

Solar GEL Deep Cycle Battery

Spaceflight Solar GEL Deep Cycle Battery is a hybrid GEL battery designed with deep cycle technology to provide extra-durable cycle performance for solar energy System. It offers more than 600 cycles at 80% DOD.

Applications

- Solar and wind power systems
- Communication systems
- Uninterruptible power supplies
- Alarm and security system

General Features

- 12 years designed floating life(25 °C)
- Non-spillable construction
- Sealed and maintenance-free
- Excellent recovery from deep discharge
- High density active materials plates
- Longer Life and low self-discharge

Standards

- Compliance with IEC, BS, JIS and EU standards.
- UL, CE Certified
- ISO45001,ISO9001 and ISO14001 certified production facilities

Specifications

Rated Voltage	12V	
Nominal Capacity	250Ah	(C ₁₀ , 10.8V)
Approx Weight	70.5kg±3%(155.43lbs)	
Terminal	F12	

Rated Capacity(25°C)	262 Ah	(20hr,13.1A,10.5V)
	250 Ah	(10hr,25A,10.8V)
	213 Ah	(5hr,43A,10.5V)
	159 Ah	(1hr,159A,9.6V)

Max.Discharge Current	2500A(5s)
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Max.Charge Current	62.5A
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Internal Resistance(25°C)	Approx 4mΩ
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Operating Temp.Range	Discharge	-20~60 °C(-4~140 °F)
	Charge	-10~50 °C(14~122 °F)
	Storage	-20~60 °C(-4~140 °F)

Nominal operating temperature	25±-5 °C
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Charge Voltage @25°C(77 °F)	Cycle Use	Initial Charging Current less than 62.5A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	Standby Use	Initial Charging Current less than 62.5A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C

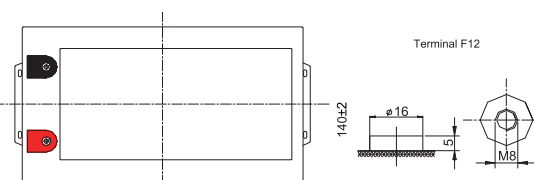
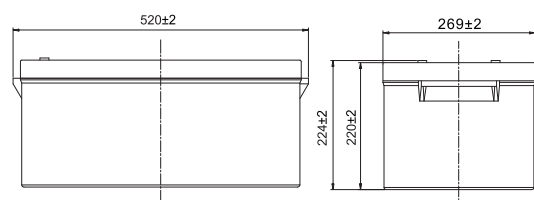
Temperature effects on capacity	40 °C (104 °F)	103%
	25 °C (77 °F)	100%
	0 °C (32 °F)	86%
	-15 °C (5 °F)	65%

Self Discharge(25°C)	Capacity after 3 months storage	91%
	Capacity after 6 months storage	82%
	Capacity after 12 months storage	65%



Dimensions

unit:mm



Length	520±2mm (20.5 inches)
Width	269±2mm(10.6inches)
Container Height	220±2mm (8.66 inches)
Total Height	224±2mm (8.82 inches)

Battery Construction

Component	Positive plate	Negative plate	Container	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS(UL94-HB) or FR(UL94-V0)	Rubber	Copper	AGM	SiO ₂ +H ₂ SO ₄

Constant Current Discharge (Amperes) at 25°C(77°F)

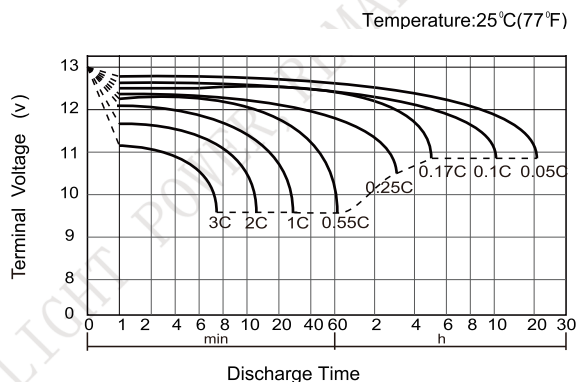
E.V/Time	5min	10min	15min	30min	60min	3h	5h	10h	20h
1.60V	/	577	401	265	159	69.0	44.5	25.5	13.3
1.65V	/	552	382	259	156	68.0	44.0	25.4	13.2
1.70V	/	527	363	251	153	67.0	43.5	25.3	13.2
1.75V	/	502	343	243	150	65.8	43.0	25.2	13.1
1.80V	/	473	318	234	145	64.3	42.3	25.0	13.0

Constant Power Discharge (Watts/cell) at 25°C(77°F)

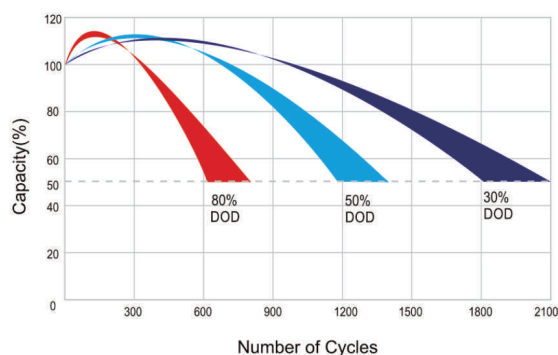
E.V/Time	5min	10min	15min	30min	45min	60min	2h	3h	5h
1.60V	/	981	748	511	394	322	187	143	82.6
1.65V	/	966	733	508	392	320	186	142	84.3
1.70V	/	948	726	504	389	317	184	141	84.0
1.75V	/	913	718	501	387	314	183	140	83.7
1.80V	/	875	707	496	384	310	181	138	83.3

Note: The above characteristics data are average values obtained Within three charge/discharge cycles not the minimum.

