

Powering The Future



THE POWER OF CARBON FOAM



G31M

(VRLA AGM GEL)

Developed by scientists at Firely Energy, Microcell Carbon Foam is a material that's revolutionizing the battery industry. Compared to lead plates, one of the main components of all lead acid batteries, carbon foam delivers longer service life, increased energy efficiency and better performance under extreme conditions. That's why we used it to create our revolutionary Firely MCF battery.

Firely carbon foam design resists sulfation and corrosion (two of the primary causes of failure in leadacid batteries), while dramatically increasing the surface area within the battery, resulting in greater energy capacity, faster recharges, and deeper discharge capability.

OASIS™

SALIENT FEATURES

- ▶ Sealed maintenance free
- ▶ More than 3 times cycle life compared to flooded gel & AGM VRLA batteries at 50% DOD
- ▶ Lower cost per kWh delivered compared to premium VRLA batteries
- ▶ Unmatched ability to recover from extended storage in discharged state
- ▶ Throughput efficiency greater than 90%
- ▶ Improved high/low temperature performance
- ▶ Superior protection against corrosion and sulfation related problems
- ▶ Lowest Cost of ownership and Industry leading warranty
- ▶ Compatible with existing lead acid battery recycling infrastructure
- ▶ Outstanding long life even under partial state of charge operation

Marine & RV

OASIS™



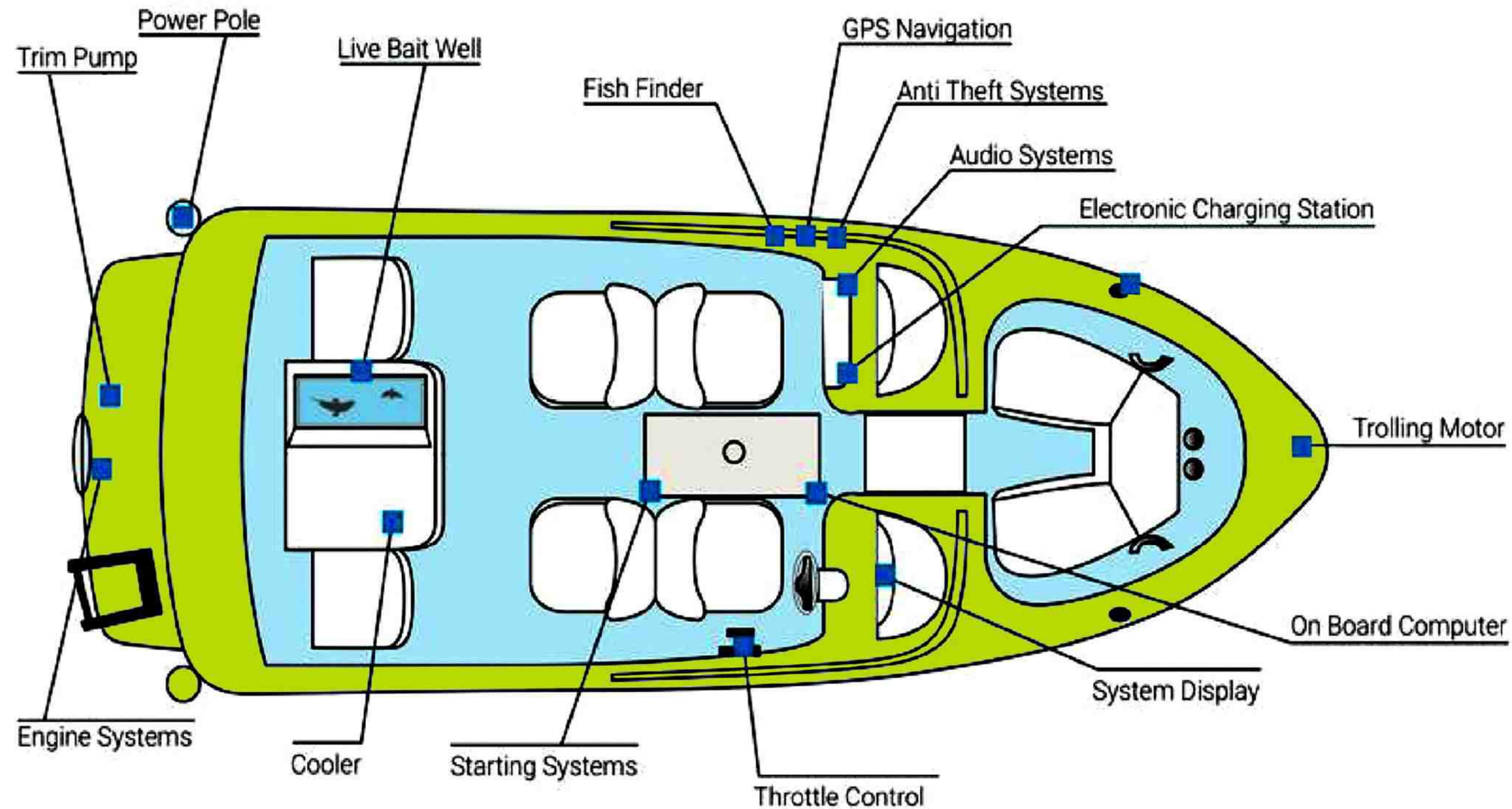
Owning the highest quality equipment with the most reliable power for your Marine or RV is a top priority for what matters most to you. Whatever your passion, nothing brings you closer to the great outdoors than a battery that provides rugged durability with outstanding performance.

Engineered specifically to meet the increasing demands of today's recreation enthusiasts, Firefly MCF Technology results in a superior battery with maximum sustained performance, longer life and increased total energy.

