

FULL FORCE[®]

BATTERY

FFD85-12



CYCLING CAPACITY

20 Hour Rate **85 Amp Hours**

RESERVE CAPACITY

Reserve @25 AMPS **145 Minutes** Reserve @75 AMPS **34 Minutes**

ELECTRICAL SPECIFICATIONS

Nominal Voltage	12 Volt
C100	94 AH
C20	85 AH
C10	80 AH
C5	70 AH
CCA	510 Amps
CA or MCA	600 Amps
Internal Resistance	5.5 mΩ

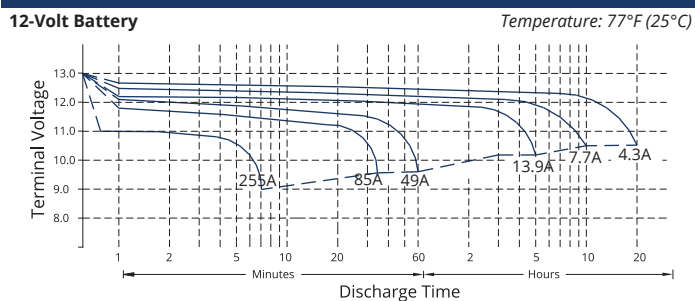
MECHANICAL SPECIFICATIONS

Group Size	24
Terminal Type	M8+TP
Terminal Torque	5.8 - 6.7 ft/lbs 62 - 80 lbs/in 7 - 9 Nm
Height (w/ terminal)	9.33" 237 mm
Height (case only)	8.31" 211 mm
Width	6.61" 168 mm
Length	10.24" 260 mm
Weight	55.1 lbs 25 kg
Case Type	ABS Plastic Flame Res. Rating UL94-HB

DISCHARGE TABLE (Constant Current)

Time	Amps	Rate
20hr	4.3	0.05 CA
10hr	7.7	0.10 CA
8hr	9.2	0.13 CA
5hr	13.9	0.20 CA
3hr	19.2	0.33 CA
2hr	25.6	0.50 CA
1hr	48.3	1.00 CA

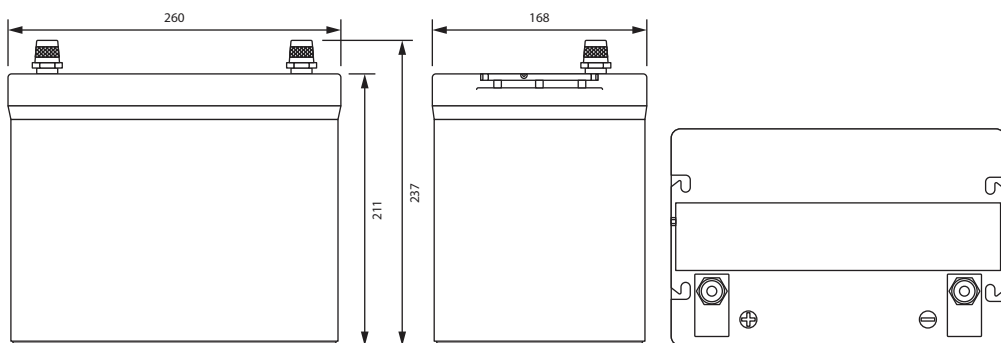
DISCHARGE PROFILE (Constant Current)



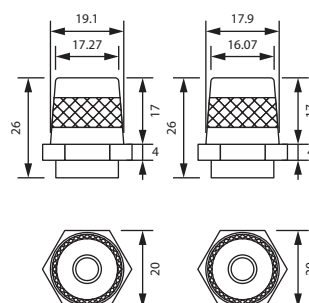
- All listed ratings are @ 100% SoC, T=77°F (25°C), 1.75VPC unless otherwise specified.

- Specifications listed are for estimation purposes only. Battery performance can vary depending on application. Battery design subject to change.

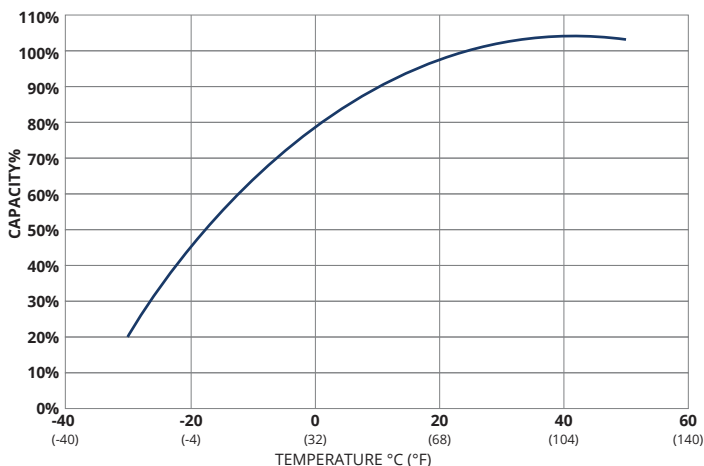
BATTERY & TERMINAL DIMENSIONS (All units shown in mm)



