

# UL180-12

12V 180AH  
General

Ultracell®  
Quality in Every Language

## UL180-12



## Physical Specification

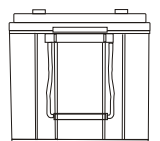
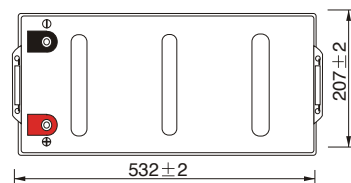
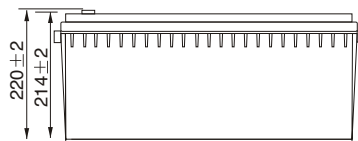
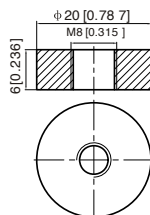
Part Number	UL180-12
Length	530 ± 2 mm
Width	209 ± 2 mm
Container Height	214 ± 2 mm
Total Height (with terminal)	220 ± 2 mm
Approx Weight	52.80 kg

## Specifications

	Nominal Voltage	12V
	Nominal Capacity (-HR)	180AH
Terminal Type	Standard Terminal	F11
	Optional Terminal	
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	UL94:VO
Rated Capacity	20hr, 1.80V/cell, 25°C	187.20 AH/9.36A
	10hr, 1.80V/cell, 25°C	180.0 AH/18.00A
	5hr, 1.75V/cell, 25°C	155.0 AH/31.00A
	1hr, 1.60V/cell, 25°C	109.80 AH/109.80A
Max Discharge Current	1800.00 (5s)	
Internal Resistance	3.000mΩ	
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 than 54.00A. Voltage 14.4V ~ 15.0V Temp. Coefficient -30mV/°C
	Standby Use	No limit on Initial Charging Current Voltage 13.5V ~ 13.8V Temp. Coefficient -20mV/°C
Capacity affect by Temperature	40°C	103%
	25°C	100%
	0°C	86%
Design Floating Life at 20°C	10 Years	
Self Discharge	Ultracell batteries may be stored for up to 6 months at 25°C(77°F) and then a refresh charge is required. For higher temperatures the time interval will be shorter.	

## Dimensions

### F11 Terminal



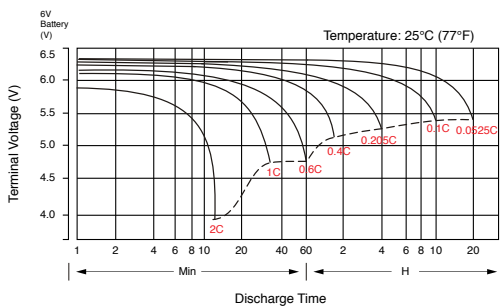
## Constant Current Discharge (Amperes) at 20°C

F.V/Time	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	242.2	206.0	172.3	136.9	103.6	84.9	54.1	42.7	34.9	28.1	24.5	19.9	17.0	9.27
1.80V/cell	309.5	248.9	203.7	161.6	120.5	95.1	59.0	46.0	37.3	30.2	26.3	21.1	18.0	9.36
1.75V/cell	340.1	271.8	219.1	167.7	125.1	99.5	61.2	46.8	38.1	31.0	27.0	21.5	18.2	9.45
1.70V/cell	370.6	290.2	230.2	174.6	130.1	102.6	63.6	48.2	39.1	31.8	27.6	21.8	18.4	9.63
1.65V/cell	400.0	308.6	244.6	184.2	133.3	106.0	65.4	50.2	40.5	32.7	28.2	22.1	18.7	9.76
1.60V/cell	434.3	330.0	260.6	194.4	139.0	109.8	67.6	51.7	41.7	33.8	28.8	22.3	18.9	9.81

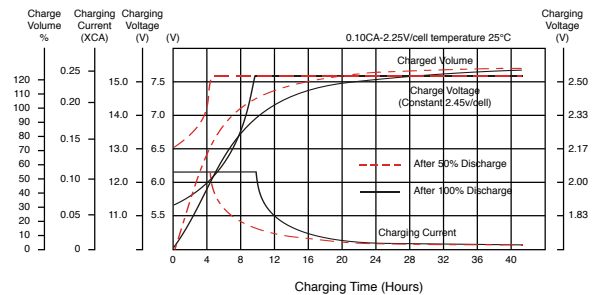
## Constant Power Discharge (Watts) at 20°C

F.V/Time	10 min	15 min	20 min	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	447.4	384.3	324.7	261.0	199.2	163.7	105.0	83.3	68.2	55.2	48.2	39.3	33.6	18.4
1.80V/cell	564.9	485.1	378.3	303.2	229.9	182.4	113.8	89.1	72.5	59.0	51.5	41.5	35.6	18.5
1.75V/cell	610.8	494.3	403.0	312.2	236.3	189.9	117.6	90.4	73.8	60.3	52.7	42.1	35.9	18.7
1.70V/cell	650.7	520.4	420.3	323.2	244.8	195.3	122.0	92.8	75.7	61.7	53.7	42.7	36.2	19.0
1.65V/cell	695.8	549.0	443.2	338.1	248.7	200.4	124.7	96.3	78.0	63.2	54.7	43.3	36.9	19.2
1.60V/cell	738.1	577.5	467.0	354.5	257.8	206.4	128.2	98.8	80.2	65.1	55.8	43.6	37.2	19.3

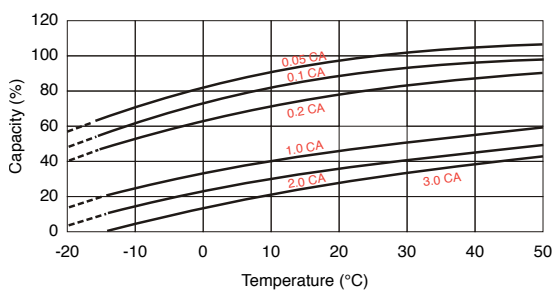
## Discharge Characteristics



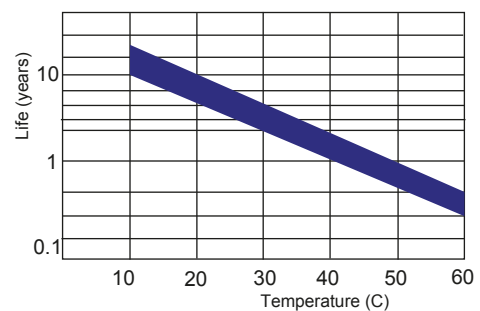
## Float Charging Characteristics



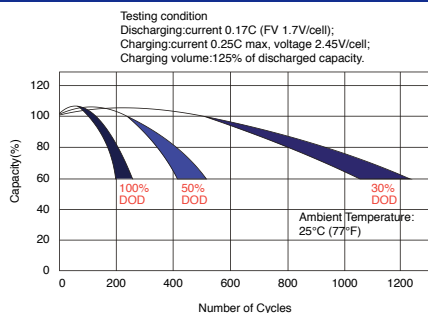
## Temperature Effects in Relation to Battery Capacity



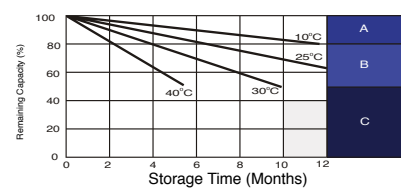
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## General Relation of Capacity VS. Storage Time



- A** No supplementary 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 30 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 30 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.