

## Applications and Key Benefits

- + Solar 2V cells
  - up to 3,800 Ah real capacity at C120 1.85 VPC
- + Designed for regular and long deep discharge
  - Ideal for:
    - Renewable energy islands (Solar / Wind)
    - Off-grid applications: BTS, mobile phone stations, signaling, lighting
    - High capacity applications in areas with unstable grid and unreliable power supply
- + Excellent cycling also in state of partial discharge
- + > 1,500 cycles at 20°C / 60% DoD
  - > 5,000 cycles at 20°C / 20% DoD
- + OPzV technology, with tubular positive plates and electrolyte immobilized in gel
- + Dimensions according to DIN 40742 OPzV cells
- + Suitable for use at elevated temperature
- + Optimized for deep DOD cycling and deep discharge recovery DIN 43539T5
- + 18 years design life under float condition
- + Minimal gassing and maintenance free (no topping-up)
- + 100% Recyclable



## Applicable Standards

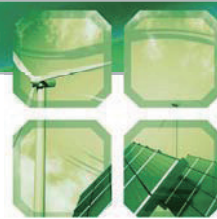
- IEC 61427 - photovoltaic energy systems
- DIN 40742 - specification OPzV cells
- DIN 43539T5 - deep DOD cycling and deep discharge recovery
- IEC 60896 Part 21 - VRLA methods of testing
- IEC 60896 Part 22 - VRLA requirements
- Eurobat "Long Life" - 12 years and longer

## FIAMM Manufacturing

- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System
- OHSAS 18001 Workplace Safety and Health

## Technical Features

- Tubular positive plates, pressure cast from high tin / low calcium alloy
- Electrolyte immobilized in gel structure
- Highly porous gauntlets retain the active material
- Pasted negative plates designed to have service lives consistent with the positive plates
- Separators with extremely high porosity and low internal resistance
- Standard ABS plastics
  - (Optional flame retardant plastics ABS IEC 707 FV0 and UL 94 V0 with LOI greater than 28%)
- Container and lid designed for unsurpassed mechanical strength made of thick walled plastics
- Threaded female M10 terminal posts guarantee highest conductivity, maximum torque retention and easy installation
- High integrity post seal design to prevent electrolyte leakage and terminal corrosion
- Flame arrestors prevent sparks or flames from entering the battery
- Cells equipped with one-way safety valves to allow excess gas to escape when overcharging
- < 2% self-discharge per month at 20°C allows 6 months shelf life
- Installation in vertical or horizontal position
- Flexible, fully insulated cable connectors with insulated screw with probe hole on the top for electrical measurement



## FIAMM SMG Solar OPzV range

CELL TYPE	CAPACITY (Ah) at 20°C		SHORT CIRCUIT CURRENT (A) IEC 60896-21	INTERNAL RESISTANCE (mohm) IEC 60896-21	WEIGHT (kg)	DIMENSIONS (mm)			TERMINALS +/-
	120 hrs to 1.85 VPC	10 hrs to 1.80 VPC				Length	Width	Height	
SMG/S 250	250	205	2300	0.89	17	206	103	388	1 / 1
SMG/S 310	310	255	2830	0.71	21	206	124	388	1 / 1
SMG/S 380	380	305	3660	0.55	24	206	145	388	1 / 1
SMG/S 440	440	355	3770	0.53	27	206	124	504	1 / 1
SMG/S 530	530	425	4080	0.50	32	206	145	504	1 / 1
SMG/S 620	620	500	4190	0.49	36	206	166	504	1 / 1
SMG/S 780	780	610	4400	0.46	44	206	145	679	1 / 1
SMG/S 1000	1000	815	5340	0.38	60	191	210	679	2 / 2
SMG/S 1250	1250	1020	6600	0.31	73	233	210	679	2 / 2
SMG/S 1550	1550	1220	7960	0.26	85	275	210	679	2 / 2
SMG/S 1900	1900	1530	9950	0.206	104	275	210	829	2 / 2
SMG/S 2200	2200	1750	11260	0.182	127	397	212	805	3 / 3
SMG/S 2500	2500	2040	12570	0.155	138	397	212	805	3 / 3
SMG/S 3150	3150	2550	15710	0.123	173	487	212	805	4 / 4
SMG/S 3800	3800	3060	18850	0.103	208	576	212	805	4 / 4

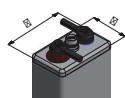
Note : dimensions may have a natural tolerance of  $\pm 2$  mm.

### Electrical Characteristics

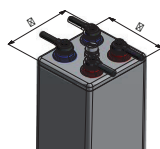
- ✦ FLOAT VOLTAGE CHARGE AT 20 °C : 2.25 V/cell
- ✦ BOOST CHARGE : 2.4 V/cell
- ✦ MAXIMUM CHARGE CURRENT : 0.25 C<sub>10</sub> A (i.e.:for a 100Ah cell maximum charge current is 25 Amps )
- ✦ FLOAT VOLTAGE TEMPERATURE COMPENSATION : - 2.5mV/°C/cell
- ✦ SELF-DISCHARGE AT 20 °C : < 2% / month
- ✦ WARNING: in order for the warranty to be valid in all critical , frequent discharge and hybrid applications, please coordinate with Fiamm Group to clarify required operating and charging settings

### Dimensions

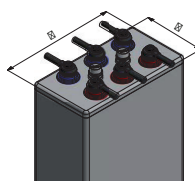
SMG/S 250  
SMG/S 310  
SMG/S 380  
SMG/S 440  
SMG/S 530  
SMG/S 620  
SMG/S 780



SMG/S 1000  
SMG/S 1250  
SMG/S 1550  
SMG/S 1900



SMG/S 2200  
SMG/S 2500



SMG/S 3150  
SMG/S 3800

