

FULL THROTTLE BATTERY

FT438-U1R



CYCLING CAPACITY

20 Hour Rate **35 Amp Hours**

RESERVE CAPACITY

Reserve @25 AMPS **50 Minutes** Reserve @75 AMPS **11 Minutes**

ELECTRICAL SPECIFICATIONS

Nominal Voltage	12 Volt
C100	38 AH
C20	35 AH
C5	30 AH
Short Circuit Current	1332 Amps
CCA	438 Amps
CA or MCA	525 Amps
PHCA	975 Amps
Internal Resistance	9.4 mΩ

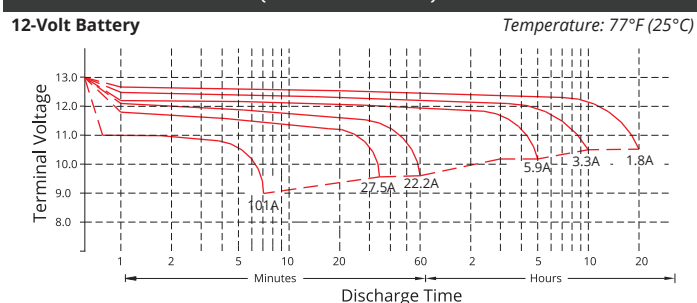
MECHANICAL SPECIFICATIONS

Group Size	U1R, 46A24L		
Terminal Type	M6 + TP26 (SAE)		
Terminal Torque	3.3 - 4.8 ft/lbs 40 - 57.5 lbs/in 4.5 - 6.5 Nm		
Height (w/ terminal)	7.56"	192 mm	
Height (case only)	6.57"	167 mm	
Width	5.16"	131 mm	
Length	7.72"	196 mm	
Weight	24.91 lbs	11.3 kg	
Case Type	ABS Plastic - Flame Res. Rating UL94-HB		

DISCHARGE TABLE (Constant Current)

Time	Amps	Rate
20hr	1.8	0.05 CA
10hr	3.3	0.10 CA
8hr	3.9	0.13 CA
5hr	5.9	0.20 CA
3hr	8.7	0.33 CA
2hr	12.4	0.50 CA
1hr	22.2	1.00 CA

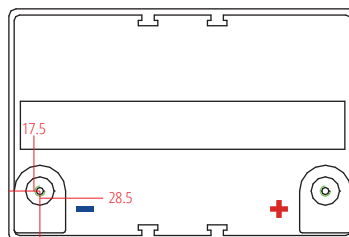
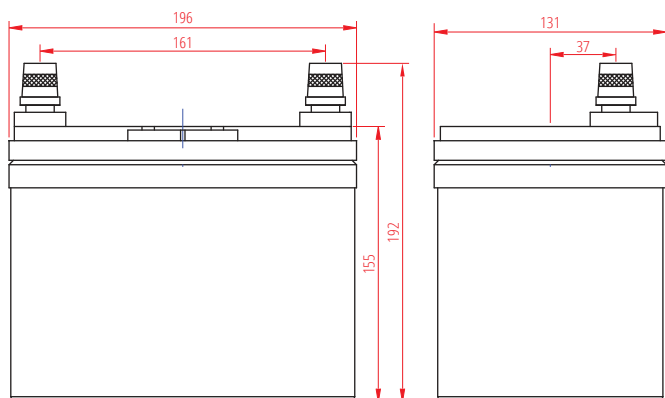
DISCHARGE PROFILE (Constant Current)



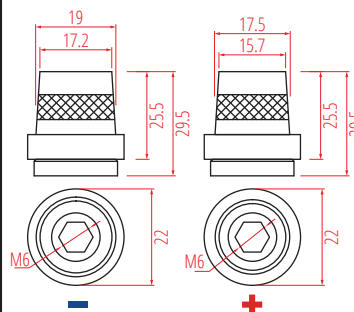
- All listed ratings are @ 100% SoC, T=77°F (25°C), 1.75VPC unless otherwise specified.

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

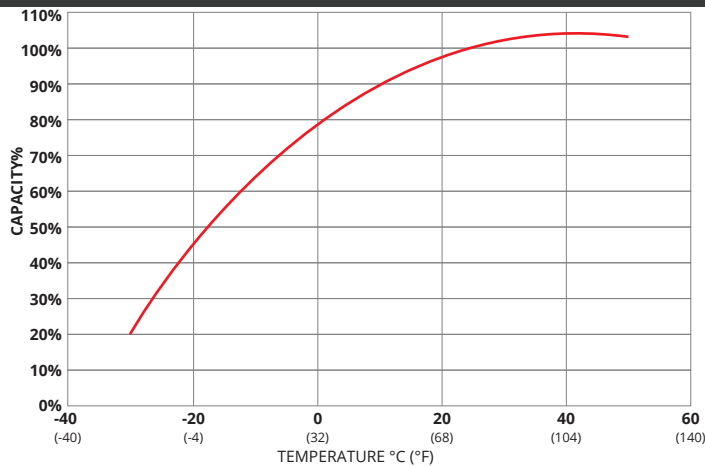
BATTERY & TERMINAL DIMENSIONS (All units shown in mm)



