



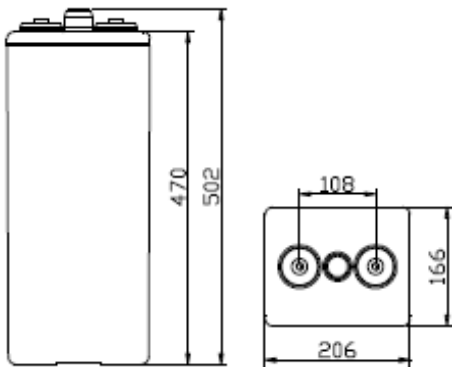
Application

- Solar energy, wind energy
- Electric power, nuclear power
- Communication
- Ship, maritime affairs
- UPS, medical facilities and emergency lighting
- Situation with high environmental protection and energy-saving

Features of performance application

- Designed service life of 20 years
- High cycle service life
- Better temperature resistance performance
- Excellent deep cycle performance
- Superior low current discharge performance
- Stronger constant power discharge capability
- Better charge acceptability
- Better safety performance and reliability
- Modular and personified installation design
- High Performance price/ratio and low yearly operating cost
- Eco-friendly, cycle applicatio

Terminal Dimensions



Standards & Certifications

Execution standard:

IEC60896-21/22 DIN40742
BS EN 61427-2002
YD/T 1360-2005
Q/321284KCC 03-2006

Authentication and certificate:

Certificate of Qualification on Perfecting Measurement & Measuring System

GB/T19022-2003
ISO10012:2003&IDT

Quality Management System Authentication

GB/T19001-2000

NO.03006010002R0M-2

Environmental Management System Authentication

ISO 14001:2004

NO.010607E2024R1M-2

Occupational Health Management System

Authentication

GB/T28001-2001

NO.010607S10147R0M-2

Product authentication:

YD/T1360-2005

NO.030074640567R1M

CE authentication

EN 61000-6-3:2001+A11:2004

EN 61000-6-1:2001

National Industrial Product Production License

XK06-044-00012

Product Quality Test Free Certificate

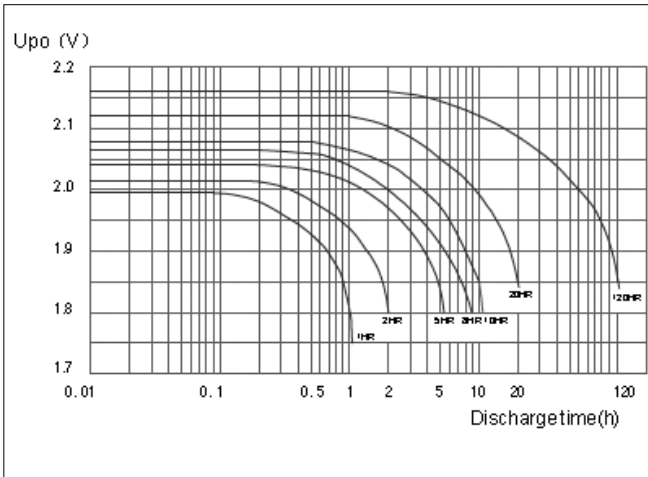
(2006)GM(321630488)

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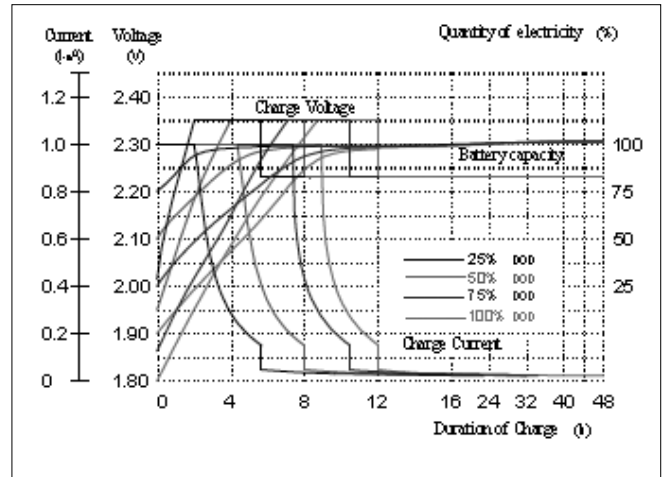
- Electrolyte: primary material adopts Germany gas silicon dioxide, the material will be the thin collosol state when it's injected initially, and it can fill the whole plate space of battery, and each part of plate can react evenly. The flooded electrolyte design can avoid dry up of battery when it's in high temperature and over charged, the thermal capacity is big and heat-elimination is fine, accordingly, thermal runaway can be avoided. The electrolyte is in the gel state in finished battery without flowing, accordingly, leakage and lamination can be avoided.
- Plate: positive plate adopts tubular type plate which can effectively prevent active substance falling, the positive plate frame is molded with multi-component alloy, the crystal particle of alloy structure is tiny and dense, the corrosion-resisting performance is fine and service life is long. Negative plate adopts pasted plate, the grid adopts radiated structure which enhances utilization ratio of active substance and discharge capability of strong current, and the charge reception capability is strong.
- Battery case: it's made of ABS material, corrosion prevention is fine, strength is high, and appearance is beautiful, it can be sealed with lid reliably which can prevent potential leakage risk.
- Separator: adopt special micro-pore PVC-SiO₂ separator from Europe AMER-SIL Company, the porosity of separator is big and resistance is low. It has bigger electrolyte storage space.
- Terminal sealing: the built-in copper core lead-base terminal post has stronger current carrying capacity and corrosion resistance. The unique double sealing structure of terminal post can effectively avoid leakage, guarantee reliability of terminal post sealing.
- Safety valve: adopt Germany technology, constant opening and closing valve, high reliability, the accumulator case expansion, damage and electrolyte dry up can be avoided.