Firefly OASIS MCF G31_M are non-spillable maintenance-free batteries that deliver superior power in demanding Marine and RV applications. Proprietary formulations provide consistent performance and significant advantages over competing products.

Firefly marine batteries excel at providing high vibration resistance, with the high cranking amps and reserve capacity that marine/RV demand.

The Firefly OASIS MCF G31_M battery is a true deep-cycle battery, engineered to withstand the rigor and abuse of deep discharge applications.



Selecting the wrong type of battery will cause disappointing performance, shortened lifetime and wasted money.

Most flooded starting and traditional AGM batteries are best suited for intermittent use and not deep-cycle applications.

FIREFLY OASIS batteries are the pinnacle of AGM battery technology. FIREFLY micro carbon foam batteries are built to provide years of worry-free and maintenance-free operation.

12V G31M Battery



(VRLA AGM GEL)

Partial state of charge Cycling Efficiency	Ampere-hour >97% & watt hour >90%
Nominal Voltage	12V
Maximum Charge Voltage	14.40V
Maximum Charge Current	1.7C Amps current limit for continuous charge @ 14.40V constant voltage charging 1C Amps can be tolerated for Sporadic session
Internal Resistance	5.0 Milli ohms (Fully charged condition)
Shelf life@25°C(77°F)	2 years
Self- Discharge	<2% per Month
CCA	630 Amps

Construction	
Terminal Configuration	3/8" - 16UNC
Case/Cover	ABS
Racks	Available Upon Request

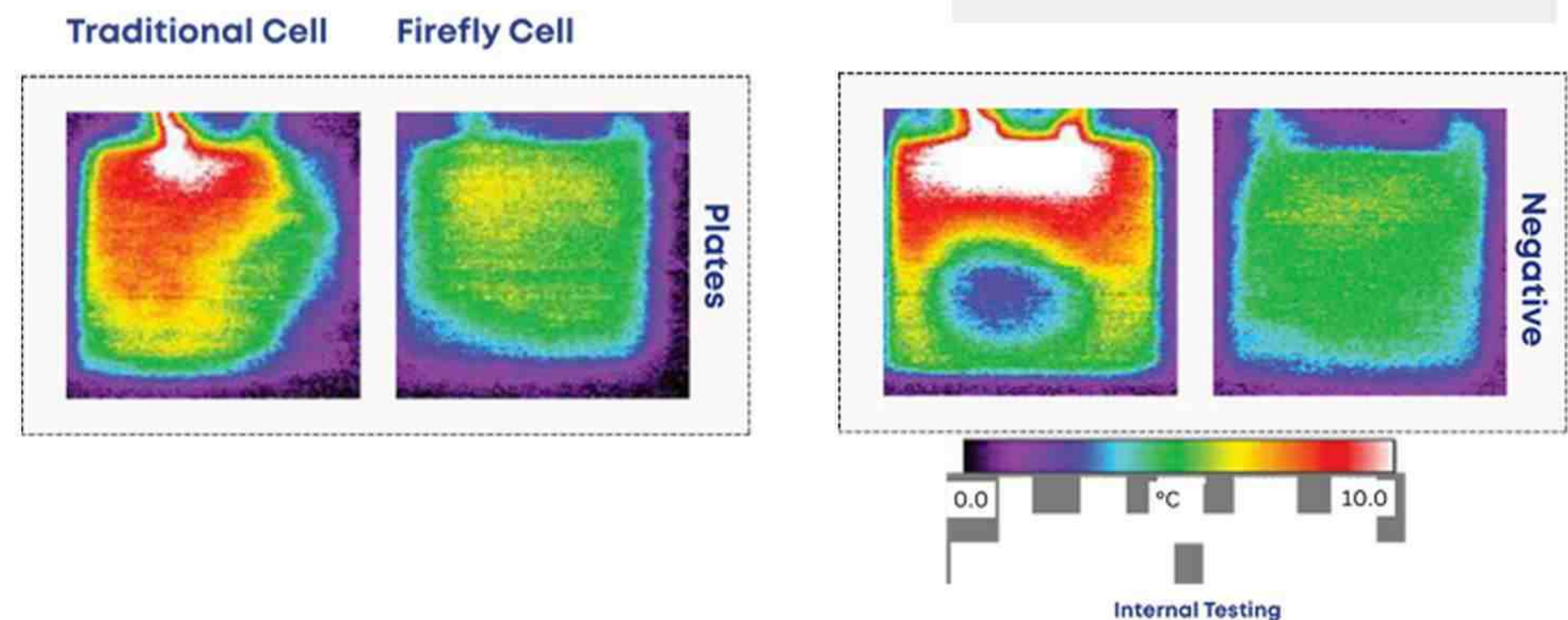
International Compliance

IEC 60896 -21/22 :2004
 IEC 61427
 IS 15549:2005
 ISO 9001:2008
 IEC 60095

Temperature	Low	High
Operation	-20°C/-4°F	50°C/122°F
Storage	-30°C/-22°F	60°C/140°F

Weights & Dimensions	
Length	13.0 in/330 mm
Width	6.8 in/171 mm
Height	8.6 in/218 mm
Weight	69.5 lbs /31.5 kgs
Volume	Volume 760.2 Cu.in/12.3 liters

Charge Temperature Compensation					
Operating Temperature	°C	-20	25	40	50
	°F	-4	77	104	122
Absorption Charge Voltage	v	15.6	14.4	14.1	13.9



Infrared thermal images snapped at the end of a 5C discharge of both a Firefly 3D cell and a Traditional cell.

More uniform temperature distribution, as the Carbon Foam is thermally conductive, results in

- ▶ Uniform current density distribution.
- ▶ Higher overall active material utilization.
- ▶ Less localized positive grid corrosion.
- ▶ Less localized positive active material wear out.