

LM/S



LM Solar Battery Range

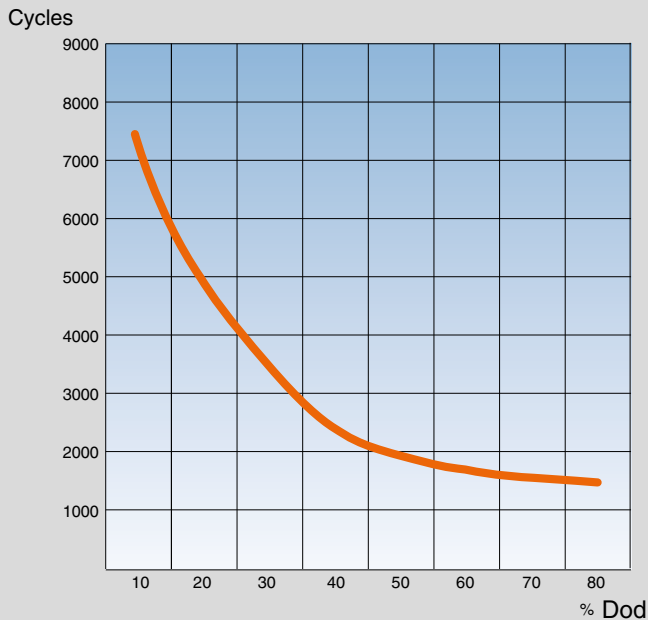
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THE LM/S BATTERY SERIES IS A VENTED RANGE DESIGNED BY FIAMM TO MEET THE NEEDS OF STORED ENERGY IN RENEWABLE APPLICATIONS.

ALL PRODUCTS HAVE BEEN DESIGNED TO PROVIDE USERS WITH A HIGHLY ROBUST PRODUCT FAMILY. THE RANGE HAS BEEN DEVELOPED FOR APPLICATIONS WHERE DISCHARGE CYCLES NEED TO BE OF THE HIGHEST LEVELS OF RELIABILITY. HIGH PERFORMANCE IS THE RESULT OF A LOW ANTIMONY ALLOY PLATE WHICH PROVIDES VERY LOW WATER CONSUMPTION OVER THE LIFE OF THE PRODUCT. UNDER NORMAL FLOAT OPERATING CONDITIONS FIAMM BATTERY REQUIRES LOW TOPPING-UP (ONCE EVERY THREE YEARS). FURTHERMORE THE DESIGN HAS BEEN OPTIMIZED TO LOWER SELF-DISCHARGE DURING STORAGE. ALL OF THESE OUTSTANDING FEATURES ADD UP TO A LONGER LIFE PRODUCT WITH LOWER MAINTENANCE COSTS. LIKE ALL FIAMM LEAD-ACID BATTERIES THE LM/S RANGE IS ECO-FRIENDLY AND FULLY RECYCLABLE.

MAIN APPLICATIONS:



SPECIFICATIONS

The positive tubular grid is composed of a special alloy (Pb-Sb) which is die-cast to guarantee high corrosion resistance and low water consumption (1 topping up in 3 years in float conditions)

Electrolyte: sulphuric acid electrolyte with specific gravity of 1.24kg/l at 20°C

Extremely high porosity separators allow intense cyclic usage

Robust design thanks to high mechanical polymers properties; box made of SAN and with an ABS lid

The vent plug is made of porous flameproof material for a superior safety

A long shelf life of up to six months is possible without recharge (<2% discharge per month)

The metallic threaded insert on terminals ensures the highest conductivity and provides easy installation and maximum torque retention

Flexible connections ensure a safe & easy link between terminals

The connecting bolt is fully insulated but with probe hole on the top to grant electrical measurements

TECHNOLOGY



THE UNIQUE FIAMM TERMINAL DESIGN PERMITS PILLAR GROWTH DURING CELL LIFE WITHOUT LEAKAGE. THIS FEATURES AVOID MECHANICAL STRESS ON THE LID FOR THE ENTIRE LIFE OF THE CELL.

