

## UP Series G40-12

GENERAL PURPOSE GEL



### Main Features

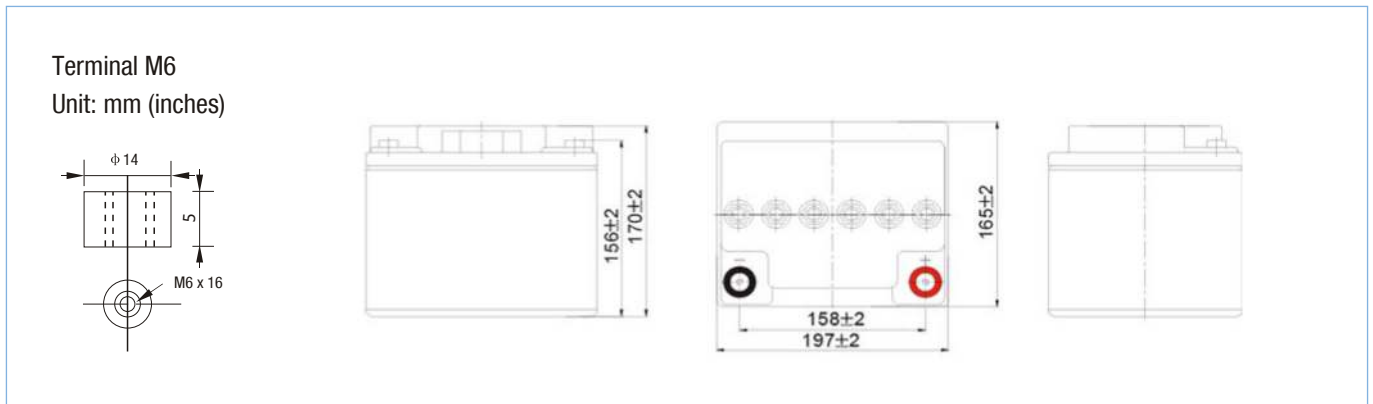
- **Longer Design Life**  
Designed for 12 years of service life at 25°C.
- **Uniform Electrolyte Distribution**  
Using high quality silica (silicon dioxide) we obtain a uniform electrolyte distribution for a better performance.

### Technical Specifications

Nominal Voltage (V)	12
Nominal Capacity (20 Hr)	40 Ah
Dimensions	Length: 197 ± 2 mm (7.76 inches)
	Width: 165 ± 2 mm (6.50 inches)
	Container Height: 170 ± 2 mm (6.69 inches)
	Total Height (+terminal): 170 ± 2 mm (6.69 inches)
Approx. Weight	Approx. 13.5 kg (29.76 lbs)
Terminal	M6
Container Material	ABS
Rated Capacity	41.6 Ah / 2.08 A (20hr, 1.80V/cell, 25°C / 77°F)
	37.0 Ah / 3.77 A (10hr, 1.75V/cell, 25°C / 77°F)
	33.2 Ah / 6.64 A (5hr, 1.75V/cell, 25°C / 77°F)
	28.8 Ah / 9.61 A (3hr, 1.75V/cell, 25°C / 77°F)
	22.85 Ah / 22.85 A (1hr, 1.67V/cell, 25°C / 77°F)
Maximum Discharge Current	380 A (5 s)
Internal Resistance	Approx. 12.0 mΩ
Operating Temperature Range	Discharge: -20 ~ 55°C (-4 ~ 131°F)
	Charge: 0 ~ 40°C (32 ~ 104°F)
	Storage: -20 ~ 50°C (-4 ~ 122°F)
Nominal Operating Temperature Range	25 ± 3°C (77 ± 5°F)
Cycle Use	Initial Charging Current less than 7.6 A. Voltage 14.4~15V at 25°C (77°F) Temp. Coefficient -30mV/°C
Standby Use	No limit on Initial Charging Current Voltage. 13.5~13.8V 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%
Self Discharge	Batteries may be stored for up to 9 months at 25°C (77°F) and then a freshening charge is required.



## Battery Dimensions



## Battery Discharge Tables

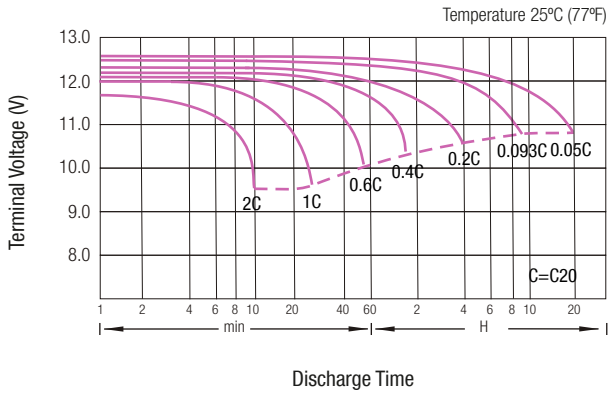
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	35.10	27.55	21.05	17.60	11.15	8.51	7.05	6.09	5.25	4.65	4.20	3.84	3.54	1.99
1.80V/cell	40.20	30.80	23.15	19.45	12.10	9.12	7.47	6.39	5.52	4.87	4.39	4.03	3.70	2.08
1.75V/cell	45.20	33.85	25.10	20.75	12.80	9.61	7.82	6.64	5.71	5.04	4.54	4.15	3.77	2.12
1.70V/cell	48.70	36.25	26.65	22.00	13.55	10.04	8.08	6.85	5.91	5.21	4.67	4.26	3.86	2.14
1.67V/cell	50.65	37.70	27.55	22.85	13.90	10.34	8.28	6.99	6.01	5.29	4.74	4.32	3.90	2.17
1.60V/cell	54.90	40.30	29.60	24.25	14.50	10.78	8.6	7.21	6.15	5.40	4.83	4.41	3.98	2.20

