

Reserve Power OPzV Batteries

Stand-By Applications



GRID



TELECOM



GENSET



UPS

 **SUNLIGHT**
Reliable Battery Solutions

Reserve Power

As a member of a strong and developing business ecosystem, SUNLIGHT relies on its modern infrastructure, continuous innovation and its passion for excellence, to develop and supply reliable battery solutions.

Our manufacturing plant, located in Xanthi, Northern Greece, is a core element of our dynamic growth. We have systematically invested in the development of **one of the most modern industrial units**, in accordance with the strictest international standards. It covers **200.000m²**, with indoors areas of more than 60.000m².

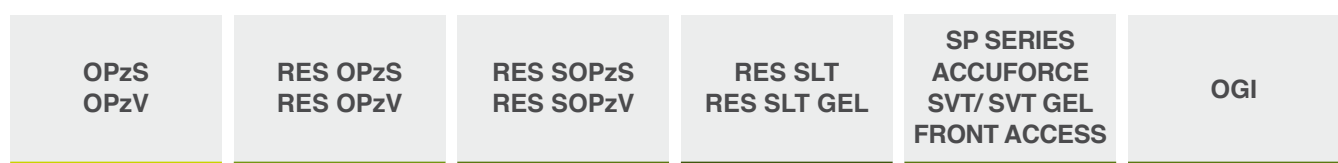
The company has consistently invested in developing one of **the most advanced industrial plants in the world**, running highly specialized production and assembly lines. The plant is fully compliant with the strict-

est international standards and is certified for Quality, Occupational Health & Safety and Environmental management systems.

The products are developed by SUNLIGHT R&D team which constantly designs and evaluates new innovative solutions to better meet market needs based on the latest technological trends, industry developments and market feedback.

SUNLIGHT products and services have gained international recognition by ensuring uninterrupted and reliable operations in a wide range of critical applications for a broad spectrum of industries, such as Telecom and Power networks.

The complete Reserve Power portfolio consists of:



Valve Regulated Tubular Plate GEL Batteries for Stand-By Applications

SUNLIGHT OPzV batteries are characterized by **maintenance-free, long service life, excellent reliable performance** even in harsh conditions (high operating temperatures or unstable power network), thus providing a premium **efficient and cost effective energy solution**.

Optimum design, according to DIN international standards, exclusive use of high quality raw materials, robust construction and state of the art manufacturing processes make this OPzV range the **ideal solution for stand-by applications requiring high level of safety and reliability**.



Power generation



Utilities



Transportation Signalling

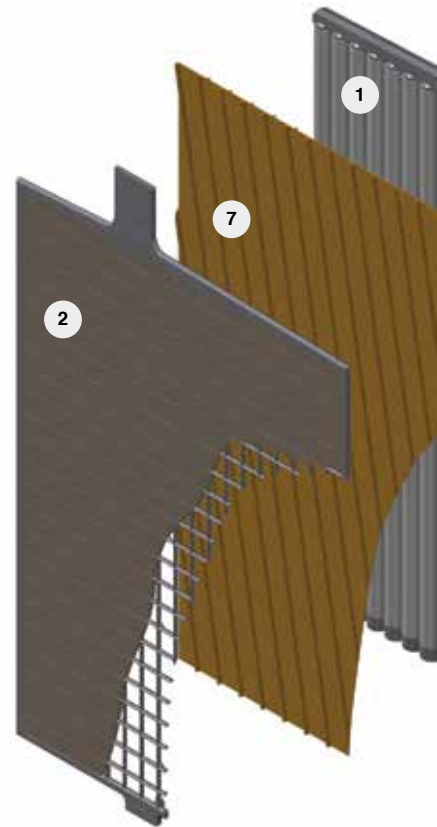
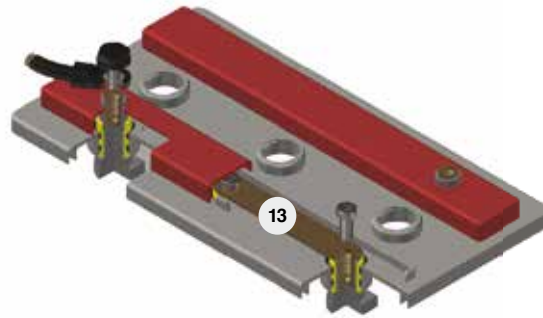


