



SUNLIGHT
POWER IS KNOWLEDGE

**Advanced
Technology**
Military
Batteries &
Charging
Systems —

Military Batteries & Charging Systems



Our Company

We operate for 30 years in the global energy storage and power supply markets, offering a wide range of innovative high-quality products and services, covering the high-demanding energy needs of various sectors.



Our Expertise

Being equipped with robust knowhow and cumulative experience in advanced technology systems, we specialize in the design and production of batteries for various types of applications, utilizing all available lead-based technologies, according to the strictest international specifications and standards.

Military Batteries & Charging Systems

Our Approach

Aiming to fulfill the performance requirements of each customer and to minimize the total cost of a submarine battery –regarding the original cost and the operational expenses during its life time, we apply a holistic approach, which is translated into:



High quality battery systems

Added value services & exceptional customer service

- Battery installation, activation and commissioning
- Supervision of capacity tests
- Maintenance assistance
- Logistics services
- Training services



In-house turn-key design for a base battery facility



Accessories

Our Production Facilities

Our manufacturing plant, located in 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 Europe.

- High-end production and assembly lines, with state-of-the-art equipment, for:
 - **Advanced Lead-Acid batteries for submarine propulsion**
 - **Silver-Zinc batteries for combat and exercise torpedoes**
 - **Stationary and motive power Lead-Acid batteries (vented type)**
 - **Sealed Lead-Acid batteries (VRLA)**
 - **Battery packs for military and commercial applications**
 - **Novel Lithium-ion energy storage products under development, for man-portable (BB-2590B/U per MIL-PRF 32383) and ground vehicle (Lithium-ion 6T per MIL-PRF-32565C) applications**

- Optimum level of safety and quality control in every step of the production
- In-house manufacturing of all the critical components so as to assure the best quality and performance of the final product (plates, pole bridges, containers, lids, rubber lines, etc)
- CAD methods
- Continuous R&D to improve performance and product life time
- In-house advanced testing facilities (shock test, electrical performance test, environmental tests) and detailed chemical inspections of all the incoming raw materials
- Fully automatic acid dilution plant
- **ISO 9001 | ISO 14001 | ISO 37001
ISO 19600 | BS OHSAS 18001 certified**

Non Rechargeable



Model	BA-3386/U	BA-3590/U	BA-5374/U	MTV6135-150-T05
Nomenclature	Primary Alkaline	Alkaline Manganese Dioxide (Zn-MnO ₂)	LiMnO ₂ battery	Lithium-Thionyl Chloride (Li-SOCl ₂)
Nominal Dimensions:	L:	240mm	111.3 mm	57mm
	W:	92mm	62 mm	37mm
	H:	54mm	126.5 mm	70.4mm
	D:			25.4mm-17.0mm
Nominal Weight		1.7 kg	50g	150 g
Nominal Voltage	A: 3V B: 15V	24V, 2 Sections 12V each	6V	3.4V / 6.8V
Capacity	-	7 Ah per section	-	4.0Ah
Discharge Load (or current)	A1: 6.8 Ohm 2min, then open circuit 18min cont. to 2.12V. A2: 14.2 Ohm 2min, 291 Ohm 18min cont. to 10V.		140 Ohm cont. to 3.6V	
Cut-Off Voltage	A1: 2.12V, A2: 10V	9V per section	3.6V	2.0V /cell
Terminals	5 Hole Socket	Connector Floating type per U.S. Army DWG # SC-C-179492	Screw(+) Flat surface(-)	3 M3 terminals
Operating Temperature Range	-10 to +50°C	-20°C to +55°C	-20 to +55°C	-60°C to +85°C
Storage Temperature Range	-20 to +30°C Storage up to +50°C is allowed for up to 30 days in 3 years	-40°C to +40°C	Max. recommended: +20°C. Storage at up to +50°C is allowed for up to 90 days in 3 years, total	"Maximum Temperature: +30°C Ambient: Non corrosive gases"
Operational Life	60H (20°C)		30H (20°C)	
Shelf Life	5 years	5 years	5 years	5 years
Case	Modified ABS	Plastic	Plastic tube	ABS
Color	Olive Drab (Green)	Olive Drab (Green)	Olive Drab (Green)	Black
Applicable Battery Spec.	MIL-B-49030 with reference to MIL-STD810	MIL-B-49030 with reference to MIL-B-49030/10	MIL-B-49030	
Replacement for	BA-386/U, BA-5598/U, BA4386/U, BA586/U, BA3186/U	BA-5590/U, BB-590/U, BB-390/U, BB-2590/U	BA-1374/U	
Disposal	Check with local regulations for proper disposal	Environmentally safe. Contains Zero 0% Mercury or Cadmium	Check with local regulations for proper disposal	Check with local regulations
Applications	PRC Radio Sets	PRC-104, PRC-113, PRC-119 etc.	Life Preserver, Mine sweeping, Equipment, SDU	