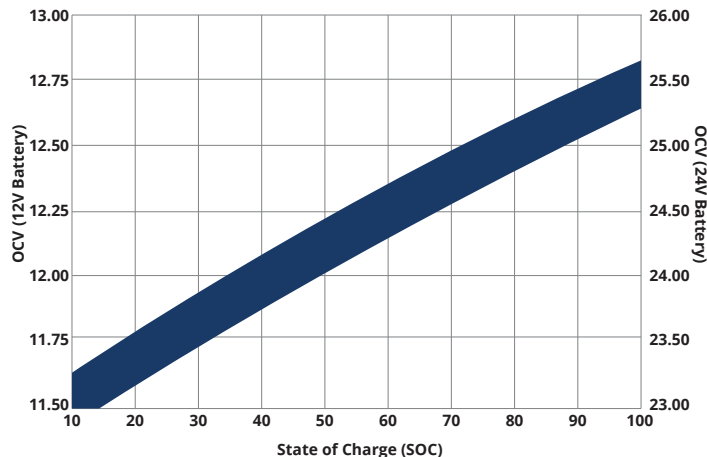
Terminal: M8+TP



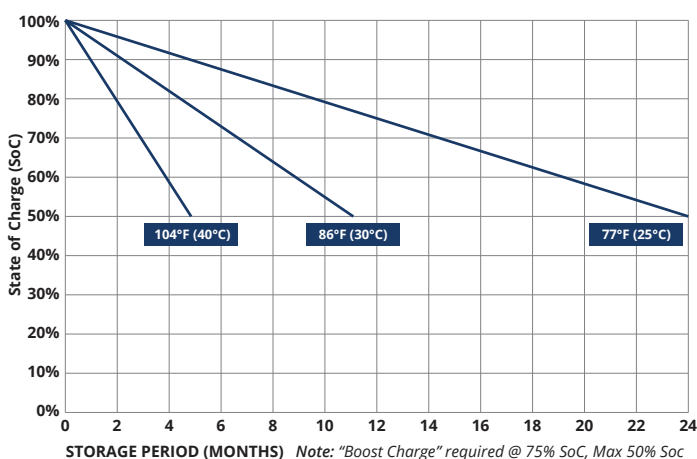
TEMPERATURE vs CAPACITY



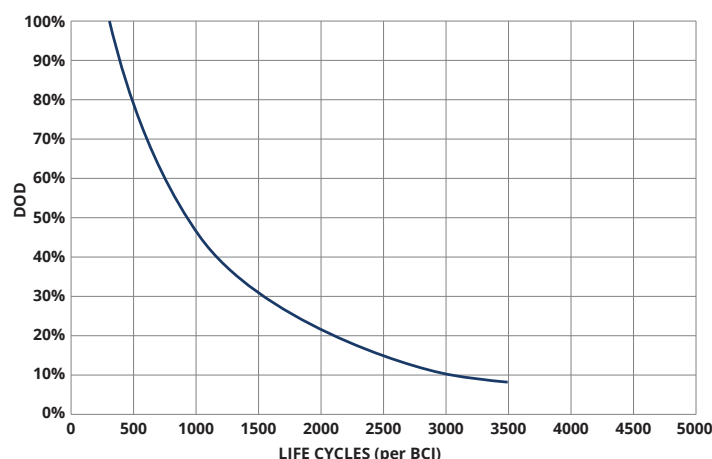
STATE of CHARGE (SOC) vs OPEN CIRCUIT VOLTAGE (OCV)



SELF DISCHARGE vs TIME/TEMPERATURE



CYCLE LIFE vs DEPTH of DISCHARGE (DOD)



TEMPERATURE RANGE SPECIFICATIONS

Condition	Recommended	Maximum	Recommended	Maximum
Storage	5°F to 122°F	-40°F to 160°F	-15°C to 50°C	-40°C to 71°C
Operation	5°F to 104°F	-40°F to 160°F	-15°C to 40°C	-40°C to 71°C
Charge with TC	5°F to 122°F	-40°F to 160°F	-15°C to 50°C	-40°C to 71°C
Charge w/o TC	32°F to 104°F	5°F to 122°F	0°C to 40°C	-15°C to 50°C

*TC= Temperature Compensation

CHARGE VOLTAGES

	Battery Voltages			
Charge Stage	12V	24V	36V	48V
Bulk	14.40V	28.80V	43.00V	58.00V
Absorption	14.00V	28.00V	42.00V	56.00V
Float	13.50V	27.00V	40.50V	54.00V

TC Factor: (-2mV°F/cell) or (-4mV°C/cell)

TERMINAL TORQUE SPECS

M5TAS	M6	M8	M10	M6M (Stud)	M8M (Stud)	M10M (Stud) & 3/8" Stud	FR45	TP06 (AP)	TP08/TP68 (AP)	AP
1.67-2.5ft-lbs	3.3-4.8ft-lbs	5.2-6.7ft-lbs	8.1-10.3ft-lbs	2.6-3.7ft-lbs	4.4-5.9ft-lbs	7.4-8.8ft-lbs	4.8-6.3ft-lbs	2.6-3.3ft-lbs	4.6-6.3ft-lbs	4.2-5.8ft-lbs
20-30lbs-in	40-57.5lbs-in	62-80lbs-in	97-124lbs-in	31-44lbs-in	53-71lbs-in	88.5-106lbs-in	57-75lbs-in	31-40lbs-in	55-75lbs-in	50-70lbs-in
2.26-3.39Nm	4.5-6.5Nm	7-9Nm	11-14Nm	3.5-5Nm	6-8Nm	10-12Nm	6.5-8.5Nm	3.5-4.5Nm	6.2-8.5Nm	5.6-7.9Nm



9001:2008 Quality Management System
14001:2004 Environmental Management System
18001:2007 Occupational Health & Safety Management System