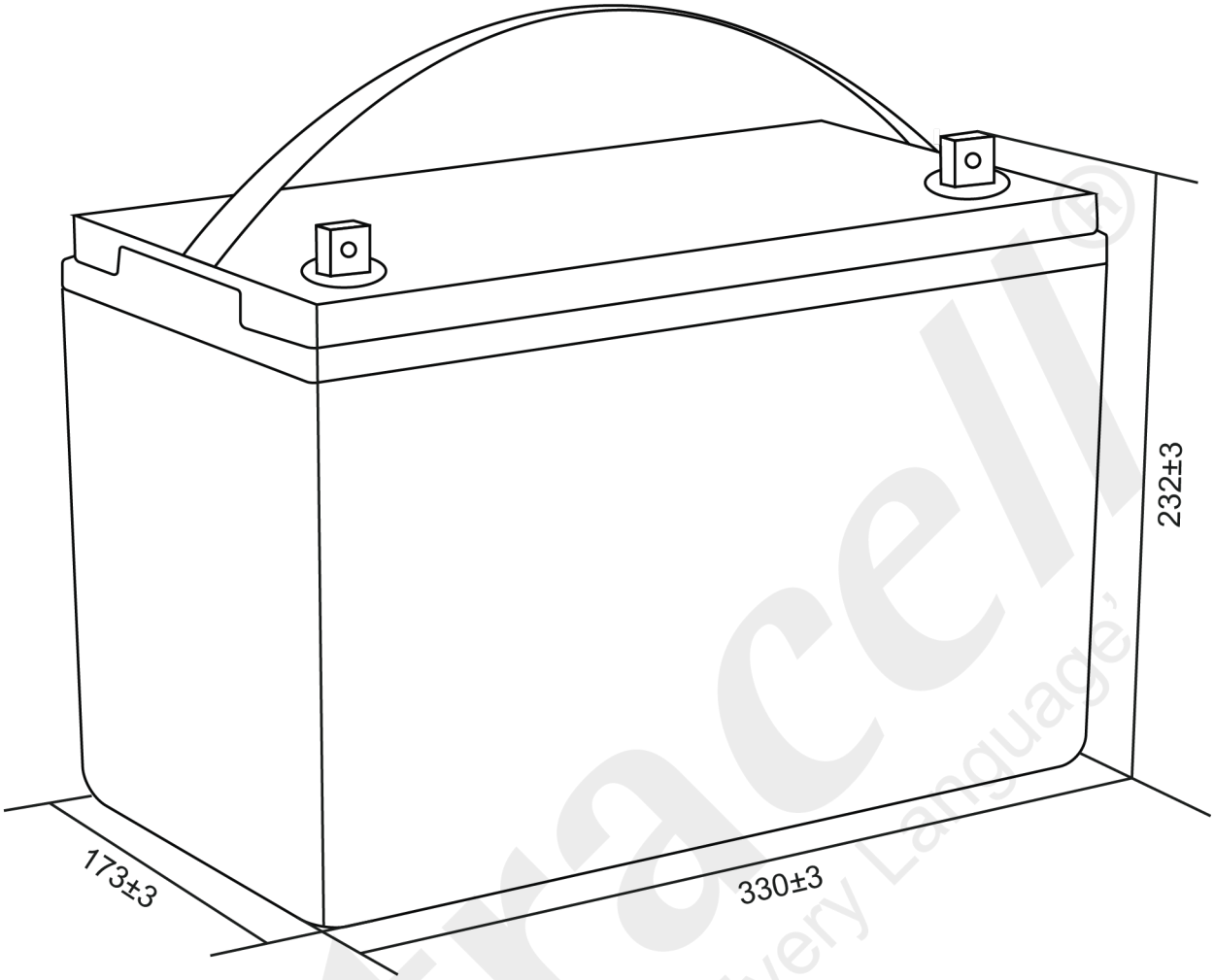
Ultracell®

'Quality in Every Language'