UPS

Telecommunications	Backup power systems for base stations, cell towers & radio transmission installations
UPS systems	Critical equipment backup power supply & protection from frequency & voltage fluctuations
Utilities	Power grid stabilization, power quality and reliability improvement
Power generation & distribution	Switches control & switchboards in substations connected to power generation line
Transportation signalling	Signalling systems, communication/control nodes in demanding environmental conditions
Emergency lighting	Lighting in critical situations when main electrical supply is interrupted
Automation and measuring systems	Backup power for measuring & high demanding automation systems



Technical features & product benefits



1 Positive Plates

- ⚙️ Tubular plate design
- ⚙️ Optimized Lead Calcium Tin Alloy reducing hydrogen evolution
- ⚙️ Red Lead in-house production by 99.99% Primary Lead
- ⚙️ Dry Filling with Red Lead
- ✓ Long service life
- ✓ Excellent cycling properties
- ✓ Quality and homogeneity
- ✓ High capacity performance
- ✓ Reduced self-discharge rate

2 Negative Plates

- ⚙️ Pasted negative plates of grid design
- ⚙️ Optimized Lead Calcium Tin Alloy
- ⚙️ Robust construction
- ✓ Stability
- ✓ Reduced corrosion

3 Gauntlet

- ⚙️ Highly porous woven material
- ⚙️ Increased diameter with high Positive Active Mass (PAM)
- ✓ High capacity performance
- ✓ Better utilization of active material
- ✓ Restricts the expansion of the active material
- ✓ Eliminates active mass shedding
- ✓ Reduces corrosion of spine

4 Bottom Bar

- ⚙️ Ultrasonic welding
- ✓ Growth of positive spine into bottom bar's cavity is easily accommodated

⚙️ Technical Features

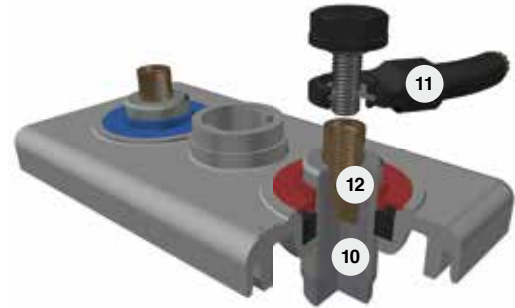
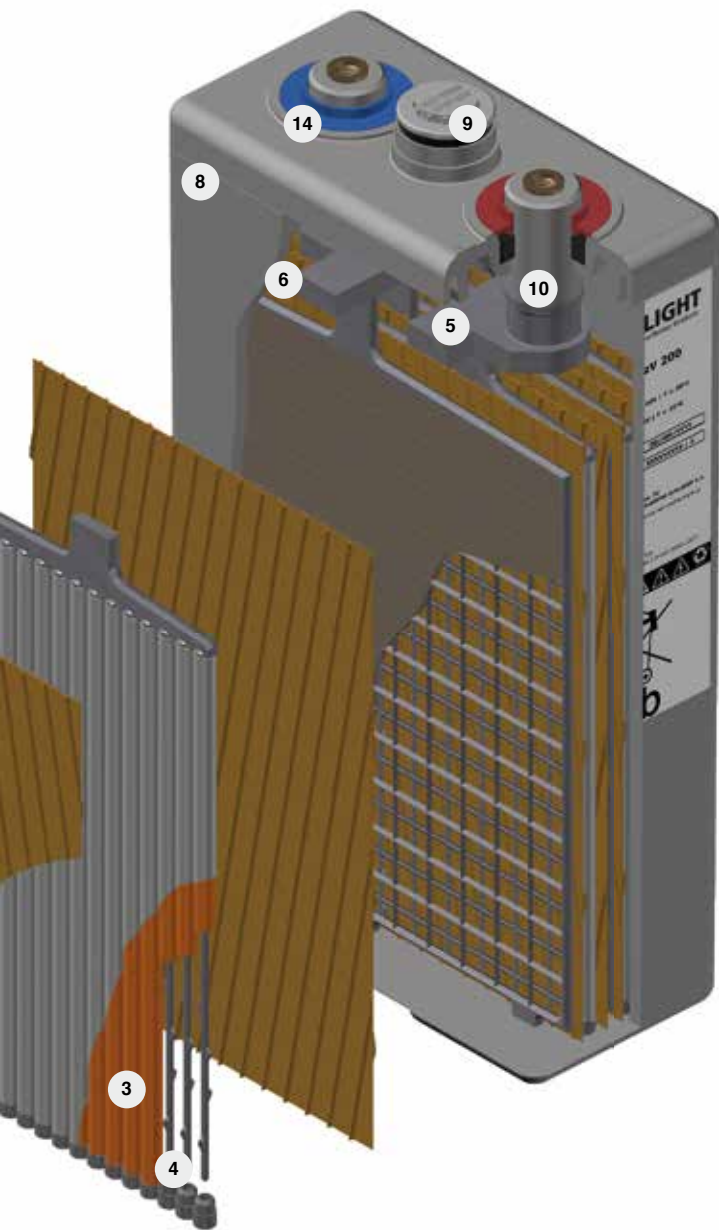
- ✓ Product Benefits