THE LM/S RANGE BEARS INTENSE CYCLIC USAGE THROUGH HIGH RELIABILITY AND COMPONENTS MANUFACTURE PROCESS. ALL LM MODELS ARE AVAILABLE IN A DRY CHARGE VERSION.

BATTERY TYPE	NOMINAL CAPACITY (Ah) 120H a 1.85 VPC a 20°C	SHORT CIRCUIT CURRENT (A) IEC 60896-11	INTERNAL RESISTANCE (mOhm) IEC 60896-11	NOMINAL DIMENSION (mm)			TYPICAL WEIGHT (with electrolyte) (kg)	
				Lenght	Width	Height		
LM/S 150	150	1220	1.860	103	206	420	4.4	14.2
LM/S 220	220	1840	1.240	103	206	420	4.0	16.4
LM/S 290	290	2330	0.857	103	206	420	3.8	17.7
LM/S 360	360	2650	0.745	124	206	420	5.0	21.8
LM/S 435	435	3170	0.620	145	206	420	5.7	25.2
LM/S 510	510	3090	0.641	124	206	536	6.6	28.8
LM/S 610	610	3700	0.534	145	206	536	7.5	33.1
LM/S 710	710	4320	0.458	166	206	536	8.7	38.1
LM/S 870	870	4470	0.456	145	206	711	12.8	47.3
LM/S 1020	1020	5210	0.391	210	191	711	15.7	59.7
LM/S 1160	1160	5980	0.342	210	191	711	13.5	63
LM/S 1310	1310	6700	0.304	210	233	711	23.1	72.9
LM/S 1450	1450	7450	0.273	210	233	711	18.5	75.9
LM/S 1740	1740	8940	0.227	210	275	711	23.2	90.6
LM/S 2200	2200	10000	0.204	210	275	861	27.7	115
LM/S 2550	2550	11660	0.174	214	399	837	36.5	148
LM/S 2750	2750	12490	0.163	214	399	837	35	151
LM/S 2900	2900	13330	0.153	214	399	837	40.2	156
LM/S 3260	3260	14990	0.136	212	487	837	45.8	184
LM/S 3625	3625	16660	0.122	212	487	837	42.4	193
LM/S 4300	4300	19990	0.102	212	576	837	55.3	226
LM/S 5000	5000	23320	0.088	212	576	837	58	252

