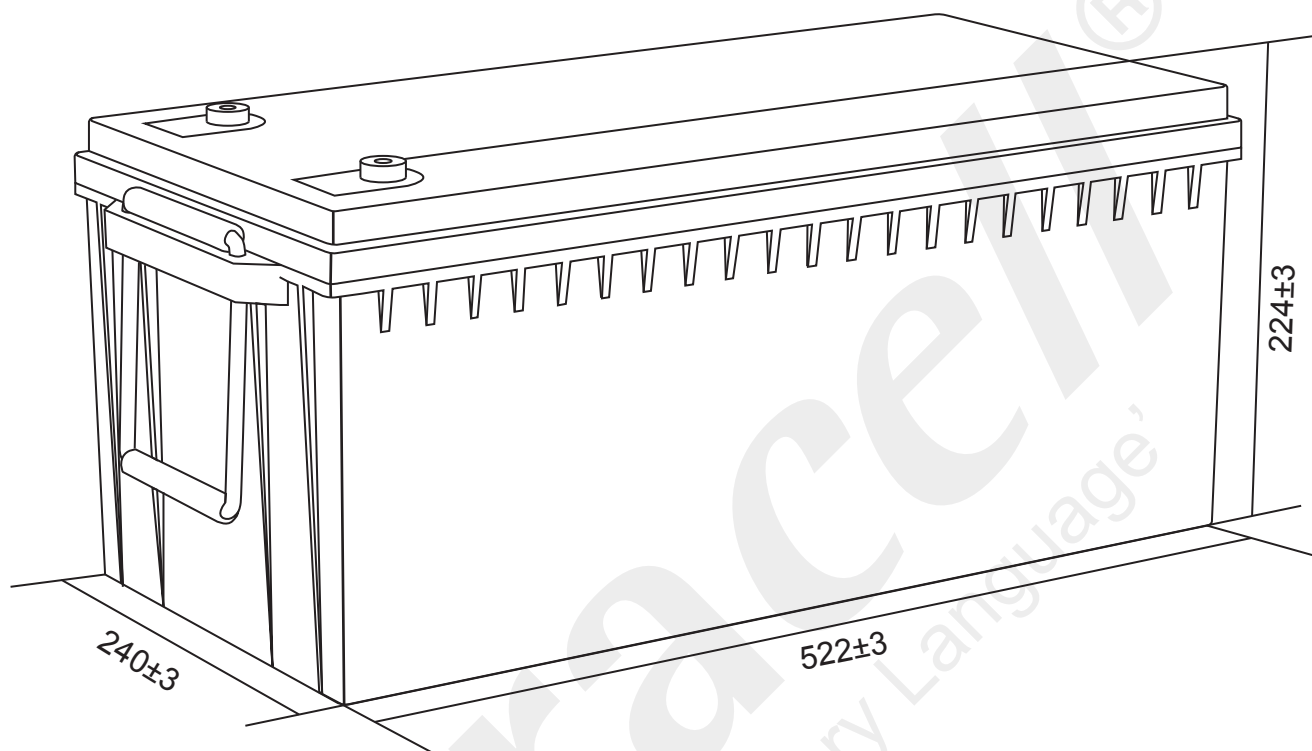
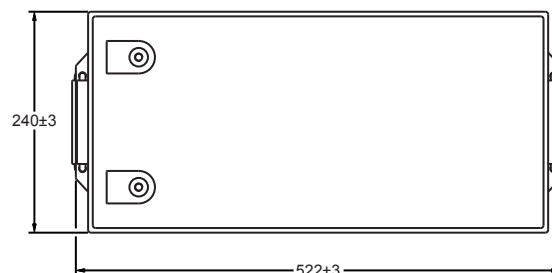
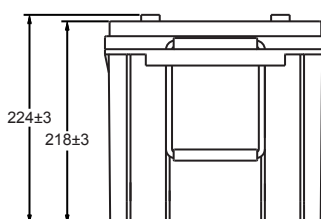
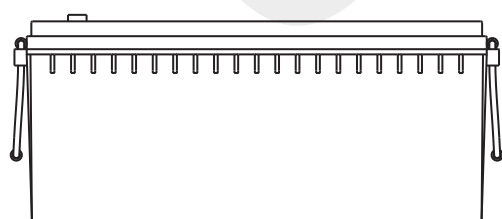