Non Rechargeable Lithium-ion



Model	BA-5800/U	BA-5598/U	BA-5590/U	SLI-2775	SLI-APILAS	SLI-MIRA	GEM-Li-1210
Nomenclature	Primary Lithium-ion Sulphur Dioxide	Primary Lithium-ion Sulphur Dioxide	Primary Lithium-ion Sulphur Dioxide	Primary Lithium-ion Sulphur Dioxide	Primary Lithium-ion Sulphur Dioxide	Primary Lithium-ion Sulphur Dioxide	Primary Lithium-ion Sulphur Dioxide
Nominal Dimensions:	L: 128mm	119mm	111.0mm	134mm	94.4mm	110.0mm	82.5mm
	W:	91mm	61.5mm	110mm	57.5mm	42.0mm	
	H:	52mm	126.2mm	77mm	200.0mm	82.0mm	
	D: 35mm						37.2mm
Nominal Weight			1050g	1060g	480g	450g	100g
Nominal Voltage			A1: 12V, A2: 24V	27V	6V	9.0V (OCV)	12V (OCV)
Capacity	7.5AH (with discharging current 250mA)	8.0AH (with discharging current 500mA @ 20°C)	A1: 15.6AH, A2: 7.8AH	7.5AH	7.8AH	7.5AH	1AH
Discharge Load (or current)	2A	2A	2A	2A	267mA	240mA	33mA
Cut-Off Voltage	4V	A1: 2V, A2: 10V	A1: 10V, A2: 20V	18V	4V	6V	8V
Terminals	Positive & Negative Terminals at the Top	5 Hole Socket	6 Hole Socket	10 Hole Sockets	2 Pin Holes	2 Hole Socket	2 Flat Concentric Cyclet
Operating Temperature Range	-40 to +70°C	-40 to +70°C	-40 to +70°C	-60 to +70°C	-40 to +70°C	-60 to +70°C	-40 to +70°C
Storage Temperature Range	Max. recommended: +30°C Possible without leakage: -40°C to +70°C	Max. recommended: +30°C Possible without leakage: -40°C to +70°C	Max. recommended: +30°C Possible without leakage: -40°C to +70°C	Max. recommended: +30°C Possible without leakage: -60°C to +80°C	Max. recommended: +30°C Possible without leakage: -40°C to +70°C	Max. recommended: +30°C Possible without leakage: -60°C to +80°C	Max. recommended: +20°C (1 year)
Operational Life	3.2H (4V@ 20°C)	3.8H (to 0 V @ 20°C)	3.6H (to 0 V @ 20°C)	3.75H (20°C)	30H (20°C)	31H (20°C)	30H (20°C)
Shelf Life	5 years	5 years	5 years	5 years	5 years	5 years	5 years
Case	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic
Color	Olive Drab (Green)	Olive Drab (Green)	Olive Drab (Green)	Olive Drab (Green)	Olive Drab (Green)	Black	Olive Drab (Green)
Applicable Battery Spec.	MIL-PRF-49471B	MIL-PRF-49471	MIL-PRF-49471B	MIL-PRF-49471	MIL-PRF-49471	MIL-PRF-49471(CR)	MIL-PRF-49471(CR)
Replacement for	-	BA-386, BA-3386/U, BA-4386/U, BA-3186/U	BB-590/U, BB-390/U, BB-2590/U, BA-3590/U, BA-5390/U	-	-	SNC-MIRA	-
Disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal
Applications	CAM & GPS, PSN Radio Sets, PLGR	PRC Radio Sets	PRC Radio Set, TAS Night Vision	Missile, Anti-tank Weapon	Light Anti-tank Weapon APILAS	Milan Mira Night Vision	Locator Beacon Mirage Aircraft

