SOLAR SERIES VRLA BATTERY

The Solar series is designed for frequent cyclic charge and discharge applications under extreme environments. By combining the newly developed Nano Gel electrolyte with high density paste, the Solar range offers high recharge efficiency at very low charge current. The acid stratification is highly reduced by adding Nano Gel.
This series is suited for energy storage for renewable energies such as PV, wing turbine power systems and CATV.

12 V voltage | 40Ah capacity | AGM tech | 8 years design life

ISO9001 ISO14001

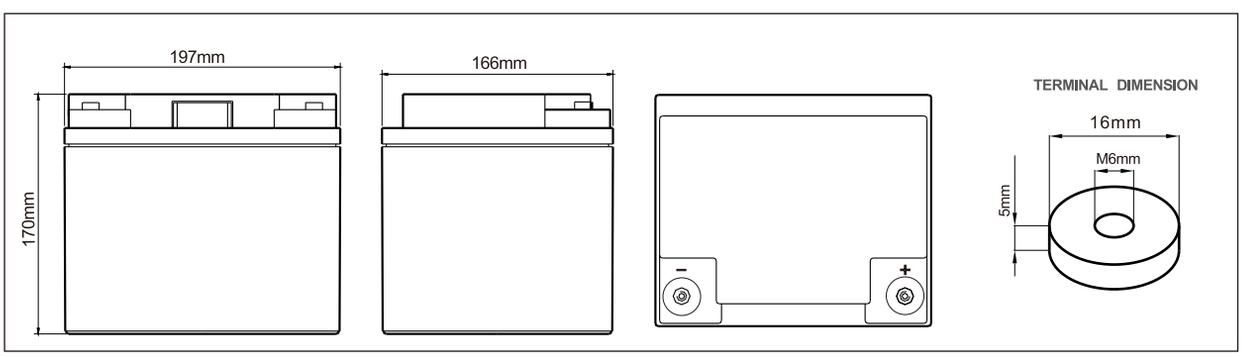
TECHNICAL SPECIFICATIONS

Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (20°C)	8 Years
Nominal Capacity (25°C)	40 Ah @ 10HR-rate (to 1.80Vpc)
Dimension (mm)	L197mm x W165mm x H170mm
Approx. Weight	12.8 kg (28.2 lbs)
Terminal Type	Female Copper Insert M6 (torque:6~8N.m)
Internal Resistance	Approx. 0.009 Ohm (fully charged @ 25°C)
Max. Charge Current	10A
Max. Discharge Current (5S)	400 A
Short Circuit Current	1260 A
Self Discharge	Approx. 2.5% per month @ 20°C
Ambient Temperature	Discharge: -20~60°C Charge: -20~60°C Storage: -20~45°C
Float Charge Voltage	13.6V @25°C (-3mV/ cell/ °C)
Equalize Charge Voltage	14.1V @25°C
Container Material	ABS (UL94-V0 optional)

Complied standards

- IEC 60896-21/22
- GB/T19638
- IEC61427
- JIS C8704
- BS6290 part 4
- UL1989

BATTERY DIMENSIONS



BATTERY DISCHARGE TABLE

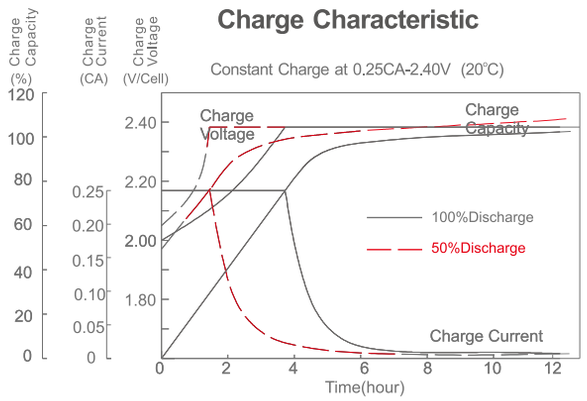
Constant Current Discharge Characteristics: Amps (25°C)												
F.V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	120	88.5	73.1	45.0	27.0	15.7	11.3	9.04	7.53	5.14	4.24	2.28
1.67V	107	81.6	68.9	43.0	26.3	15.4	11.2	8.92	7.42	5.07	4.19	2.23
1.70V	95.6	74.1	65.1	41.4	25.7	15.2	11.1	8.83	7.37	5.01	4.14	2.18
1.75V	83.1	68.9	60.4	40.0	25.2	15.0	10.9	8.73	7.27	4.94	4.08	2.14
1.80V	73.5	62.6	56.4	38.2	24.4	14.6	10.7	8.52	7.10	4.83	4.00	2.10
1.85V	62.9	56.4	51.4	36.1	23.3	14.1	10.3	8.28	6.93	4.72	3.90	2.05

