



OASIS



POWERING THE FUTURE

2V 900 Ah / 4V 450 Ah BATTERY OASIS[™]

(VRLA AGM GEL)

Partial state of charge cycling Efficiency	2 V 900 Ah	4V 450 Ah
	Ampere-hour >97% & Watt-hour > 90 %	
Nominal Voltage	2V	4V
Maximum charge voltage	2.40V	4.80V
Maximum charge current	400 A	200 A
Internal Resistance	0.35mΩ	1.1 mΩ
Shelf life@25°C(77°F)	2 years	
Self-Discharge	<2% per Month	

Discharge Rates to 1.75 VPC *		
	2v 900 Ah	4V 450 Ah
Hours	Amps	Ah
8	24.5	750
10	11	800
20	5.8	900
24	5	920
100	1.27	960
	Amps	Wh
	46.87	375
	40	400
	22.5	450
	19.18	460
	4.8	480
		Kwh
		1,500
		1,600
		1,800
		1,841
		1,920

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

Length	10.16 in/258mm
Width	6.85 in /174 mm
Height	17.24 in/438 mm
Weight	97 lbs /44 kgs
Volume	1200 Cu.in/19.7 liters
Terminal configuration	3/8"-16 UNC
Case/Cover	PC/P
Racks	Available upon request along with BEMS

Battery Life *	
DOB(%)	Cycles
30	9,000
50	3,600
65	1,800
80	1,000
100	600

* All above are at 25°C/77°F

International Compliance

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

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Developed by scientists at Firefly 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 Firefly MCF battery.

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

SALIENT FEATURES

- Sealed—requires no maintenance
- More than 3–4 times cycle life compared to normal VRLA batteries.
- 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.
- Available with Battery Energy Management System (BEMS).
- Lowest Cost of ownership
- Industry leading warranty.
- Compatible with existing lead acid battery recycling infrastructure.
- Outstanding long life even under partial state of charge operation.



PV SOLAR / WIND / HYBRID GENERATORS



ENERGY STORAGE / UPS / TELECOM



MICRO GRID APPLICATIONS



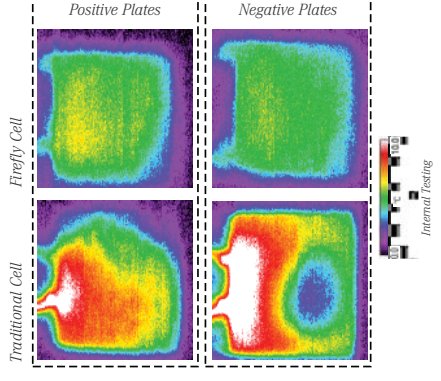
DEMAND REDUCTION



LOAD SHIFTING APPLICATION

Charge Temperature Compensation

Operating Temperature	°C	-20	-5	10	25	40	55
	°F	-4	23	50	77	104	131
Absorption Charge Voltage(V)	2V 900 Ah	2.6	2.5	2.45	2.4	2.35	2.33
	4V 450 Ah	5.2	5	4.9	4.8	4.7	4.66



Infrared thermal images snapped at the end of a 5C (12 minute) 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.

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