

## UP Series G33-12

GENERAL PURPOSE GEL



### Main Features

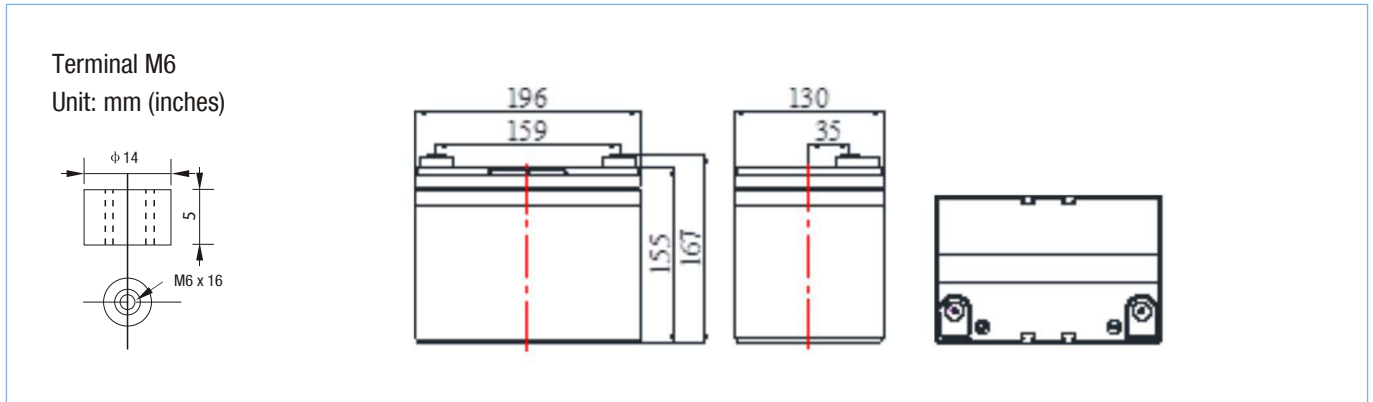
- **Longer Design Life**  
Designed for 12 years of service life at 25°C.
- **Uniform Electrolyte Distribution**  
Using high quality silica (silicon dioxide) we obtain a uniform electrolyte distribution for a better performance.

### Technical Specifications

Nominal Voltage (V)	12	
Nominal Capacity (20 Hr)	33 Ah	
Dimensions	Length:	196 ± 1 mm (7.72 inches)
	Width:	130 ± 1 mm (5.12 inches)
	Container Height:	155 ± 1 mm (6.10 inches)
	Total Height (+terminal):	167 ± 1 mm (6.57 inches)
Approx. Weight	10.1 kg (22.27 lbs) ± 3%	
Terminal	M6	
Container Material	ABS	
Rated Capacity	35.4 Ah	20 hour rate (1.77 A, 10.5 V)
	33.0 Ah	10 hour rate (3.30 A, 10.8 V)
	29.0 Ah	5 hour rate (5.8 A, 10.5 V)
	21.1 Ah	1 hour rate (21.1 A, 9.6 V)
Maximum Discharge Current	330 A (5 s)	
Internal Resistance	≤ 11.5 mΩ	
Operating Temperature Range	Discharge:	-30 ~ 60°C (-22 ~ 140°F)
	Charge:	-30 ~ 60°C (-22 ~ 140°F)
	Storage:	-30 ~ 60°C (-22 ~ 140°F)
Nominal Operating Temperature Range	25°C (77°F)	
Cycle Use	Initial Charging Current Less than 8.25 A. Voltage 14.4 - 14.9 V	
Standby Use	No limit on Initial Charging Current Voltage. 13.6~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	108%
	25°C (77°F)	100%
	0°C (32°F)	90%
	-15°C (5°F)	70%
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

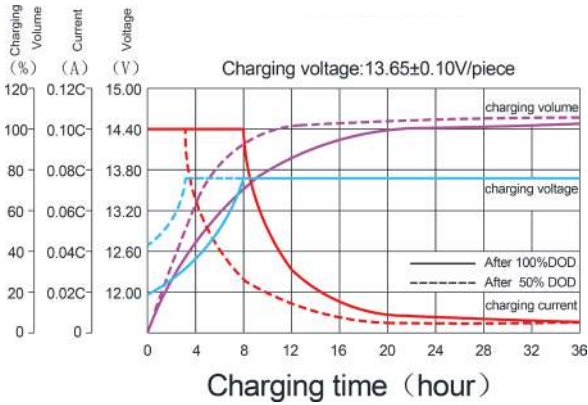
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	6h	8h	10h	20h
1.60V/cell	59.6	35.1	26.6	21.1	12.4	9.1	6.1	5.3	4.2	3.5	1.83
1.67V/cell	56.3	33.2	25.5	20.4	12.0	8.8	6.0	5.2	4.2	3.4	1.82
1.70V/cell	52.8	32.3	24.6	19.6	11.6	8.6	5.9	5.1	4.1	3.4	1.79
1.75V/cell	49.5	30.9	23.5	18.8	11.4	8.4	5.8	5.0	4.0	3.3	1.77
1.80V/cell	46.4	29.7	22.7	18.2	10.9	8.1	5.7	5.0	4.0	3.3	1.75