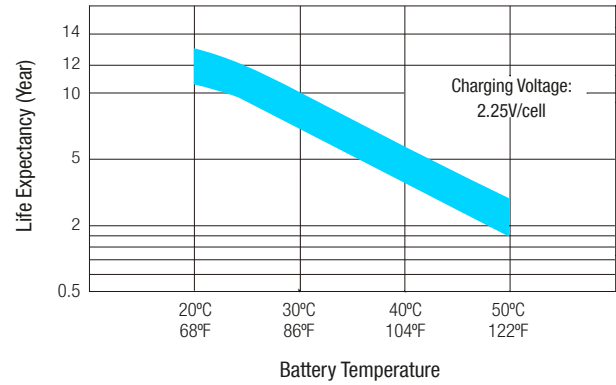
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	20min	30min	45min	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	20h
1.85V/cell	67.20	53.10	40.75	34.25	21.85	16.70	13.85	12.00	10.41	9.23	8.34	7.64	7.05	3.98
1.80V/cell	76.00	58.75	44.65	37.60	23.50	17.80	14.65	12.55	10.90	9.61	8.72	8.01	7.35	4.14
1.75V/cell	84.40	64.10	47.90	40.05	24.80	18.75	15.30	13.00	11.25	9.96	8.98	8.24	7.49	4.22
1.70V/cell	89.95	68.00	50.45	42.15	26.20	19.45	15.75	13.40	11.60	10.25	9.23	8.45	7.66	4.26
1.67V/cell	92.60	69.90	51.90	43.45	26.75	20.00	16.05	13.65	11.75	10.40	9.33	8.54	7.74	4.30
1.60V/cell	99.20	74.15	55.35	45.95	27.65	20.75	16.60	14.00	12.00	10.59	9.50	8.71	7.88	4.36

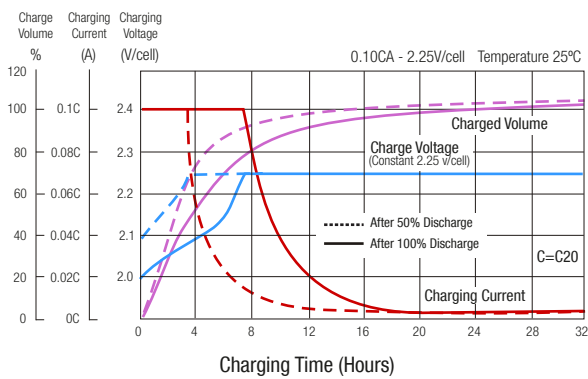
### Discharge Characteristics



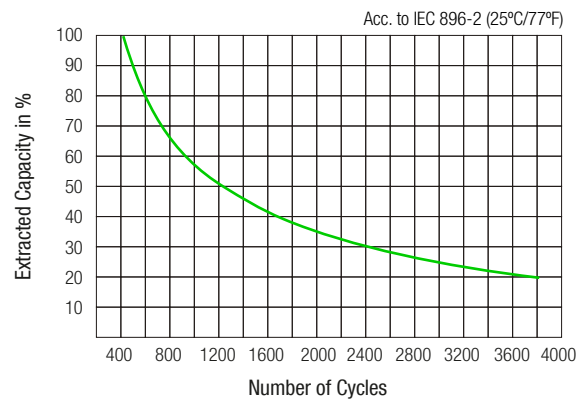
### Effect of Temperature on Long Term Float Life



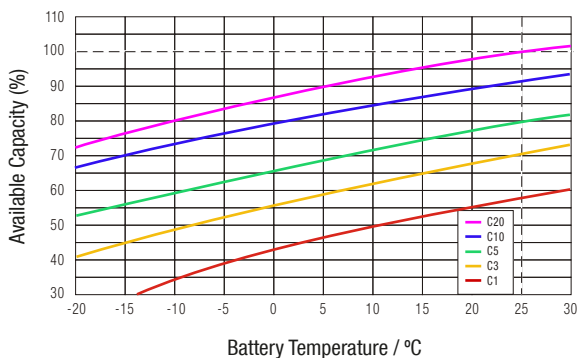
### Float Charging Characteristics



### Cycle Life in Relation to Depth of Discharge



### Temperature Effects in Relation to Battery Capacity



### General Relation of Capacity VS. Storage Time

