



# SG 1000H (12V100AH/C<sub>20</sub>)

## Power Solar Gel Battery

TST CO.

www.TST-CO.com



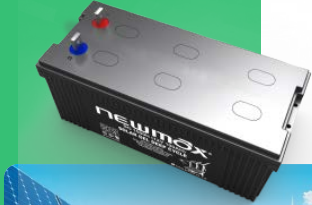
### Solar Gel Deep Cycle

#### 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)	



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

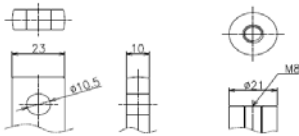
**01 Long Life      02 Maintenance Free      03 Leak free      04 Safety**

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

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

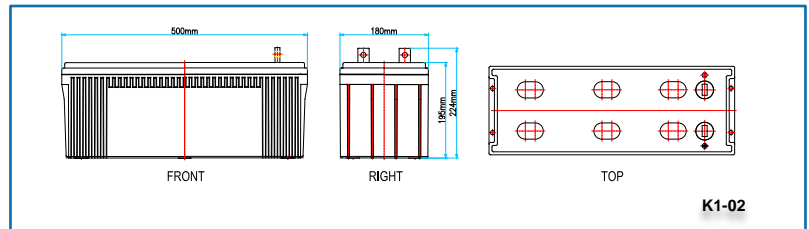
Gel Technology is applied to prevent leakage. They won't spill even if the battery is tipped upside down.

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



Standard

Optional

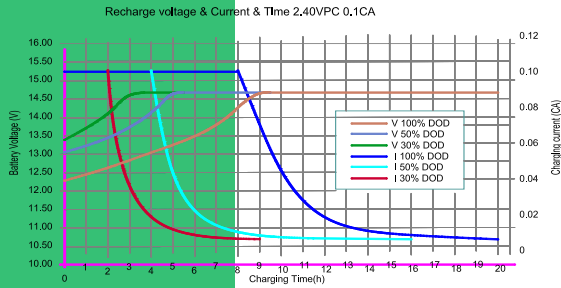


K1-02

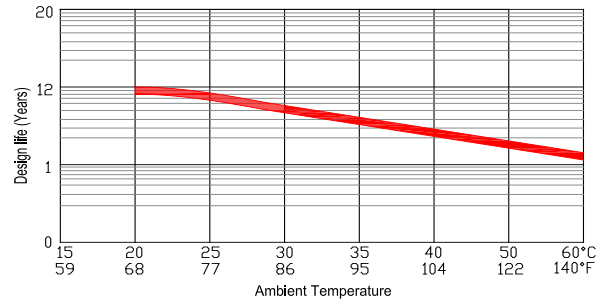
Battery model	SG 1000H (12V100AH / 20 HOUR RATE)			
Capacity (@25°C)	20HR (1.80VPC)	10HR (1.75VPC)	5HR (1.70VPC)	1HR (1.60VPC)
	100Ah	95Ah	87Ah	66Ah
Dimensions (mm/inch)	Length	Width	Height	Total Height
	500(19.69)	180(7.09)	195(7.68)	224(8.82)
Weight (kg/lbs)	30.0kg(66.1lbs) ± 3%			
Internal resistance (mΩ)	≤5.12mΩ (25°C, 77°F)			
Max. discharge current (5sec)	760 A	Max. discharge current(continuous)		285 A
Capacity affected by Temperature	@30°C (86°F)	@25°C (77°F)	@10°C (50°F)	@-10°C (14°F)
	105%	103%	95%	78%
Self discharge (@25°C, 77°F)	After 1 month 3%		After 3 month 8%	After 6 month 15%
Max. short duration discharge current (0.1sec)	1,900A ± 10%			
Recommended charging (@25°C)	Cycle use		Floating use	
	2.40~2.45V/cell (±5.5mV/°C/Cell) / 38.0A max.		2.20~2.24V/cell (±3.3mV/°C/cell)	