Nickel-Cadmium



Model	BB-590/U	SNC-7224	SNC-1444	SNC-MIRA
Nomenclature	Secondary Nickel-Cadmium	Secondary Nickel-Cadmium	Secondary Nickel-Cadmium	Secondary Nickel-Cadmium
Nominal Dimensions:	L: 111mm	99.0mm	260.0mm	220.0mm
	W: 62mm	38.5mm	80.0mm	42.0mm
	H: 127mm	67.0mm	94.0mm	82.0mm
Nominal Weight	1400g	500g	2800g	1050g
Nominal Voltage	A1: 12V, A2: 24V	7.2V	14.4V	7.2V
Capacity	A1: 4.6AH, A2: 2.3AH	2.4AH	5.0AH	5.0AH
Discharge Load (or current)	0.5A	480mA	1A	1A
Cut-Off Voltage	A1: 10V, A2: 20V	5.4V	10.8V	6V
Terminals	6 Hole Sockets	2 Hole Socket	2 Hole Socket	2 Hole Socket
Operating Temperature Range	-20 to +60°C (discharging) 0 to +40°C (charging)	-20 to +60°C (discharging) 0 to +40°C (charging)	-40 to +60°C (discharging) +5 to +50°C (charging)	-40 to +60°C (discharging) +5 to +50°C (charging)
Storage Temperature Range	-20 to +35°C	-30 to +35°C	-30°C to +35°C	-30°C to +35°C
Operational Life	Up to 500 cycles depending on discharge conditions			
Shelf Life	5 years	5 years	5 years	5 years
Standard Charge	Charge at 0.1C5 = 230 mA for 16h at 20°C	Charge at 0.1C = 240 mA for 16h at 20°C	Charge at 0.1C = 450 mA for 16h at 20°C	Charge at 0.1C = 450 mA for 16h at 20°C
Case	Modified ABS	Plastic Top & Bottom, Aluminium Case	Plastic	Plastic
Color	Olive Drab (Green)	Olive Drab (Green)	Olive Drab (Green)	Black
Applicable Battery Spec.	MIL-B-49436B	MIL-PRF-32052	MIL-PRF-32052	MIL-PRF-32052
Replacement for	BB-390/U, BB-2590/U, BA-3590/U, BA-5590/U, BA-5390/U	ALI-124, ALI-142, ALI-146	ALI-116, ALI-143	-
Disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal
Applications	PRC Radio Set, and Other Equipment	Thomson Handhelds Tx/Rx (TRC 9100 & TRC 5100 family), RCU, TDT	THOMSON T - 9200 Radio Set	Milan Mira Night Vision

