Updated Jun. 2015

SG 650H (12V65AH/C_{10})

Power Solar Gel Battery

*** The color and the printed specifications of the products are subject to change without prior notice.

Solar Gel Deep Cycle

Solar gel Series

NEWMAX Solar gel batteries are true maintenance-free sealed batteries engineered specially to satisfy the need for frequent deep cycles from PVs and renewable energy storage applications. We are confident that our technology-intensive, long-lasting, and environment friendly SG batteries will provide stability and efficiency for your everyday renewable energy needs.

General feature

Plate	Paste type
Battery type	Sealed and Maintenance free operation
Structure	Nonspillable construction design
Container/cover	ABS resin (Optional Flame retardant, UL94-V0)
Safety	Safety valve installation for explosion proof.
High quality and high reliability and low self discharge characteristics	
Exceptional deep discharge recovery performance	
Flexibility design for multiple install positions (Position Free)	

01 Long Life

High density, anti-corrosive lead calcium alloy is used in harmony with the GEL electrolyte to reduce the sulfation effect significantly.

02 Maintenance Free

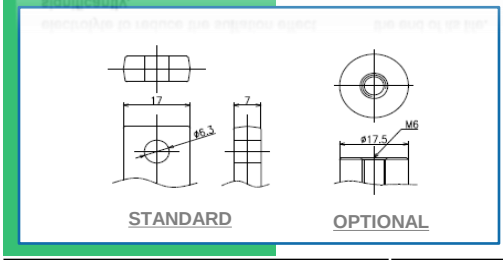
NEWMAX Battery has a gas re-combining design that doesn't need maintenance until the end of its life.

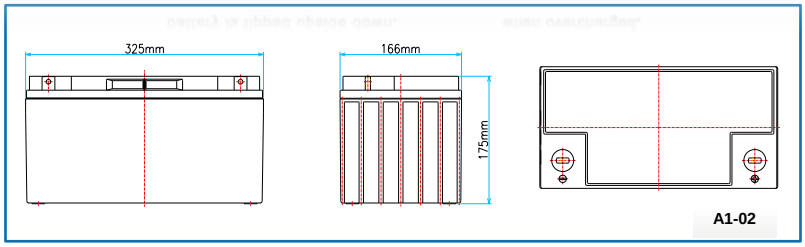
03 Leak free

Gel Technology is applied to prevent leakage. They won't spill even if the battery is tipped upside down.

04 Safety

Specially designed anti-explosion filter and safety valves prevent gas leakage when overcharged.





Battery model	SG 650H (12V65AH / 10 HOUR RATE)			
Capacity (@25℃)	20HR (1.80VPC)	10HR (1.80VPC)	5HR (1.70VPC)	1HR (1.60VPC)
	70Ah	65Ah	54h	42Ah
Dimensions (mm/inch)	Length	Width	Height	Total Height
	325(12.80)	166(6.54)	175(6.89)	175(6.89)
Weight (kg/lbs)	21.2kg(46.7lbs)±5%			
Internal resistance (mΩ)	5.30mΩ±10% (25℃, 77°F)			
Max. discharge current (5sec)	520 A	Max. discharge current(continuous)		195 A
Capacity affected by Temperature	@30℃(86°F)	@25℃(77°F)	@10℃(50°F)	@-10℃(14°F)
	105%	103%	95%	78%
Self discharge (@25℃,77F)	After 1 month 3%	After 3 month 8%		After 6 month 15%
Max. short duration discharge current (0.1sec)	1,300A±10%			
Recommended charging (@25℃)	Cycle use		Floating use	
	2.40~2.45V/cell (±5.5mV/℃/Cell) / 26.0A max.		2.20~2.24V/cell (±3.3mV/℃/cell)	