5 Terminal Bridge

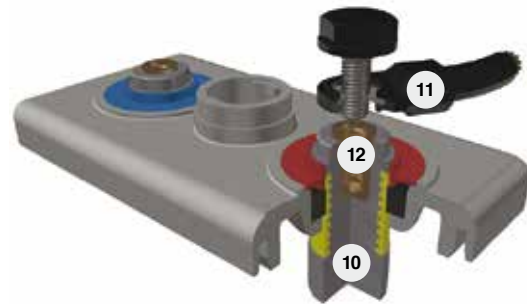
- ⚙️ Manufactured with high quality, robust materials following certified processes
- ✓ Consistent and uniform pole bridge composition
- ✓ Increased robustness and durability
- ✓ Perfect connection for poles-bridge-plate block as a whole

6 Electrolyte

- ⚙️ Immobilized in GEL form sulphuric acid with nominal density of 1,26 kg/l (20°C/68°F)
- ⚙️ State of the art GEL filling equipment
- ⚙️ High purity silica for GEL formation
- ⚙️ Effective diffusion of GEL
- ✓ Operation without acid stratification or dendrite growth
- ✓ High performance on deep discharges
- ✓ Low self discharge



US pole (optional)
(different codes for US pole cells)



Standard pole

7 Separators

- ⚙ High porosity grade material
- ⚙ Allow migration of ions during charge/discharge
- ⚙ More acid in the surrounding area of the plates
- ✓ Secured protection against short circuits
- ✓ High temperature stability
- ✓ Mechanical strength
- ✓ Low internal resistance

8 Container / Lid

- ⚙ Heavy Duty ABS Material
- ⚙ Optionally flame retardant (Class V0) ABS material
- ⚙ Thick wall container
- ⚙ Sealing between container - lid with polyurethane resin
- ⚙ 100% leakage quality control with high precision equipment
- ✓ Unsurpassed mechanical strength
- ✓ Robust and durable battery construction

9 Valve

- ⚙ Pressure relief
- ⚙ Integral flame arrestor
- ✓ Maintenance-free design
- ✓ No water topping-up requirements

10 Sliding Poles

- ⚙ Premium sliding design with brass insert and rubber seal in the lid
- ⚙ Hardness and acid resistance
- ✓ Effectively prevents top lid cracks and acid leakages
- ✓ Positive plate's expansion is safely absorbed
- ✓ Optimum current conductivity
- ✓ Perfect sealing
- ✓ Available also with taller poles with extra space for measurements
- ✓ Safe and long operational life

11 External Intercell Connectors

- ⚙ Flexible
- ⚙ Copper
- ⚙ Fully insulated
- ⚙ Fixed with plastic head safety bolt and probe hole on the top
- ✓ Allow voltage measurements
- ✓ High conductivity
- ✓ Safe and long operational life