Nickel-Cadmium



Model	SNC-9610E	SNC-2412	SNC-TOW	TNC-2188	
Nomenclature	Secondary Nickel-Cadmium	Secondary Nickel-Cadmium	Secondary Nickel-Cadmium	Nickel Cadmium	
Nominal Dimensions:	L:	75.6mm	184.0mm	396.0mm	65.5mm
	W:	30.5mm	72.0mm	121.0mm	71.5mm
	H:	83.6mm	60.0mm	182.0mm	186.5mm
Nominal Weight	320g	1350g	9850g	1.70 kg	
Nominal Voltage	9.6V	24V	A1: 24.0V A2: 50.4V A3: 50.4V	12.0 V	
Capacity	1AH	1.3AH	A1: 5.0AH A2: 1.3AH A3: 1.3AH	5.0 Ah	
Discharge Load (or current)	200mA	130mA	A1: 1A, A2,3: 260mA		
Cut-Off Voltage	8V	20V	A1: 20.0V A2: 46.2V A3: 46.2V	10.0 V	
Terminals	1 Flat Surface (+) 2 Metal Foils (-)	2 Metal Foils	6 Hole Socket	Floating 2-pin charge/ 2-pin discharge connector. Nickel-plated brass socket contacts.	
Operating Temperature Range	-20 to +60°C (discharging) 0 to +40°C (charging)	-20 to +60°C (discharging) 0 to +45°C (charging)	-20 to +60°C (discharging) 0 to +45°C (charging)	-40°C to +60°C (discharging) +5°C to +50°C (charging)	
Storage Temperature Range	-30 to +35°C	+5 to +25°C	+5 to +25°C	-30°C to +35°C	
Shelf Life	5 years	5 years	5 years	5 years	
Standard Charge	Charge at 0.1C = 100 mA for 16h at 20°C	Charge at 0.1C = 130 mA for 16h at 20°	Charge at 0.1C = 500 mA for 16h at 20°C / Charge at 0.1C = 130 mA for 16h at 20°C	Charge at 0.1C = 450 mA for 16h at 20°C	
Case	Plastic Top & Bottom, Aluminium Case	Metallic	Aluminium	Plastic	
Color	Black	Olive Drab (Green)	Olive Drab (Green)	Black	
Applicable Battery Spec.	MIL-PRF-32052	MIL-PRF-32052	MIL-PRF-32052 MIL-B-49436		
Replacement for	SLI-1230	SNC-2450	SLI-TOW	BA-3791	
Disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal	Check with local regulations	
Applications	Racal Tranceivers, Cougar	LP Range Finder, Clansman	Tow Gun	PRC-80, PRC-730, PRC-2200	

Alkaline



Model	SMG-2	MK-107	MK-105	VA-148
Nomenclature	ALKALINE, NON MAGNETIC	ALKALINE, NON MAGNETIC	ALKALINE, NON MAGNETIC	ALKALINE
VG Norm	VG 96915-144	VG 96915-107	VG 96915-105	VG 96915-36
NSN	6135-12-314-8794	6135-12-199-2468	6135-12-19-2469	6135-12-301-9691
Nominal Dimensions (mm):	L:	385	259	66.6
	W:	190	68	33.3
	H:	105	171,5/188,5	100/118
	D:			
Nominal Weight (kg)	17.5	5	0.42	0.88
Nominal Voltage	10,5V	6V	3V	22,5V
Capacity	100Ah, 25Ah, 25Ah	42Ah	7Ah	3Ah
Discharge Load (or current)				
Cut-Off Voltage	6,3V	3,6V	1,8V	13,5V
Terminals	Connector VG 95328 J 12-10-SW	2 Poles	2 Poles	Snap fasteners
Operating Temperature Range				
Storage Temperature Range	-5°C to +30°C	-5°C to +30°C	-5°C to +30°C	-5°C to +30°C
Operational Life				
Shelf Life	3 years	3 years	3 years	3 years
Standard Charge	n/a	n/a	n/a	n/a
Case	TERLURAN 877ME GRAY 7281	Carton case	Carton case	Carton case
Color	RAL 7000	RAL 7030	RAL 7030	RAL 7030
Applicable Battery Alternative				
Disposal				
Applications	Sea mines	Sea mines	Sea mines	Sea mines