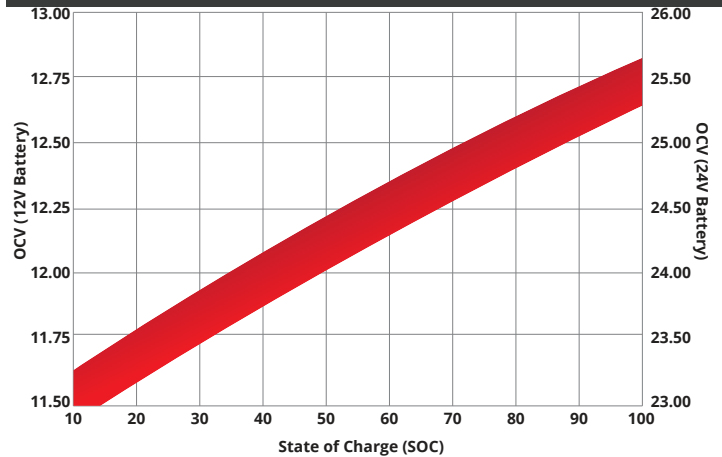
Terminal: M6 + TP26



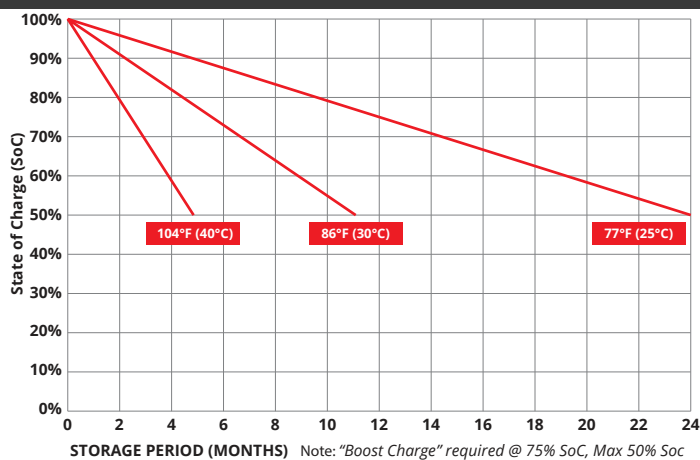
TEMPERATURE vs CAPACITY



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

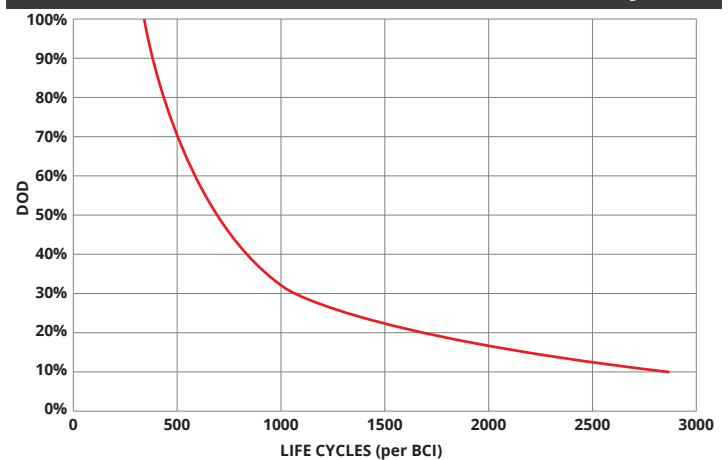


SELF DISCHARGE vs TIME/TEMPERATURE



CYCLE LIFE vs DEPTH of DISCHARGE (DOD)

*(Based on BCI Testing @ 2-hr Rate)



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	14.4 - 14.7V	28.8 - 29.4V	43.2 - 44.1V	57.6 - 58.8V
Absorption	14.4 - 14.7V	28.8 - 29.4V	43.2 - 44.1V	57.6 - 58.8V
Float	13.6V	27.2V	40.8V	54.6V

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

TERMINAL TORQUE SPECS (applicable values are highlighted)

M6	M8	M10	M6M (Stud)	M8M (Stud)	M10M (Stud) & 3/8" Stud	FR45	TP06 (AP)	TP08/TP68 (AP)	AP
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
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
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



DELIVERY APPROVED!
**LAND, SEA
& AIR**

Fullriver batteries are sealed lead acid batteries made with Absorbed Glass Mat (AGM) technology. The electrolyte is absorbed into the fiberglass separator material rather than in a free-flowing liquid form. Fullriver batteries are non-spillable electric storage batteries. They are exempted from the requirements of DOT's hazardous materials regulations, since they adhere to the requirements of code 49 CFR Section 173.159(D) - (CLASSIFIED APPROVED: DOT, CFR, HMR49, IATA, ICAO67, IMDG27)