12 Terminals

- ⚙ Threaded female M10 terminal posts
- ✓ High conductivity
- ✓ Maximum torque retention
- ✓ Easy installation

13 Internal Monoblock Intercell Connectors

- ⚙ Copper bars premium design
- ✓ High conductivity
- ✓ Safe and long operational life

14 Pole Washers

- ⚙ Color coded pole washers
- ✓ Easy polarity recognition

The ideal energy solution for stand-by applications

Long cycle life

Tubular positive plates, GEL form electrolyte and a unique sliding pole design, offer a design life of up to 18 years for 2V cells and 15 years for 6V & 12V blocks as well as more than 1500 cycles at 80% Depth of Discharge.

Outstanding performance and reliability

Products of optimum design with use of high quality raw materials, European state-of-the-art production facilities and cumulative experience on advanced submarine battery manufacturing ensure remarkable performance, exceeding values as defined by the DIN international standards.

Reduced maintenance cost

Maintenance-free design without water topping-up requirements.

Space optimization

Vertical and horizontal installation. Racks designed for easy installation, battery maintenance and optimal space utilization.

Operational safety

Extensive compliance testing performed under European and Global norms and verified by independent 3rd party certification agency.

Complete battery solution

Complete and ready to install systems with all the necessary accessories. Also flame retardant containers and battery management systems are available upon request.

Flexibility

Design and production of customized products and services, high volume orders handling capability, fast delivery.

Peace-of-mind

24x7 experienced pre-sales and after sales support, through SUNLIGHT Global Partners Network.

Optimum Total Cost of Ownership (TCO)

Maximum lifetime value and cost efficiency.



- “**Very Long Life**” according to Eurobat 2015 classification
- Tested according to **IEC 60896-21** and fully compliant to **IEC 60896-22**
- Optimized for deep discharge recovery according to **DIN 43539T5 Part 5**
- Full conformity to **DIN 40742** specifications for OPzV cells and **DIN 40744** for OPzV blocks
- Compliant to the safety requirements of **IEC 62485-2** for stationary batteries
- Manufactured in SUNLIGHT European production facilities, certified with **ISO 9001**, **ISO 14001**, **BS OHSAS 18001**