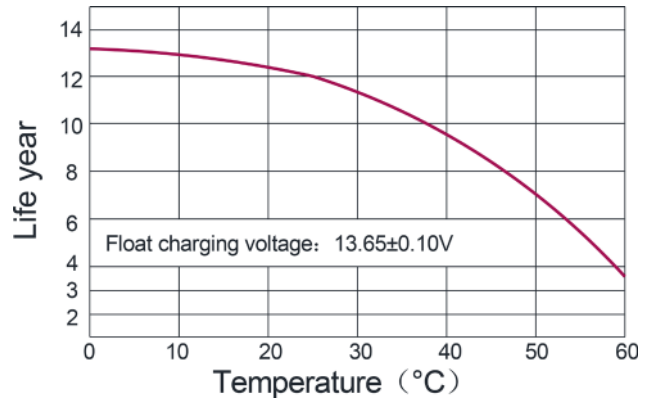
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	6h	8h	10h	20h
1.60V/cell	113.9	69.7	50.5	40.4	23.5	17.4	11.8	10.3	8.2	6.8	3.6
1.67V/cell	109.0	65.3	48.7	39.3	22.8	16.9	11.6	10.2	8.1	6.7	3.6
1.70V/cell	101.5	63.9	47.2	38.0	22.3	16.5	11.5	10.0	8.0	6.6	3.5
1.75V/cell	95.3	60.8	45.3	36.6	21.8	16.2	11.3	9.9	7.9	6.6	3.5
1.80V/cell	89.4	58.3	43.8	35.4	21.1	15.7	11.1	9.7	7.8	6.5	3.5

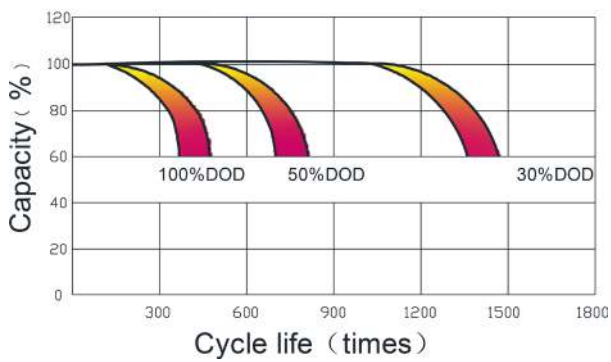
Charging Characteristics (@25°C/77°F)



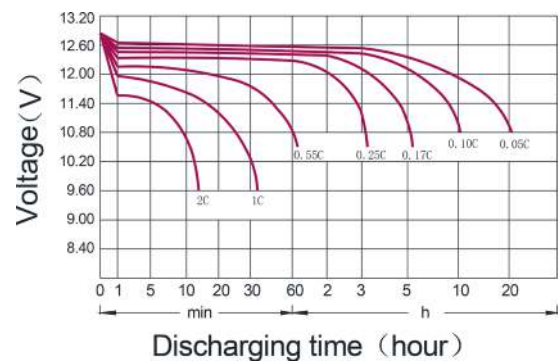
Temperature Effects on Design Service Life



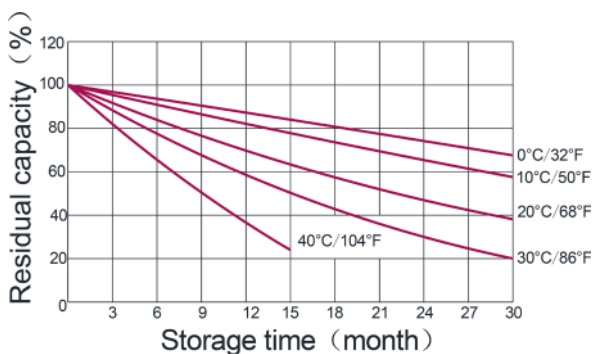
Cycle Life vs. Depth of Discharge (@25°C/77°F)



Discharge Characteristics (@25°C/77°F)



Temperature Effects on Battery Self-Discharge



Temperature Effects on Capacity

