Ultracell®

'Quality in Every Language'

UL40-12

12V 40Ah

General Series

Technical Dimensions (mm)

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TechData

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Image

Terminal Dimensions (mm)

Standard Terminal: F10

Optional Terminal: F6

Technical Specification

Output	Nominal Voltage Nominal Capacity (10HR)	12V 40Ah
Terminal Type	Standard Terminal Optional Terminal	F10 F6
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)	42.0 Ah/2.10A 40.0 Ah/4.00A 36.4 Ah/7.28A 33.3 Ah/11.1A 25.5 Ah/25.5A
Max Discharge Current	400A (5s)	
Internal Resistance	Approx 9mΩ	
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 12A. Voltage 14.4V ~ 15.0V @ 25°C Temp. Coefficient -30mV/°C
	Standby Use	Initial Charging Current less than 12A. 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 A / W	5 min	10 min	15 min	20 min	30 min	45 min	60 min	90 min	2 hours	3 hours	4 hours	5 hours	6 hours	8 hours	10 hours	20 hours
1.85V/cell	83.2 155.4	59.2 111.3	51.3 97.1	40.3 76.7	36.1 70.3	26.4 50.7	22.3 44.1	16.2 32.0	13.6 27.0	9.99 19.9	7.84 15.7	6.80 13.7	5.99 11.8	4.61 9.33	3.82 7.75	2.03 4.12
1.80V/cell	94.6 173.9	67.2 124.5	58.1 108.7	45.6 85.8	39.3 75.9	28.0 53.4	23.1 45.4	16.7 33.0	14.1 27.8	10.8 21.5	8.36 16.7	7.15 14.3	6.44 12.7	4.85 9.79	4.00 8.10	2.10 4.26
1.75V/cell	102.8 185.6	72.8 132.9	62.9 116.0	49.2 91.6	40.1 76.9	29.0 55.0	24.3 47.4	17.6 34.5	14.8 29.1	11.1 21.9	8.52 16.9	7.28 14.5	6.49 12.7	4.88 9.82	4.04 8.17	2.12 4.30
1.70V/cell	109.9 195.1	77.7 139.7	66.9 121.9	52.2 96.3	40.9 77.8	29.5 55.7	24.8 48.1	18.0 35.0	15.1 29.6	11.3 22.2	8.67 17.2	7.40 14.7	6.52 12.8	4.95 10.0	4.08 8.25	2.14 4.34
1.67V/cell	113.7 198.3	80.1 142.0	68.8 123.9	53.6 97.9	41.5 78.3	30.0 56.2	25.1 48.6	18.2 35.4	15.3 29.9	11.4 22.3	8.80 17.4	7.55 15.0	6.55 12.8	5.02 10.1	4.13 8.34	2.17 4.39
1.60V/cell	117.8 201.0	82.9 144.0	70.9 125.6	55.0 99.3	42.1 78.7	30.4 56.5	25.5 48.9	18.5 35.6	15.5 30.1	11.5 22.4	8.91 17.5	7.66 15.1	6.60 12.9	5.09 10.2	4.18 8.42	2.19 4.43

VdS
MH29410
CE EMC 1188-C
IEC 60896
IEC 62321
Qualitas Veritas ISO 9001:2015

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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 2.25Vcell.
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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