FT680-48

FULL THROTTLE BATTERY

FT SERIES

FULL THROTTLE SERIES | HIGH CRANKING AGM

CYCLING CAPACITY

20 Hour Rate	**60 Amp Hours**

RESERVE CAPACITY

Reserve @25 AMPS	**120 Minutes**	Reserve @75 AMPS	**23 Minutes**

ELECTRICAL SPECIFICATIONS

Nominal Voltage	**12 Volt**
C100	**66 AH**
C20	**60 AH**
C5	**53 AH**
Short Circuit Current	**2000 Amps**
CCA	**680 Amps**
CA or MCA	**810 Amps**
PHCA	**1320 Amps**
Internal Resistance	**5.5 mΩ**

MECHANICAL SPECIFICATIONS

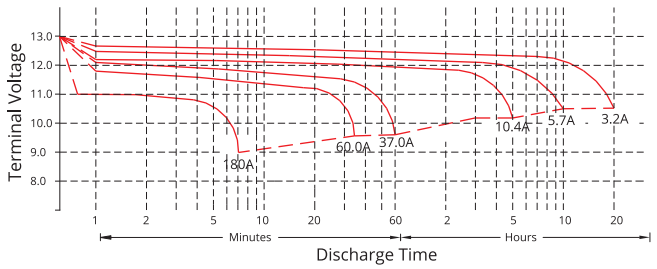
Group Size	**L3**	
Terminal Type	**AP**	
Terminal Torque	**See reverse side**	
Height (w/ terminal)	**7.48"**	**190 mm**
Height (case only)	**7.48"**	**190 mm**
Width	**6.89"**	**175 mm**
Length	**10.94"**	**278 mm**
Weight	**48.1 lbs**	**21.8 kg**
Case Type	**ABS Plastic -** Flame Res. Rating UL94-HB	

DISCHARGE TABLE (Constant Current)

Time	Amps	Rate
20hr	3.0	0.05 CA
10hr	5.7	0.10 CA
8hr	6.6	0.13 CA
5hr	10.4	0.25 CA
3hr	15.5	0.33 CA
2hr	20.5	0.50 CA
1hr	37.0	1.00 CA

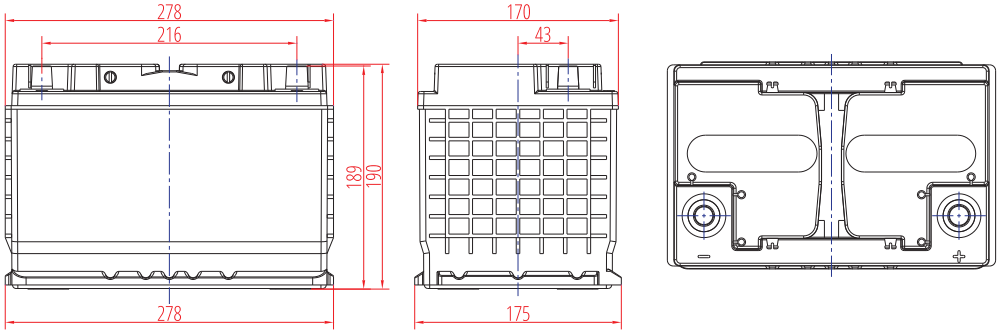
DISCHARGE PROFILE (Constant Current)

12-Volt Battery *Temperature: 77°F (25°C)*

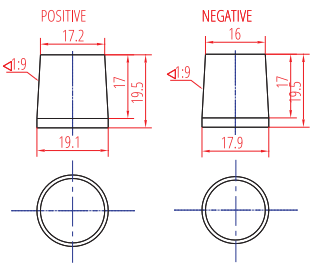


- All listed ratings are @ 100% SoC, T=77°F (25°C), 1.75VPC unless otherwise specified.
- Specifications listed are for estimation purposes only. Battery performance can vary depending on application. Battery design subject to change.

BATTERY & TERMINAL DIMENSIONS (All units shown in mm)