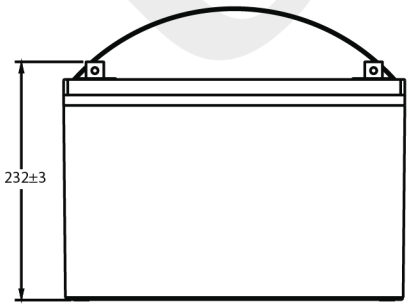
UCG100-12

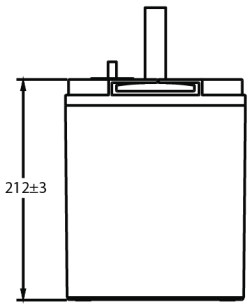
12V 100Ah

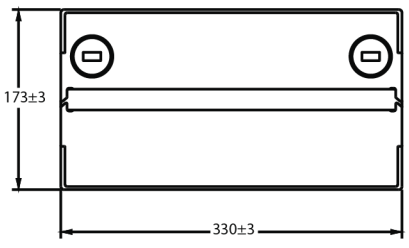
Solar Series



Technical Dimensions (mm)







Ultracell (UK) Ltd | Vesty Business Park, Vesty Road, Liverpool, L30 1NY, United Kingdom
Tel: +44 (0) 151 523 2777 | Fax: +44 (0) 151 523 0855 | Email: info@ultracell.co.uk
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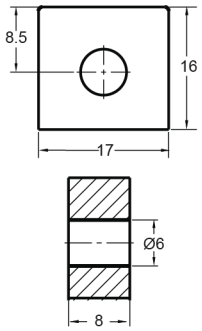
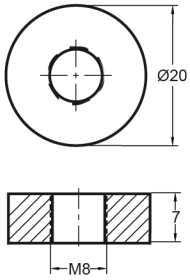
Image

Terminal Dimensions (mm)

Standard Terminal: F10



Optional Terminal: F11



Technical Specification

Output	Nominal Voltage Nominal Capacity (10HR)	12V 100Ah
Terminal Type	Standard Terminal Optional Terminal	F10 F11
Container Material	Standard Option Flame Retardant Option (FR)	ABS ABS (UL94:VO)
Rated Capacity	(20HR 1.80V/cell, 25°C) (10HR 1.80V/cell, 25°C) (5HR 1.75V/cell, 25°C) (3HR 1.75V/cell, 25°C) (1HR 1.60V/cell, 25°C)	103.0 Ah/5.15A 100.0 Ah/10.0A 85.0 Ah/17.0A 73.8 Ah/24.6A 59.7 Ah/59.7A
Max Discharge Current	1200A (5s)	
Internal Resistance	Approx 5mΩ	
Discharge Characteristics	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 then 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%
Design Floating Life at 20°C	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 (A / W)	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
1.85V/cell	161.2 297.0	126.8 235.9	107.8 202.7	90.2 171.2	71.2 136.5	54.1 104.5	44.8 86.8	28.5 55.4	22.1 43.2	18.2 35.7	15.4 30.4	13.5 26.5	11.0 21.7	9.28 18.4	5.00 9.94
1.80V/cell	213.3 389.0	159.6 293.8	128.3 238.3	105.0 196.7	82.0 155.2	61.4 117.7	49.8 96.0	30.9 59.9	23.8 46.2	19.4 37.8	16.6 32.5	14.4 28.4	11.7 23.1	10.0 19.8	5.15 10.2
1.75V/cell	245.4 437.8	179.0 324.0	143.1 262.2	115.3 213.7	87.4 164.0	64.9 123.4	52.7 101.1	32.4 62.6	24.6 47.7	20.0 38.9	17.0 33.2	14.8 29.1	11.9 23.4	10.1 20.0	5.20 10.3
1.70V/cell	273.4 473.5	197.4 348.6	154.5 278.8	122.6 225.2	92.2 171.8	68.2 128.9	55.0 105.0	34.0 65.5	25.5 49.2	20.6 40.0	17.5 34.0	15.2 29.6	12.0 23.7	10.2 20.1	5.30 10.5
1.65V/cell	298.6 508.8	210.9 368.4	162.7 290.7	129.0 234.7	96.6 178.2	70.2 131.7	57.0 108.1	34.9 66.9	26.4 50.9	21.2 41.0	17.9 34.7	15.5 30.2	12.2 24.0	10.3 20.3	5.35 10.6
1.60V/cell	332.0 552.6	230.9 394.1	175.5 308.3	138.5 249.3	102.6 187.8	74.3 138.3	59.7 112.7	36.2 69.0	27.3 52.4	21.7 41.8	18.2 35.2	15.8 30.8	12.4 24.3	10.4 20.6	5.40 10.7

