

### Applications and Key Benefits

- + OPzS 2V cells - 100Ah to 3500Ah nominal capacity

Ideal for:

- IT and Telecom network operations
- Power plants and power distribution
- Emergency lighting and Security
- Automation & Industrial backup power
- Railway, Airport & Seaport signaling
- Applications in areas with unreliable power

- + Tubular positive plate design
- + Dimensions are in accordance with DIN 40736 OPzS standards and are compatible with existing installations
- + Outstanding cycling performance
- + Suitable for use at elevated temperature and reliable operation in difficult conditions
- + Optimized for deep discharge recovery
- + 20 years design life under float voltage condition
- + Also available in dry charged version
- + 100% Recyclable

### Applicable Standards

- DIN 40736 - specification OPzS cells
- DIN 43539T5 - deep discharge
- DIN 40740 - electrolyte level indicator
- IEC 60896 Part 11 - vented types requirements & tests

### FIAMM Manufacturing

- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System

### Technical Features

- **Positive Tubular Plates:** designed with a low selenium lead alloy to reduce water loss and increase intervals between watering (36 months when operated under float conditions).  
The tubular design prevents the loss of active material during operation, resulting in longer operating life.
- **Negative Flat Plates:** rugged pasted grid construction designed to have a service life consistent with the positive plates.
- **Electrolyte:** high purity sulfuric acid solution with 1.24 specific gravity at 77°F ( $\pm 0.01$ ) when fully charged.
- **Separators:** made with a high porosity / low resistance material for high efficiency and low self discharge rates.
- **Containers:** made from an acid resistant transparent SAN material, designed for unsurpassed mechanical strength and easy cell status inspection.
- **Covers:** made of an opaque ABS material.
- **Terminal posts:** female threaded M10 terminal posts provide high conductivity, retain required torque values and allow for easy installation.
- **Post seals:** developed with a high integrity design to prevent electrolyte leakage and eliminate terminal corrosion.
- **Vent Caps:** effectively prevents acid spray from the cell when 'gassing' during boost charge. Caps are provided with a ceramic filter and bayonet lock, designed to prevent any errant spark or flame from entering the cell.
- **Connectors:** flexible cable design is fully insulated and is provided with an insulated screw which allows for easy meter probe access.
- **Capacities:** proven to exceed DIN standard nominal values.
- **Shelf life:** < 3% self-discharge per month at 77°F allows up to 6 months shelf life before boosting is required.
- **Installation:** designed for vertical orientation.



# ENDURLITE

## LM OPzS

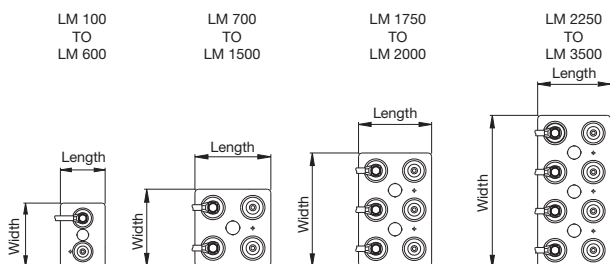


### FIAMM LM OPzS range

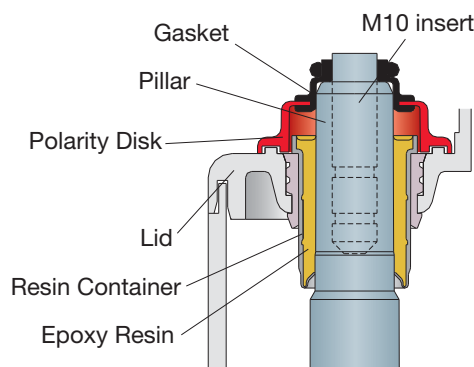
DIN 40736 Standard Type	Cell Type	Capacity (Ah) at 77°F		Dimensions (in)			Weight	Electrolyte Volume (Sg 1.24)	Terminals	
		8 hrs to 1.75 Vpc	Length	Width	Height	+			-	
		lbs	Gals							
2 OPzS 100 LA	LM 100	109	4.1	8.1	16.5	30.8	1.06	1	1	
3 OPzS 150 LA	LM 150	164	4.1	8.1	16.5	35.3	0.98	1	1	
4 OPzS 200 LA	LM 200	220	4.1	8.1	16.5	39.7	0.9	1	1	
5 OPzS 250 LA	LM 250	274	4.9	8.1	16.5	46.3	1.22	1	1	
6 OPzS 300 LA	LM 300	329	5.7	8.1	16.5	55.1	1.37	1	1	
5 OPzS 350 LA	LM 350	390	4.9	8.1	21.1	63.9	1.56	1	1	
6 OPzS 420 LA	LM 420	468	5.7	8.1	21.1	77.2	1.85	1	1	
7 OPzS 490 LA	LM 490	546	6.5	8.1	21.1	88.2	2.06	1	1	
6 OPzS 600 LA	LM 600	640	5.7	8.1	28	103.6	2.67	1	1	
7 OPzS 700 LA	LM 700	746	8.3	7.5	28	132.3	3.70	2	2	
8 OPzS 800 LA	LM 800	856	8.3	7.5	28	138.9	3.59	2	2	
9 OPzS 900 LA	LM 900	960	8.3	9.2	28	163.1	4.76	2	2	
10 OPzS 1000 LA	LM 1000	1064	8.3	9.2	28	169.8	4.50	2	2	
12 OPzS 1200 LA	LM 1200	1280	8.3	10.8	28	198.4	5.34	2	2	
12 OPzS 1500 LA	LM 1500	1648	8.3	10.8	33.9	249.1	5.97	2	2	
14 OPzS 1750 LA	LM 1750	1920	8.4	15.7	32.9	326.3	9.38	3	3	
15 OPzS 1875 LA	LM 1875	2056	8.4	15.7	32.9	335.1	8.98	3	3	
16 OPzS 2000 LA	LM 2000	2192	8.4	15.7	32.9	343.9	8.48	3	3	
18 OPzS 2250 LA	LM 2250	2464	8.4	19.2	32.9	414.5	11.5	4	4	
20 OPzS 2500 LA	LM 2500	2744	8.4	19.2	32.9	432.1	10.67	4	4	
24 OPzS 3000 LA	LM 3000	3288	8.4	22.7	32.9	504.9	13.40	4	4	
28 OPzS 3500 LA	LM 3500	3544	8.4	22.7	32.9	540.1	12.20	4	4	