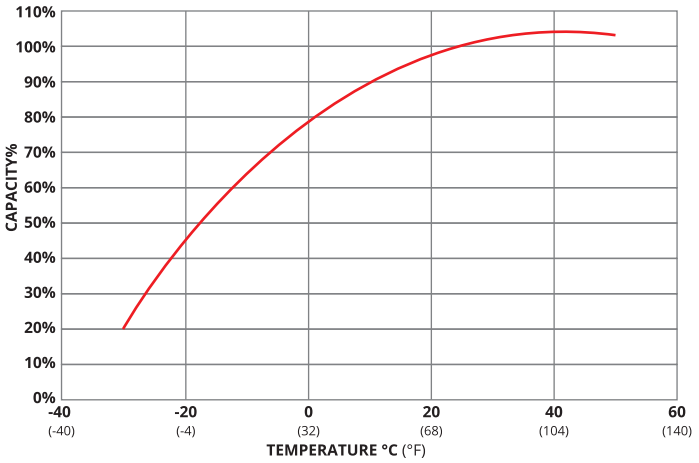


Terminal: AP

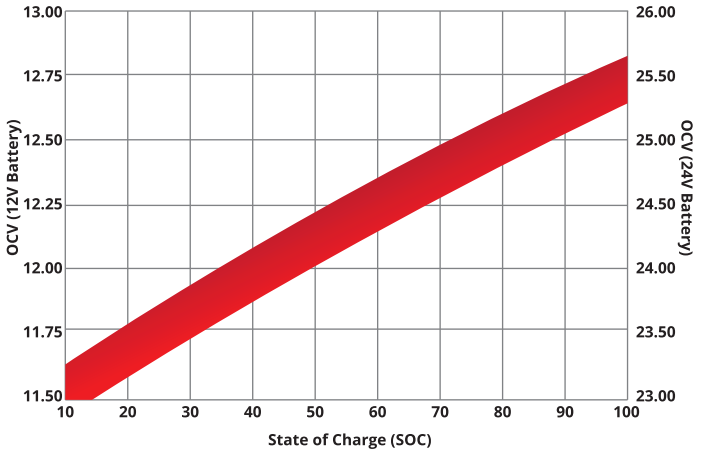


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TEMPERATURE vs CAPACITY

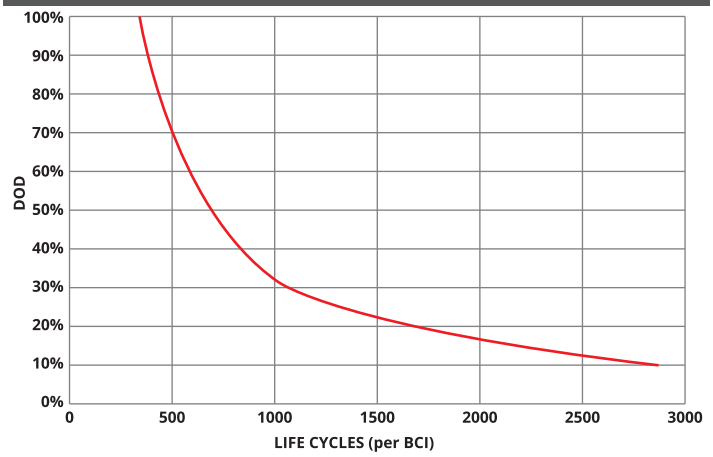


STATE of CHARGE (SOC) vs OPEN CIRCUIT VOLTAGE (OCV)

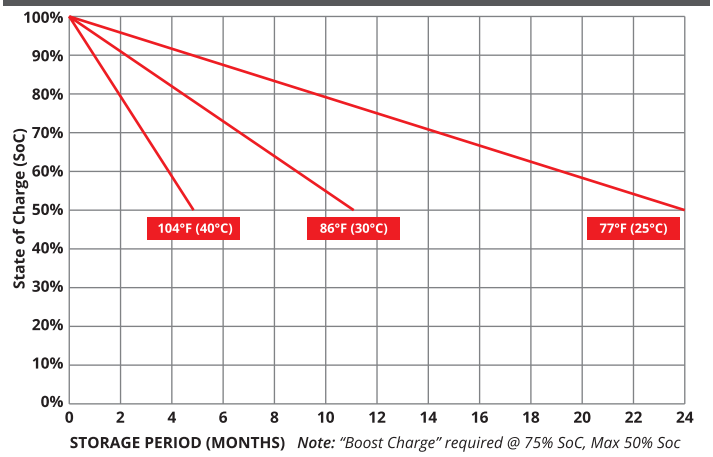


CYCLE LIFE vs DEPTH of DISCHARGE (DOD)

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



SELF DISCHARGE vs TIME/TEMPERATURE



Note: "Boost Charge" required @ 75% SoC, Max 50% Soc

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

Terminal Type	ft-lbs	in-lbs	Nm
AP, DT *(AP)*, **M6, M6M** *(Stud)*, **TP07** *(AP)* ,**TP08** *(AP)*	**4.2 - 6.0**	**50-70**	**5.6 - 7.9**
FR45	**6.0 - 7.5**	**70-90**	**7.9 - 10.1**
M8	**7.1 - 8.0**	**85-95**	**9.6 - 10.7**
DT *(Stud)*, **M10M** *(Stud)*	**9.2 - 10.4**	**110-125**	**12.2 - 14**

ISO CERTIFIED

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

TPPL TECHNOLOGY

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 excepted 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)**