VdS
MH 29410
EMC 1188-C
IEC 60896
ISO 9001:2015

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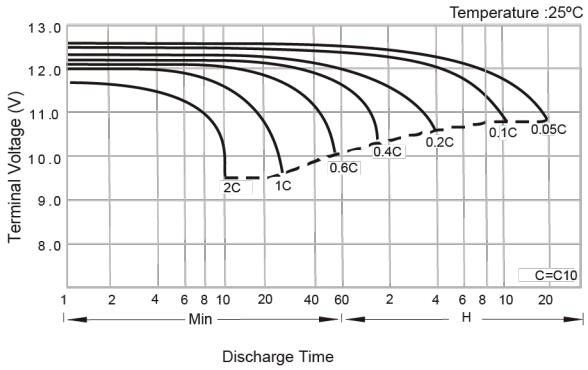
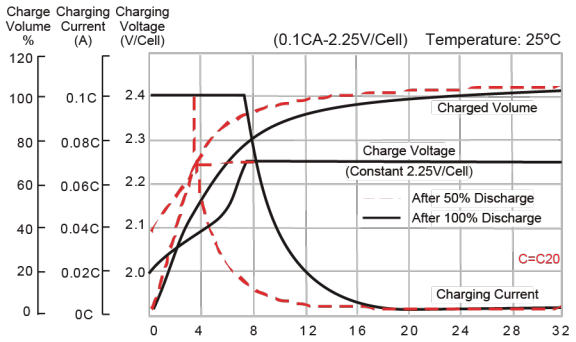
Discharge Characteristics



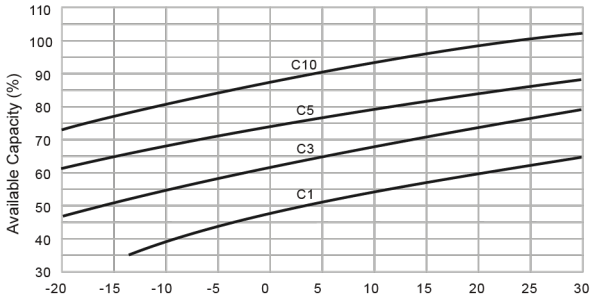
Discharge Time

Float Charging Characteristics



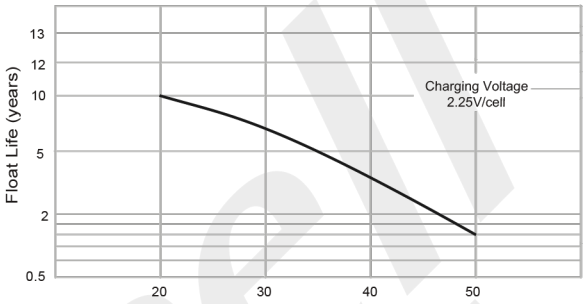
Charging Time (hours)

Temperature Effects in Relation to Battery Capacity



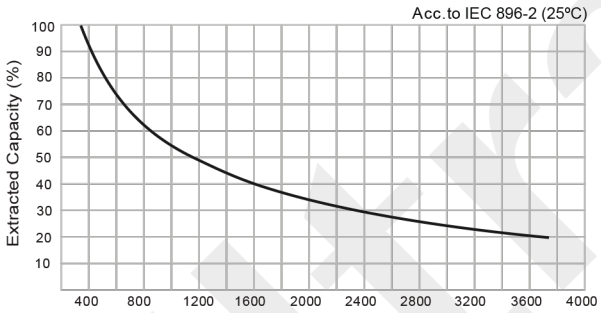
Battery Temperature (ºC)

Effect of Temperature on Long Term Float Life



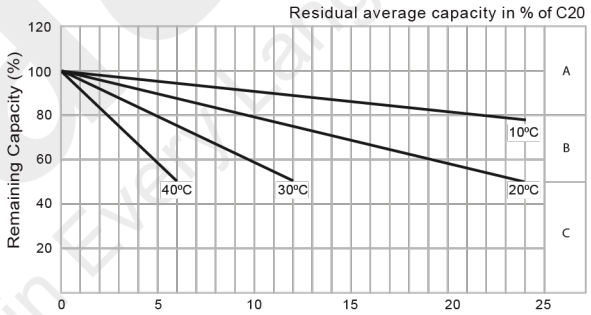
Battery Temperature (ºC)

Cycle Life in Relation to Depth of Discharge



Number of Cycles

General Relation of Capacity vs. Storage Time



Storage Time in Months

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 2.45Vcell.
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.

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Quality Veritas ISO 9001:2015

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