### Electrical Characteristics

- NOMINAL VOLTAGE: 2 V
- FLOAT VOLTAGE AT 77°F: 2.23 Vpc
- BOOST RECHARGE: 2.4 Vpc
- TERMINAL TORQUE 175 - 220 in lbs (20-25 Nm)



### High Reliability Post Seal



This Document and the confidential information it contains shall be distributed, routed or made available solely with written permission of FIAMM

FIAMM reserves the right to change or revise without notice any information or detail given in this publication  
LM - NA - 140924

FIAMM Energy LLC  
1 FIAMM Way  
Waynesboro, GA 30830  
www.fiamm.com  
email: info.standby.america@fiamm.com



Industrial Batteries

**ENDURLITE****LM OPzS**

Cell Type	Constant Current Discharge Rates Amperes to 1.75 Vpc at 77°F (25°C) Sg 1.24											
	Minutes			Hours								
	1	30	60	1.5	2	3	4	5	8	10	12	20
LM 100	100	77.3	55.0	43.8	36.6	28.1	23.3	19.8	13.7	11.4	9.72	6.31
LM 150	150	116	82.5	65.7	54.8	42.2	34.9	29.7	20.6	17.1	14.6	9.47
LM 200	200	155	110	87.6	73.1	56.2	46.5	39.6	27.5	22.9	19.4	12.6
LM 250	250	193	138	109	91.4	70.3	58.1	49.4	34.3	28.6	24.3	15.8
LM 300	300	232	165	131	110	84.4	69.8	59.3	41.2	34.3	29.2	18.9
LM 350	313	252	190	153	129	99.3	81.6	69.7	48.9	41.1	34.9	22.1
LM 420	375	302	228	184	155	119	97.9	83.6	58.7	49.3	41.9	26.5
LM 490	438	353	266	214	180	139	114	97.5	68.5	57.5	48.9	30.9
LM 600	464	393	309	253	216	165	136	115	80.0	66.4	56.4	36.7
LM 700	541	459	361	296	252	193	158	134	93.3	77.4	65.8	42.9
LM 800	619	524	412	338	288	221	181	153	107	88.5	75.2	49.0
LM 900	696	590	464	380	324	248	204	172	120	99.6	84.6	55.1
LM 1000	774	655	515	422	360	276	226	192	133	111	94.0	61.2
LM 1200	928	786	618	507	432	331	271	230	160	133	113	73.5
LM 1500	808	797	711	600	520	407	337	288	206	174	148	93.5
LM 1750	943	930	829	700	606	475	393	335	240	204	173	109
LM 1875	1010	997	888	750	649	509	421	359	257	218	185	117
LM 2000	1077	1063	948	800	693	543	450	383	274	233	198	125
LM 2250	1212	1196	1066	900	779	611	506	431	308	262	222	140
LM 2500	1347	1329	1185	1000	866	679	562	479	343	291	247	156
LM 3000	1616	1594	1421	1200	1039	814	674	575	411	349	297	187
LM 3500	1885	1860	1658	1400	1212	945	764	642	443	366	311	198

FIAMM Energy LLC  
 1 FIAMM Way  
 Waynesboro, GA 30830  
[www.fiamm.com](http://www.fiamm.com)  
 email: info.standby.america@fiamm.com



Industrial Batteries