Technical Dimensions (mm)



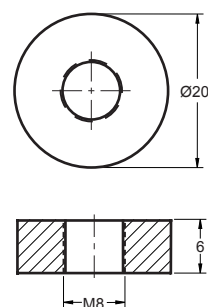


Image



Terminal Dimensions (mm)

Standard
Terminal: F11



Technical Specification

Output	Nominal Voltage Nominal Capacity (10HR)	12V 200Ah
Terminal Type	Standard Terminal	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)	208 Ah/10.4A 200.0 Ah/20.0A 180.0 Ah/36.0A 164.1 Ah/54.7A 126.2 Ah/126.2A
Max Discharge Current	2000A (5s)	
Internal Resistance	Approx 2.7mΩ	
Discharge Characteristics	Operating Temp Range	Discharge: -15 ~ 50°C Charge: -20 ~ 40°C Storage: -15 ~ 40°C
	Nominal Operating Temp Range	25 ± 3°C
	Cycle Use	Initial Charging Current less than 60A. Voltage 14.4V ~ 15.0V @ 25°C Temp. Coefficient -30mV/°C
	Standby Use	Initial Charging Current less than 60A. 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	8 Years	

Self Discharge

Ultracell® UL 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.

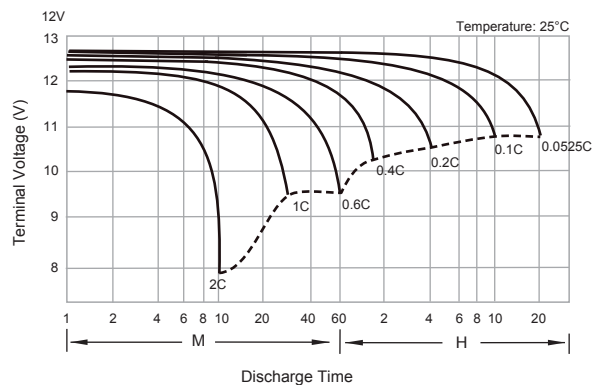
Constant Current Discharge / Constant Power Discharge At 25°C (Amperes & Watts/Cell)

A = Amperes W = Watts

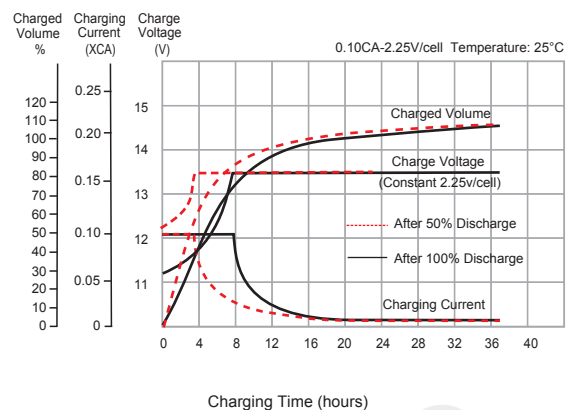
F.V/TIME	10	15	20	30	45	60	90	2	3	4	5	6	8	10	20
A W	min	min	min	min	min	min	min	hours	hours	hours	hours	hours	hours	hours	hours
1.85V/cell	287.1	254.0	199.7	178.6	130.6	110.6	80.2	67.4	49.4	38.8	33.7	29.7	22.8	18.9	10.0
	529.0	480.9	379.9	341.2	251.1	213.9	155.5	131.1	96.6	76.1	66.3	58.6	45.3	37.6	20.0
1.80V/cell	325.8	287.8	225.8	194.4	138.4	114.6	82.9	69.6	53.7	41.4	35.4	31.9	24.0	20.0	10.4
	591.8	537.9	424.9	368.6	264.3	220.4	160.0	134.7	104.4	80.9	69.4	62.7	47.5	39.3	20.7
1.75V/cell	353.4	311.6	243.8	198.4	143.4	120.2	87.1	73.3	54.7	42.2	36.0	32.1	24.1	20.1	10.5
	631.6	574.1	453.5	373.2	272.2	230.2	167.4	141.3	106.1	82.2	70.4	63.0	47.6	39.7	20.8
1.70V/cell	376.8	330.9	258.5	202.4	146.2	122.6	88.9	74.7	55.8	42.9	36.6	32.3	24.5	20.2	10.6
	664.0	603.5	476.8	377.5	275.7	233.6	170.0	143.5	107.8	83.3	71.4	63.3	48.3	40.0	21.0
1.67V/cell	388.7	340.6	265.5	205.3	148.4	124.4	90.2	75.8	56.3	43.6	37.4	32.4	24.8	20.5	10.7
	674.8	613.3	484.5	380.2	278.2	235.7	171.6	145.0	108.3	84.3	72.6	63.4	48.9	40.5	21.3
1.60V/cell	402.0	351.1	272.4	208.3	150.5	126.2	91.5	76.9	56.8	44.1	37.9	32.7	25.2	20.7	10.9
	684.2	621.9	491.3	381.8	279.6	237.5	173.0	146.2	108.8	84.9	73.3	63.6	49.4	40.9	21.5



