UC 20-12
12V 20AH
Deep Cycle

Ultracell
'Quality in Every Language'

UC20-12



Physical Specification

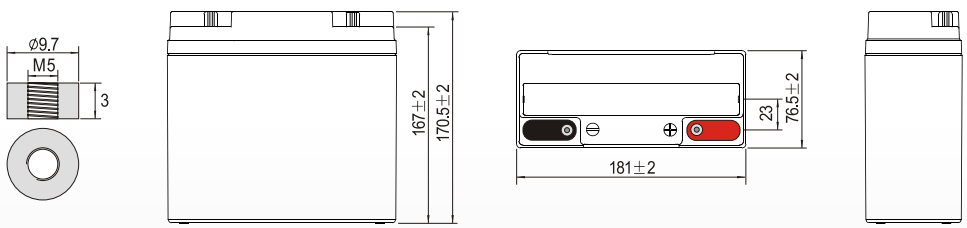
Part Number:	**UC20-12**
Length:	**181 ± 2 mm (7.13 inches)**
Width:	**76.5 ± 2 mm (3.01 inches)**
Container Height:	**170.5 ± 2 mm (6.71 inches)**
Total Height (with terminal):	**170.5 ± 2 mm (6.71 inches)**
Approx Weight:	**Approx 6.90kg (15.21lbs)**

Specifications

	Normal Voltage	12V
	Normal Capacity (20HR)	20.0AH
Terminal Type	Standard Terminal	F15
	Optional Terminal	
Container Material	Standard Option	ABS
	Flame Retardant Option (FR)	ABS(UL94:VO)
Rated Capacity	21.4 AH/1.07A	(20hr, 1.80V/cell, 25°C / 77°F)
	20.0 AH/2.00A	(10hr, 1.80V/cell, 25°C / 77°F)
	17.5 AH/3.51A	(5hr, 1.75V/cell, 25°C / 77°F)
	15.9 AH/5.30A	(3hr, 1.75V/cell, 25°C / 77°F)
	12.9 AH/12.9A	(1hr, 1.60V/cell, 25°C / 77°F)
Max Discharge Current	300A (5s)	
Internal Resistance	Approx 15.0mΩ	
Discharge Characteristics	Operating Temp. Range	Discharge: -15 ~ 50°C (5 ~ 122°F)
		Charge: 0 ~ 40°C (5 ~ 104°F)
		Storage: -15 ~ 40°C (5 ~ 104°F)
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 6.0A.Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
	Standby Use	No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C
	Capacity affected by Temperature	40°C (104°F) 103%
		25°C (77°F) 100%
		0°C (32°F) 86%
Design Floating Life at 20°C	12 Years	
Self Discharge	Ultracell batteries may be stored for up to 6 months at 25°C(°77F) and then a refresh charge is required. For higher temperatures the time interval will be shorter.	

Dimensions

F15 Terminal



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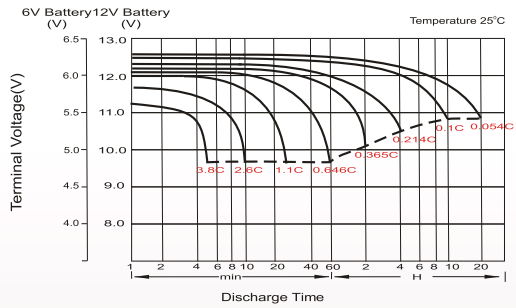
Constant Current Discharge (Amperes) at 25°C (77°F)

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	29.3	24.6	21.5	15.5	12.3	9.99	6.20	4.84	3.92	3.18	2.78	2.27	1.89	1.06
1.80V/cell	37.4	29.8	25.5	18.3	14.3	11.2	6.77	5.20	4.18	3.42	2.98	2.40	2.00	1.07
1.75V/cell	41.1	32.5	27.4	19.0	14.9	11.7	7.02	5.30	4.28	3.51	3.06	2.45	2.02	1.08
1.70V/cell	44.8	34.7	28.8	19.8	15.4	12.1	7.30	5.45	4.39	3.60	3.12	2.48	2.04	1.10
1.65V/cell	48.4	36.9	30.6	20.8	15.8	12.5	7.50	5.68	4.54	3.70	3.19	2.52	2.08	1.11
1.60V/cell	52.5	39.5	32.6	22.0	16.5	12.9	7.76	5.85	4.68	3.82	3.26	2.54	2.10	1.12