OPzV model	Rated Capacity (Ah) at 20°C (68°F)				Dimensions mm (in)				Weight kg (lb)	Internal Resistance (mOhm)	Short Circuit Current (A)	
	C10 1.80 Vpc	C8 1.75 Vpc	C5 1.75 Vpc	C3 1.75 Vpc	Length	Width	Height ₁	Height ₂				
Cells	2V 2 OPzV 100	112	111	101	90	103 (4.06)	206 (8.11)	354 (13.94)	382 (15.04)	13.6 (30.0)	1.650	1240
	2V 3 OPzV 150	168	167	152	134	103 (4.06)	206 (8.11)	354 (13.94)	382 (15.04)	15.7 (34.6)	1.110	1840
	2V 4 OPzV 200	224	223	202	179	103 (4.06)	206 (8.11)	354 (13.94)	382 (15.04)	18.3 (40.3)	0.830	2460
	2V 5 OPzV 250	280	278	253	224	124 (4.88)	206 (8.11)	354 (13.94)	382 (15.04)	21.8 (48.1)	0.670	3040
	2V 6 OPzV 300	336	334	303	268	145 (5.71)	206 (8.11)	354 (13.94)	382 (15.04)	26.4 (58.2)	0.565	3620
	2V 5 OPzV 350	405	404	365	320	124 (4.88)	206 (8.11)	471 (18.54)	499 (19.65)	30.0 (66.1)	0.570	3580
	2V 6 OPzV 420	486	486	438	384	145 (5.71)	206 (8.11)	471 (18.54)	499 (19.65)	35.3 (77.8)	0.485	4200
	2V 7 OPzV 490	567	567	512	447	166 (6.54)	206 (8.11)	471 (18.54)	499 (19.65)	40.8 (89.9)	0.430	4740
	2V 5 OPzV 500*	575	578	520	449	145 (5.71)	206 (8.11)	643 (25.31)	671 (26.42)	43.8 (96.6)	0.530	3850
	2V 6 OPzV 600	690	693	623	539	145 (5.71)	206 (8.11)	643 (25.31)	671 (26.42)	48.2 (106.3)	0.445	4600
	2V 7 OPzV 700*	805	808	727	630	191 (7.52)	210 (8.27)	644 (25.35)	672 (26.46)	61.2 (134.9)	0.365	5600
	2V 8 OPzV 800	920	923	831	720	191 (7.52)	210 (8.27)	644 (25.35)	672 (26.46)	65.5 (144.4)	0.325	6300
	2V 9 OPzV 900*	1035	1039	935	809	233 (9.17)	210 (8.27)	646 (25.43)	674 (26.54)	75.9 (167.3)	0.295	6900
	2V 10 OPzV 1000	1150	1154	1039	899	233 (9.17)	210 (8.27)	646 (25.43)	674 (26.54)	80.4 (177.3)	0.265	7700
	2V 11 OPzV 1100*	1265	1271	1143	987	275 (10.83)	210 (8.27)	645 (25.39)	673 (26.50)	90.8 (200.2)	0.245	8350
	2V 12 OPzV 1200	1380	1387	1247	1076	275 (10.83)	210 (8.27)	645 (25.39)	673 (26.50)	95.1 (209.7)	0.225	9050
	2V 11 OPzV 1375*	1485	1493	1348	1169	275 (10.83)	210 (8.27)	796 (31.34)	824 (32.44)	105.0 (231.5)	0.230	8850
	2V 12 OPzV 1500	1620	1629	1470	1275	275 (10.83)	210 (8.27)	796 (31.34)	824 (32.44)	110.1 (242.7)	0.210	9700
	2V 14 OPzV 1750*	1890	1900	1715	1488	399 (15.71)	214 (8.43)	771 (30.35)	799 (31.46)	146.0 (321.9)	0.180	11350
	2V 15 OPzV 1875*	2025	2035	1838	1595	399 (15.71)	214 (8.43)	771 (30.35)	799 (31.46)	151.0 (332.9)	0.167	12200
	2V 16 OPzV 2000	2160	2171	1960	1701	399 (15.71)	214 (8.43)	771 (30.35)	799 (31.46)	156.1 (344.1)	0.157	13000
	2V 18 OPzV 2250*	2430	2443	2207	1917	487 (19.17)	212 (8.35)	769 (30.28)	797 (31.38)	185.2 (408.3)	0.137	14900
2V 20 OPzV 2500	2700	2714	2452	2130	487 (19.17)	212 (8.35)	769 (30.28)	797 (31.38)	195.3 (430.6)	0.123	16600	
2V 22 OPzV 2750	2970	2988	2695	2332	576 (22.68)	212 (8.35)	771 (30.35)	799 (31.46)	221.2 (487.7)	0.115	17750	
2V 24 OPzV 3000	3240	3260	2940	2544	576 (22.68)	212 (8.35)	771 (30.35)	799 (31.46)	231.4 (510.1)	0.108	18900	
2V 26 OPzV 3250	3458	3501	3150	2714	576 (22.68)	212 (8.35)	771 (30.35)	799 (31.46)	241.5 (532.4)	0.103	19800	
Blocks	6V 4 OPzV 200	206	207	190	169	272 (10.71)	205 (8.07)	332 (13.07)	372 (14.65)	55.2 (121.7)	2.70	2270
	6V 5 OPzV 250	257	258	237	211	380 (14.96)	205 (8.07)	332 (13.07)	372 (14.65)	62.8 (138.5)	2.22	2760
	6V 6 OPzV 300	309	311	285	253	380 (14.96)	205 (8.07)	332 (13.07)	372 (14.65)	69.0 (152.1)	1.89	3240
	12V 1 OPzV 50	51	51	47	42	272 (10.71)	205 (8.07)	332 (13.07)	372 (14.65)	43.8 (96.6)	19.01	640
	12V 2 OPzV 100	102	102	94	84	272 (10.71)	205 (8.07)	332 (13.07)	372 (14.65)	50.5 (111.3)	9.50	1290
	12V 3 OPzV 150	153	154	141	126	380 (14.96)	205 (8.07)	332 (13.07)	372 (14.65)	73.3 (161.6)	6.80	1800