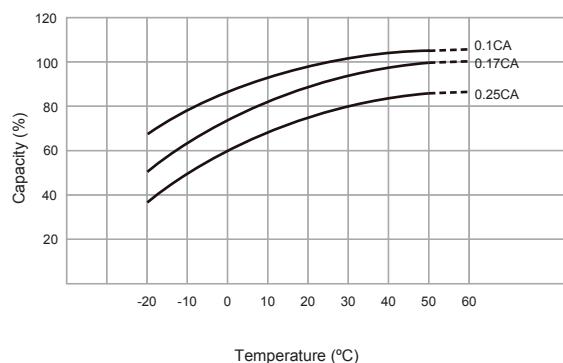
Discharge Characteristics



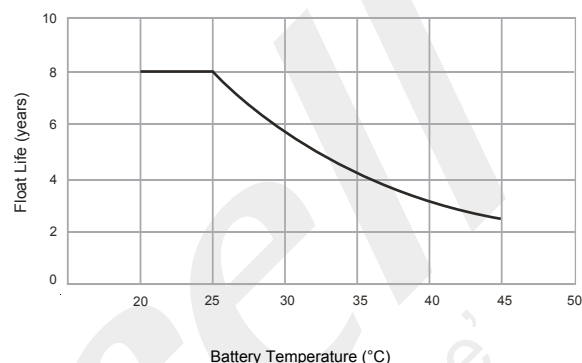
Float Charging Characteristics



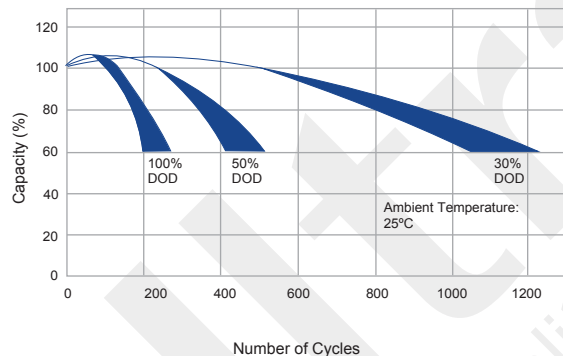
Temperature Effects in Relation to Battery Capacity



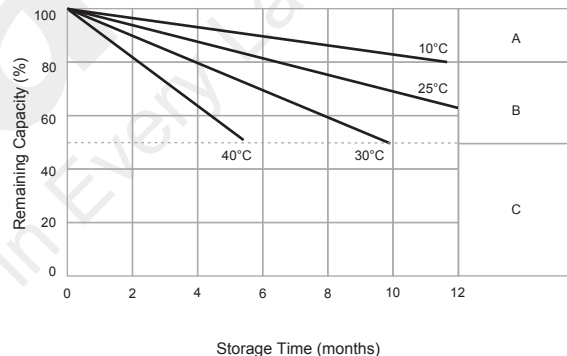
Effects of Temperature on Long Term Float Life



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 2.45V/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.