ELECTRICAL CHARACTERISTICS

Float Voltage: 2.23 V/cell at 20°C

Boost Voltage: 2.40 V/cell

Float Voltage Compensation with Temperature: -2.5 mV/cell/°C

Self-Discharge at 20°C: <2%/month

STANDARDS

IEC 61427 - photovoltaic energy systems

DIN 40736 - specification OPzS cells

DIN 43539T5 - deep discharge

DIN 40740 - electrolyte level indicator

IEC 60896 Part 11 - vented types requirements & tests

CERTIFICATIONS

ISO 9001

Quality Management System

ISO 14001

Environmental Management System

OHSAS 18001

Workplace Safety & Health

ACCESSORIES

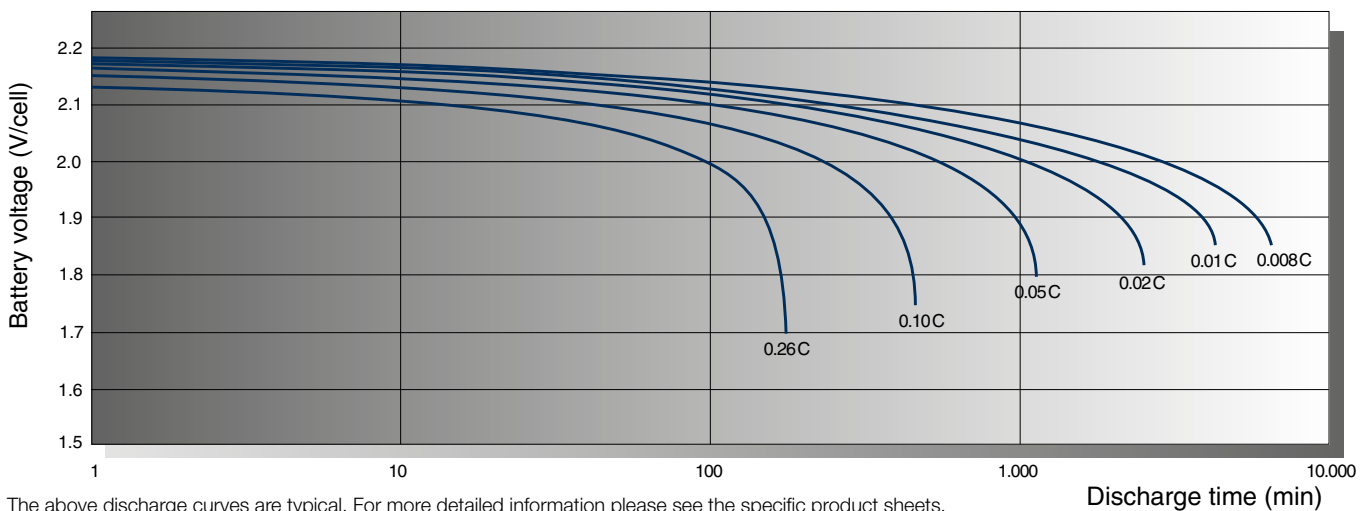
Recombination plug

Filtering plugs to DIN standard

Racks for battery installation (standard and anti-seismic)

Monitoring system

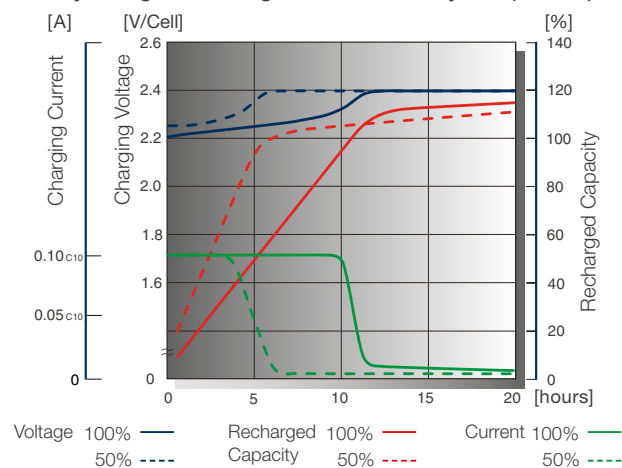
DISCHARGE CURVES at different current / final voltage (at 20°C)



The above discharge curves are typical. For more detailed information please see the specific product sheets.

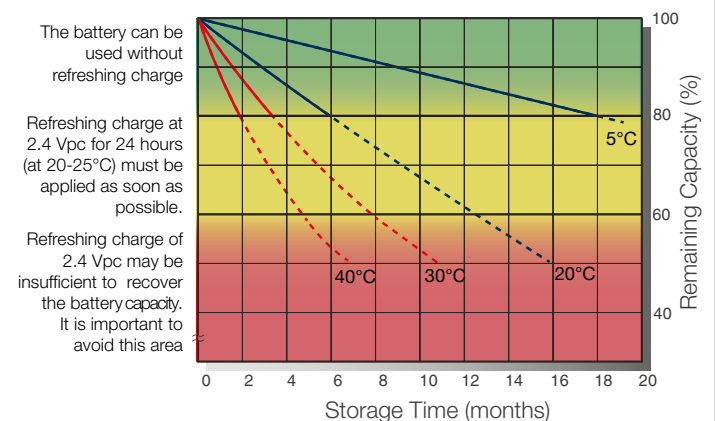
TYPICAL CHARGE CURVES

Battery Voltage and Charge Time for Standby Use (at 20°C)



STORAGE

Capacity loss during storage at various temperatures



The battery can be used without refreshing charge

Refreshing charge at 2.4 Vpc for 24 hours (at 20-25°C) must be applied as soon as possible.

Refreshing charge of 2.4 Vpc may be insufficient to recover the battery capacity. It is important to avoid this area



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