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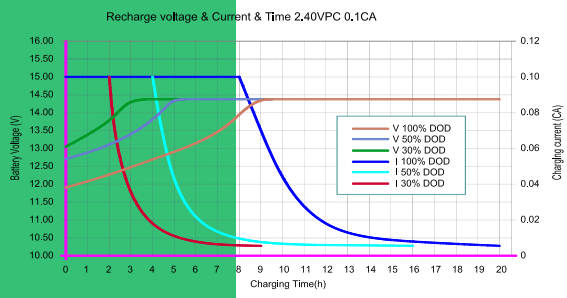
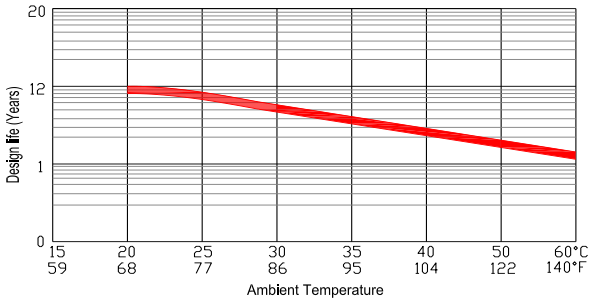
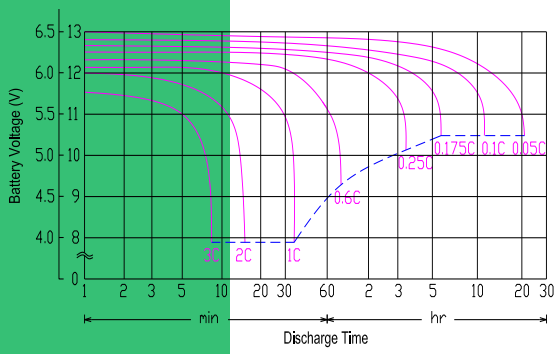
DOD % vs Recharging time curve



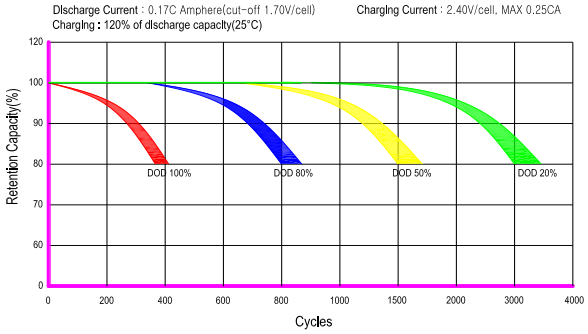
Floating life characteristics



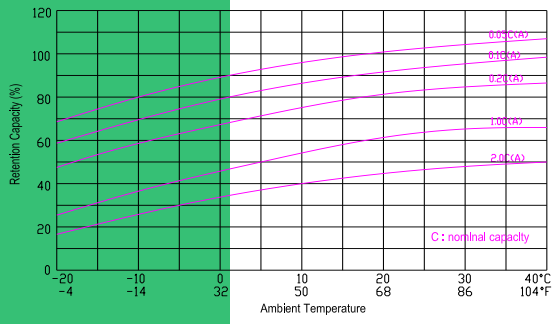
Discharge time vs current



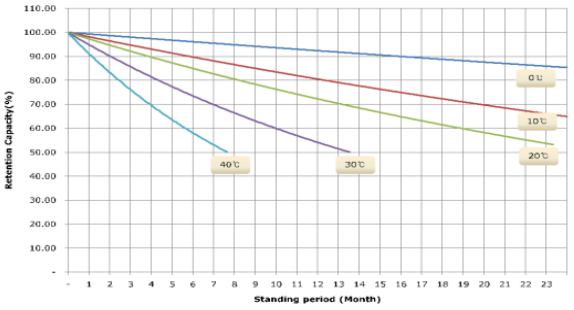
Cycle life characteristics



Effect of temperature on capacity



Self discharge



Constant current discharge ratings – Amperes per cell @ 25℃

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	125	105	98	80	66	57	41	16	10	7.1	6.0	3.3
1.85V	149	124	113	92	74	63	42	17	11	7.4	6.3	3.4
1.80V	174	138	121	97	76	65	42	18	11	7.7	6.5	3.6
1.75V	188	146	126	100	77	67	42	18	11	7.9	6.6	3.6
1.70V	203	153	131	102	78	67	42	19	12	8.1	6.9	3.8
1.65V	209	156	133	104	79	68	43	19	12	8.5	7.2	3.9
1.60V	215	159	134	105	79	68	43	20	12	8.6	7.3	4.0

Constant power discharge ratings – Watts per cell @ 25℃

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	243	203	190	155	131	111	80	32	20	14.2	12.1	6.6
1.85V	290	240	219	178	146	124	82	33	21	14.8	12.6	6.9
1.80V	338	267	235	189	149	128	83	35	22	15.3	13.0	7.2
1.75V	364	282	245	194	153	132	83	36	22	15.7	13.3	7.3
1.70V	393	296	253	198	155	133	84	36	23	16.3	13.8	7.5
1.65V	406	303	257	202	156	133	84	38	24	16.9	14.3	7.8
1.60V	417	309	259	203	156	134	85	38	24	17	14.7	8.1