Battery Model	7 OPzV 490
Rated voltage	2V
Capacity(25 °C)	490Ah @ 10hr to 1.80V per cell
Weight	39.5kg (86.91 lb)
Reference internal	0.34m0hm@ 25°C(77°F)
Resistance (charged)	6029A (0.1S reference value)
Short circuit current	
Max discharge current	1470A (5sec)
Self-discharge	<20% 180 days@ 25°C (77°F)
Temperature range	Application: -20°C~50°C(-4°F~122°F) Storage: 0°C~20°C(32°F~68°F) Recommendation: 20°C~25°C(68°F ~ 77°F)
Max charge current	98A
Charge voltage @ 25 °C	Float charge: 2.23V, average charge: 2.35V Temperature compensation factor: -3 mV/°C
Terminal output	M10 copper terminal (HPb59-1)
Recharge time	See figure 2

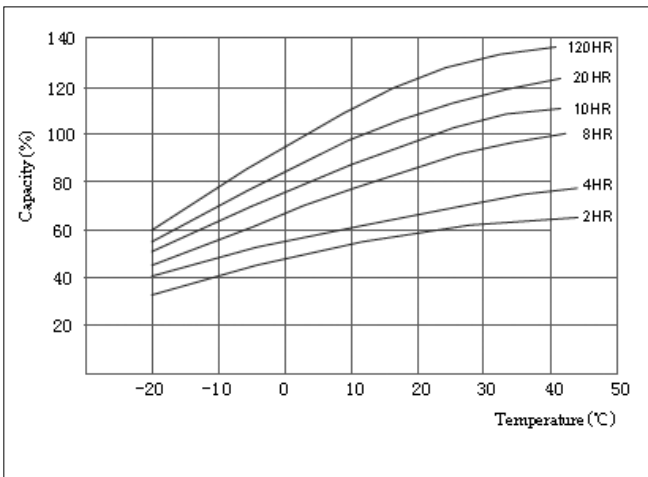
Discharge Characteristic



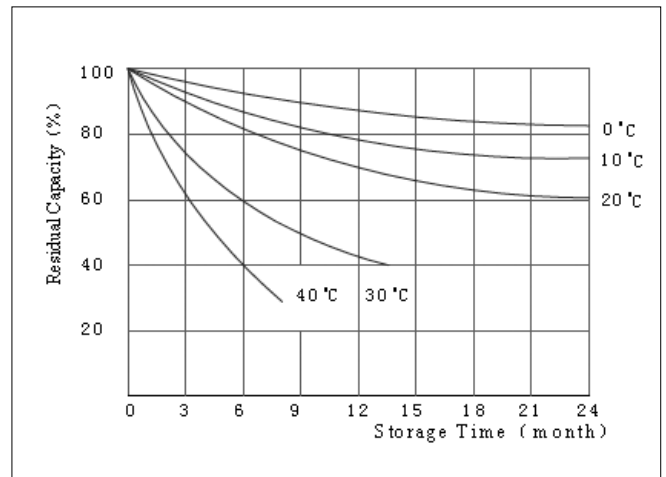
Constant voltage charge



Relationship of Capacity and Temperature



Relationship of Residual and Storage



Constant current discharge ratings-amperes at 25 °C

	5MIN	10MIN	15MIN	30MIN	45MIN	1HR	1,5HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	100HR	120HR
1.90V	466	397	292	273	245	203	152	137	106	88	75	55	45	23	5,92	5,08
1.85V	480	409	350	303	260	237	167	159	121	99	85	58	47	25,30	6,24	5,35
1.80V	504	481	448	371	286	259	211	164	123	101	87	61	51	26,56	6,45	5,53
1.75V	525	519	515	406	301	275	222	171	127	104	88	62	52	27,62	6,61	5,61

Constant power discharge ratings-watts at 25 °C

	5MIN	10MIN	15MIN	30MIN	45MIN	1HR	1,5HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	100HR	120HR
1.90V	838	714	458	418	370	321	288	255	199	166	143	104	89	46,00	11,84	10,16
1.85V	874	744	499	445	405	365	324	282	221	184	158	112	97	50,09	12,36	10,59
1.80V	918	875	731	628	560	492	413	334	262	214	180	126	105	53,06	12,64	10,80
1.75V	950	940	833	698	623	547	453	358	274	222	185	128	107	54,31	12,76	10,83