Constant Power Discharge Characteristics: W/cell (25°C)												
F.V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	211	159	133	83.2	50.4	29.5	21.4	17.1	14.3	9.88	8.19	4.43
1.67V	191	148	127	80.0	49.4	29.2	21.3	17.0	14.3	9.81	8.14	4.36
1.70V	173	136	121	77.6	48.6	29.0	21.2	17.0	14.2	9.76	8.09	4.30
1.75V	152	128	113	75.5	47.9	28.7	21.0	16.9	14.2	9.70	8.04	4.24
1.80V	136	118	107	72.9	46.8	28.4	20.8	16.7	13.9	9.55	7.95	4.19
1.85V	118	107	98.1	69.5	45.2	27.5	20.3	16.3	13.7	9.40	7.79	4.12

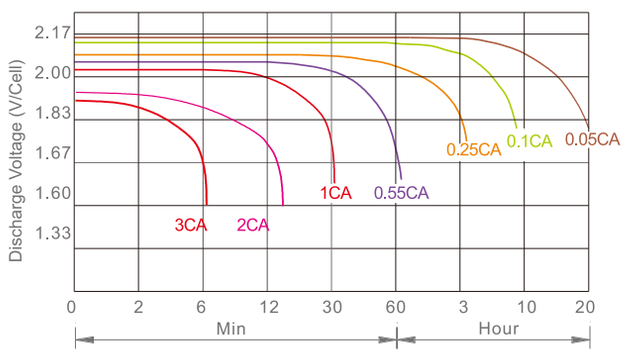
Modify date:2019-07

CHARACTERISTICS

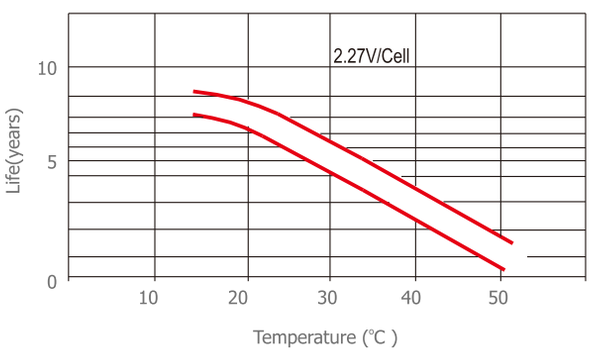
Charge Characteristic



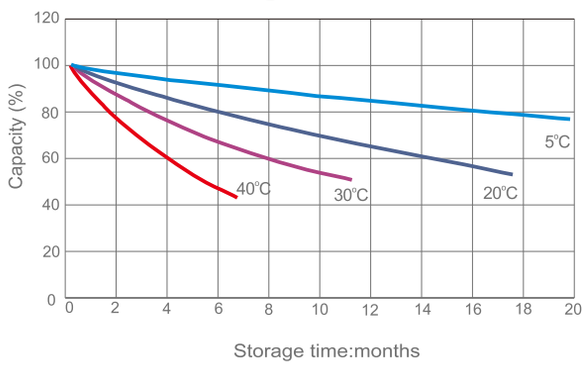
Discharge Characteristic (25°C)



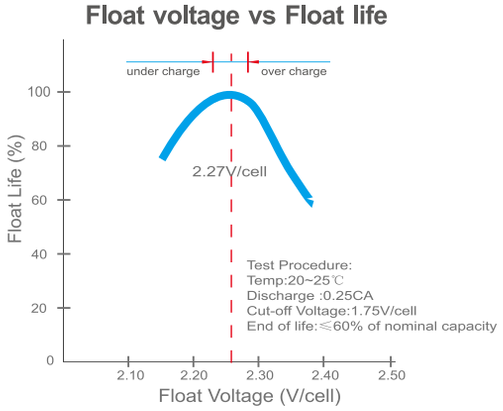
Temperature vs Float Life



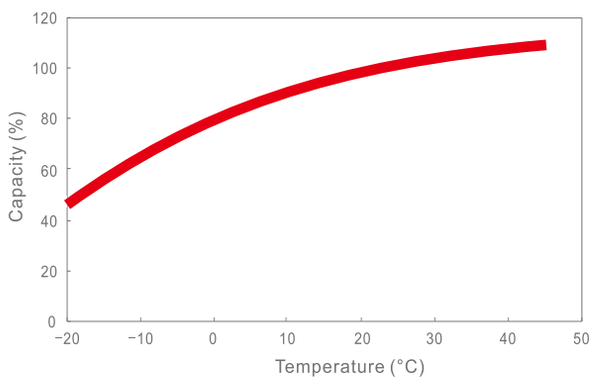
Self discharge characteristics



Float voltage vs Float life



Capacity vs Temperature



FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

Discharge Current I (A)	I ≤0.08C	0.08C≤I<0.2C	0.2C≤I<0.6C	0.6C≤I<1.0C	I≥1.0C
Final of Voltage	≥1.85Vpc	≥1.80Vpc	≥1.75Vpc	≥1.70Vpc	≥1.60Vpc

Modify date:2019-07