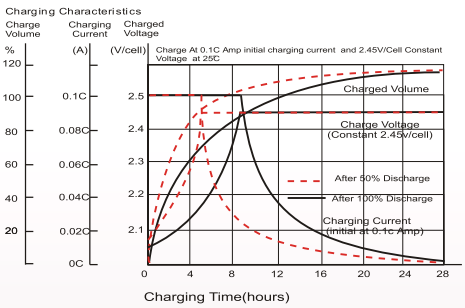
Constant Power Discharge (Watts) at 25°C (77°F)

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	54.6	46.5	41.0	29.8	23.8	19.4	12.1	9.45	7.67	6.25	5.49	4.48	3.74	2.13
1.80V/cell	68.9	55.3	47.8	34.7	27.5	21.6	13.1	10.1	8.15	6.69	5.86	4.75	3.96	2.14
1.75V/cell	74.8	59.8	51.0	35.9	28.4	22.5	13.6	10.3	8.32	6.86	6.01	4.83	4.00	2.16
1.70V/cell	80.3	63.4	53.3	37.2	29.4	23.1	14.1	10.5	8.52	7.01	6.13	4.89	4.03	2.20
1.65V/cell	86.1	67.0	56.3	39.0	30.0	23.8	14.4	11.0	8.79	7.20	6.26	4.96	4.11	2.22
1.60V/cell	91.9	70.8	59.4	40.8	31.0	24.5	14.8	11.2	9.03	7.40	6.38	5.00	4.15	2.23

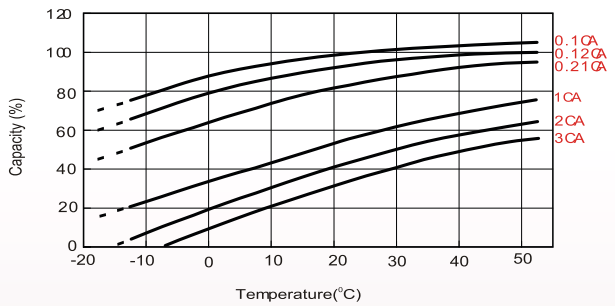
Discharge Characteristics



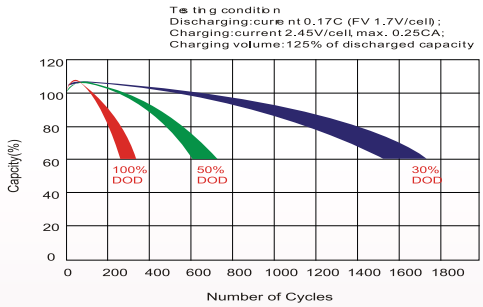
Charging Characteristics (cycle use)



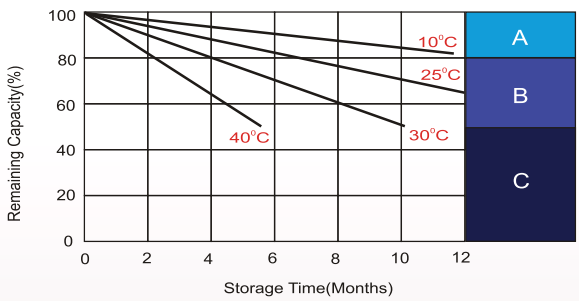
Temperature Effects in Relation to Battery Capacity



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



A No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

B Supplemenary charge required before use. Optional charging way as below:
1.Charged for above 3 days at limted current 0.25 CA and constant volatge 2.25 V/cell.
2.Charged for above 20hours at limted current 0.25CA and constant volatge 2.45V/cell.
3.Charged for 8~10 hours at limted current 0.05 CA.

C Supplemenary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached

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