Lithium-ion



Model	BB-2590/U SMBus	LIB-2445
Nomenclature	Secondary Lithium-Ion	Secondary Lithium-Ion
Nominal Dimensions:	L: 111.0mm	227.0mm
	W: 61.5mm	89.0mm
	H: 126.3mm	92.0mm
Nominal Weight	1400g	1280g
Nominal Voltage	A1: 14.4V, A2: 28.8V	14.4V
Capacity	A1: 15.0AH, A2: 7.5AH	7.5AH
Discharge Load (or current)	2A	2A
Cut-Off Voltage	A1: 11.0V, A2: 22.0V	11.0V
Terminals	6 Hole Sockets	2 Round Poles
Operating Temperature Range	-20 to +60°C (discharging) 0 to +45°C (charging)	-20 to +60°C (discharging) 0 to +45°C (charging)
Storage Temperature Range	-20°C to +25°C (1 year) -20°C to +60°C (1month)	-20°C to +25°C (1 year) -20°C to +60°C (1 month)
Operational Life	>300 cycles @ C/2 to 70% of initial capacity	
Shelf Life	5 years	5 years
Standard Charge	Charge each section at 16.8V at C/2 (3.75A) rate for 4H or until current reduced below 200mA in a temperature range of 0°C to 45°C	Charge at 16.8V at C/2 (3.75A) rate for 5H or until current reduced below 200mA in 200mA in a temperature range of 0°C to 45°C
Case	Plastic	Plastic
Color	Olive Drab (Green)	Black
Applicable Battery Spec.	MIL-PRF-32052	MIL-PRF-32052
Replacement for	BB-590/U, BB-390/U, BA-3590/U, BA-5590/U, BA-5390/U, BB-2590/U	NB-2440
Communication Protocol	SMBus 1.1, SBDData 1.1	
Disposal	Check with local regulations for proper disposal	Check with local regulations for proper disposal
Applications	AN / GRS-213, AN / GSQ- 187, AN / PRC-104, 104A, 104B, 113, 119, 132, AN / PPN-19 (V1), 19 (V2) AN / GYK-29, AN / PDR-75, AN / TAS-4A, 6A AN / PSN-8 etc	Saab/Grintek Radio Transceiver

Adaptor



Model		SNC-1444A	SNC-9610B
Nomenclature		Power Supply Connecting Unit	Battery Case
Nominal Dimensions:	L:	255.0mm	75.6mm
	W:	62.5mm	30.5mm
	H:	36.0mm	83.6mm
Nominal Weight		1125g	180g
Nominal Voltage		11 to 32 V (26V nominal)	
Terminals			1 Flat Surface (+), 2 Metal Foils (-)
Operating Temperature Range		-40 to +70°C	
Storage Temperature Range		-40 to +70°C	
Case			Plastic Top and Bottom, Aluminium Case Black
Colour		Olive Drab (Green)	
Disposal		Check with local regulations for proper disposal	Check with local regulations for proper disposal
Applications			Racal Tranceivers, Cougar



Model	SL-1VS
DC input range:	9-36V DC (reverse polarity protected)
AC input range:	85-264V AC
Notice:	The unit is shipped with AC and DC power input cables
Battery types:	BB390, BB590, BB2590 (auto-detection)
Nr of battery:	1
Charge rate:	BB390, BB590 => 1,0A per string max. BB2590 => 2,3A per string max. SLI-2652 => 2,3A per string max.
LED indicators per string:	Chemistry Type (Nickel - Lithium-ion) Charging Status Discharging Status
Unit LED indicators:	Power DC input reverse polarity
Working temperature:	-10°C to +45°C
Storage temperature:	-40°C to +80°C
Humidity:	5% - 90%
Dimensions (L x W x H):	11,8" x 9,8" x 7,7" 29,9cm x 24,8 x 19,6cm
Weight:	aprox. 8lb, (3,5Kg) (battery not included)
Case type:	Military watertight Plastic Case
Color:	Olive Drab
Case Waterproof protection:	IP66



#1

plant worldwide with dynamic production of motive power and storage energy



500+

clients in 130 countries



Quality & Safety

in every step of the production lines



Innovation

based on experience



GREECE | ITALY | ROMANIA | USA

Contact us: empowerfuture@sunlight.gr

Headquarters Greece T: +30 210 6245400

Sunlight Batteries USA Inc. T: +1 336 579 5109

Sunlight European Battery Assembly (SEBA)
& Sunlight Italy T: +39 045 7651771

Sunlight Industrial SRL Romania T: +40 021 351 77 77

www.systems-sunlight.com