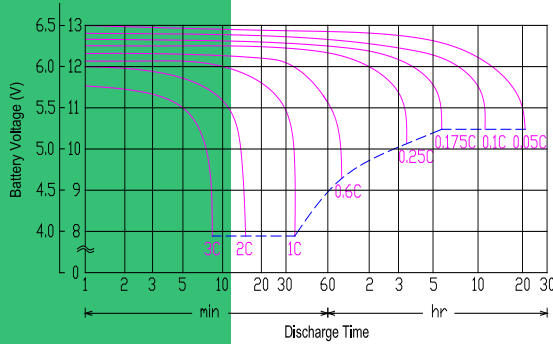
**DOD % vs Recharging time curve**



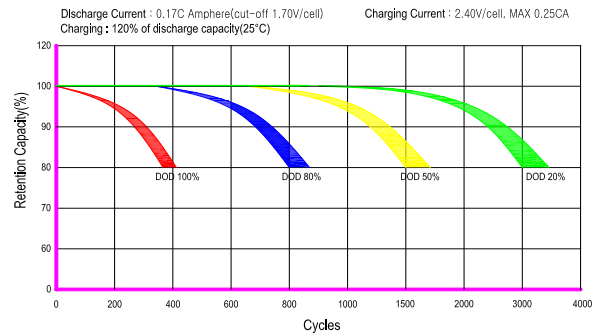
**Floating life characteristics**



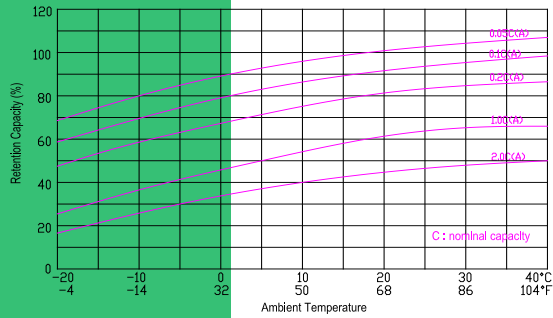
**Discharge time vs current**



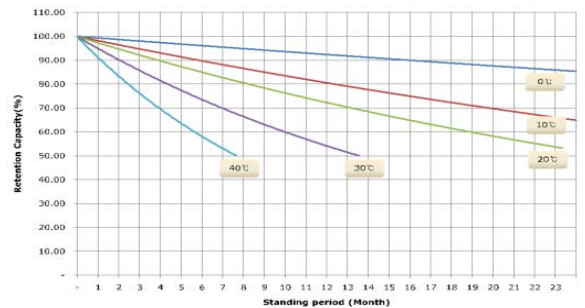
**Cycle life characteristics**



**Effect of temperature on capacity**



**Self discharge**



**Constant current discharge ratings – Amperes per cell @ 25°C**

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	188	156	146	118	97.9	83.0	62.4	23.4	15.4	10.1	8.8	4.6
1.85V	224	173	168	136	109	92.5	63.9	24.4	15.9	10.6	9.2	4.8
1.80V	262	206	180	144	112	95.4	64.4	25.3	16.3	10.9	9.5	5.0
1.75V	282	218	188	148	114	98.3	64.9	26.2	16.8	11.2	9.7	5.1
1.70V	305	228	194	151	116	99.0	65.2	26.7	17.7	11.7	10.1	5.3
1.65V	314	233	197	154	117	99.3	65.5	27.6	18.0	12.1	10.4	5.5
1.60V	323	238	199	155	117	99.5	65.9	28.1	18.5	12.4	10.7	5.6

**Constant power discharge ratings – Watts per cell @ 25°C**

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	365	303	283	230	193	163	123	46	30	20	18	9
1.85V	435	335	325	263	215	182	126	48	31	21	18	10
1.80V	507	400	350	279	220	188	127	50	32	22	19	10
1.75V	547	422	364	288	225	194	128	52	33	22	19	10
1.70V	591	443	377	293	228	195	128	53	35	23	20	11
1.65V	609	452	383	298	230	196	129	54	35	24	21	11
1.60V	627	462	386	301	231	196	130	55	36	25	21	11