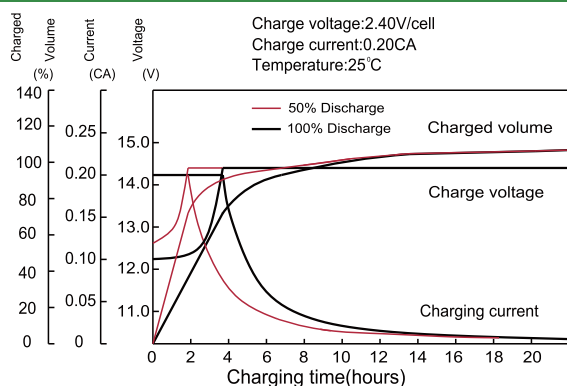
Discharge characteristic



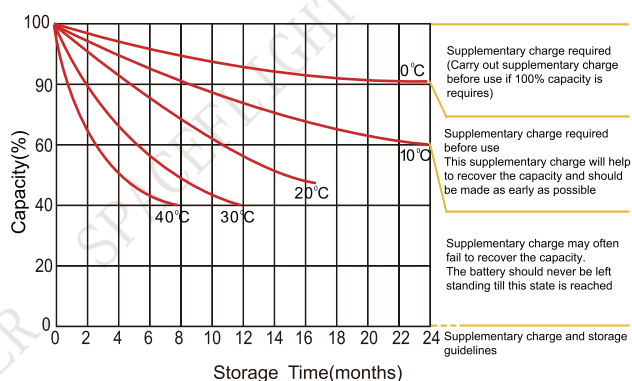
Cycle life in relation to depth of discharge



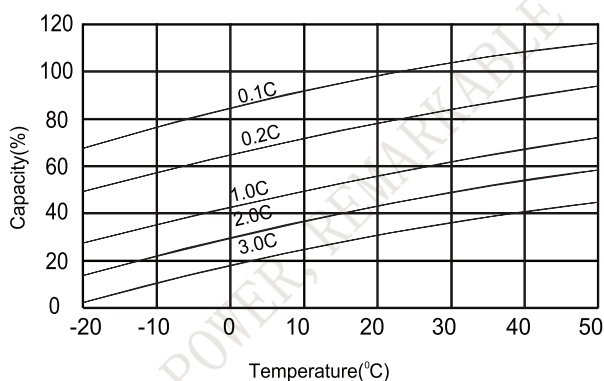
Charge characteristic curve



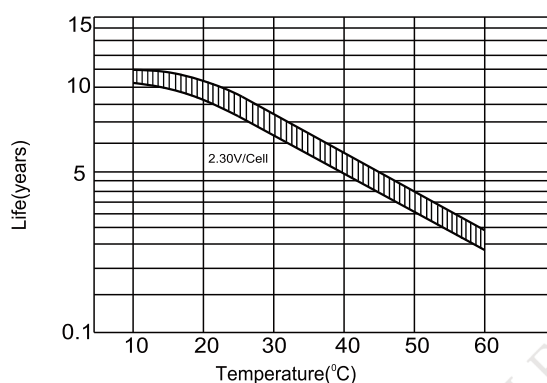
Storage Characteristics



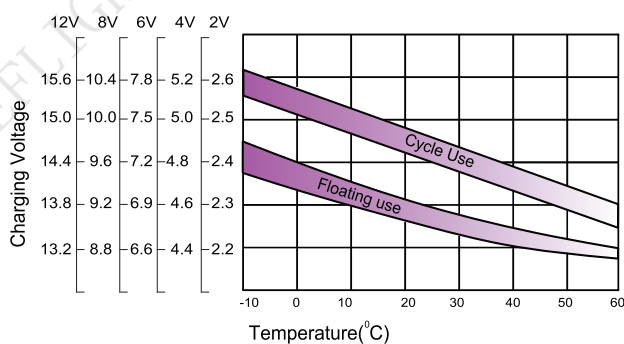
Temperature effects on capacity



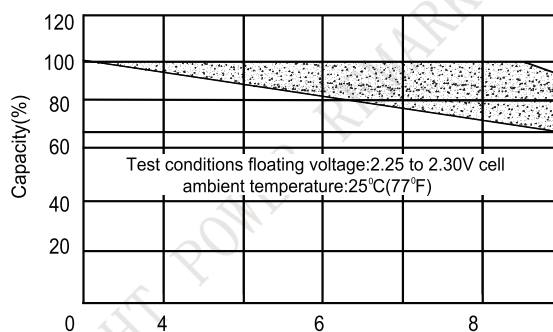
Temperature effects on float life



Relationship between charging voltage and temperature



Life characteristic of standby use



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