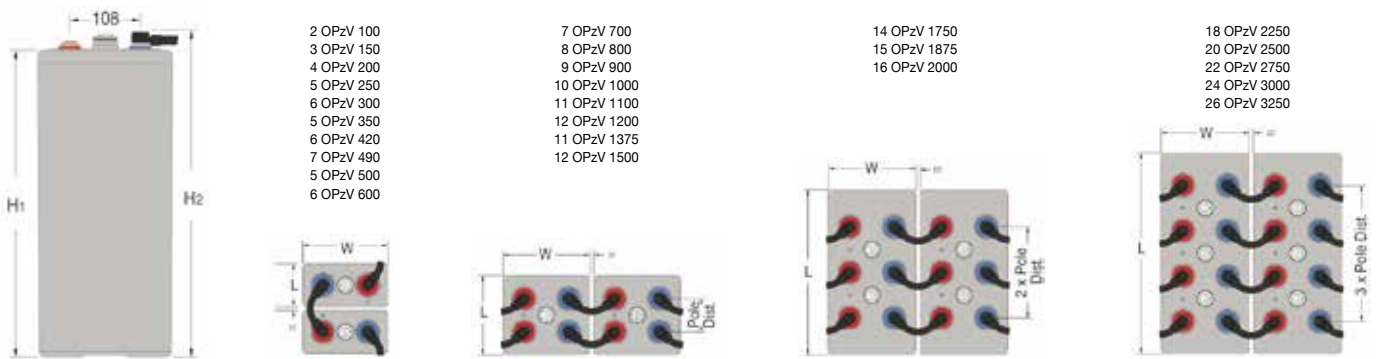
Cells type according to DIN 40742:2015 except.*

Monoblocks type according to DIN 40744:2015

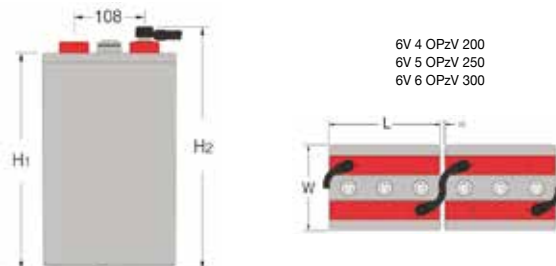
Height₂ includes installed connectors and bolts

All dimensions and weights shown are subject to manufacturing tolerances

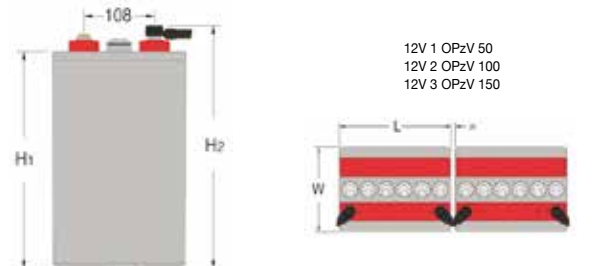
2V OPzV



6V OPzV



12V OPzV



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Headquarters 2 Ermou & Nikis Street | Syntagma Square | 105 63 | Athens | Greece | EU

Manufacturing Plant Neo Olvio | 672 00 Xanthi | Greece | EU

Recycling Plant Industrial Area of Komotini | 691 00 Komotini | Greece | EU

Southeast Europe Industrial Sales 14B Menexedon Street | 145 64 Kato Kifissia | Greece | EU

European Battery Assembly (SEBA) 175, Via Stra | 37030 Colognola Ai Colli Verona | Italy | EU

Industrial SRL 111-115, Timisoara Boulevard | 061327 Bucharest | Romania | EU

T +30 210 6245400	F +30 210 6245409
T +30 25410 48100	F +30 25410 95446
T +30 25310 82460	F +30 25310 82489
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