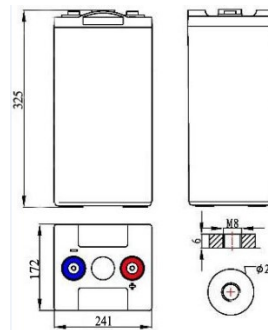




**Jiangsu Oliter** Energy Technology Co., Ltd was founded in 1998, covered 120.000M<sup>2</sup>, annual throughput reaches 750000KVAH. **Oliter** has been focusing on the R&D, Production, Marketing and Application of VRLA GEL battery and Lithium battery. By the support of South China Normal University, Xi' An JiaoTong University and Other scientific research institutes, Oliter has built up the post-doctoral workstations. Till now, Oliter has achieved 7 series, more than 100 models of batteries. Depending on scientific structure, strict material selection and advanced manufacture process, Oliter GEL batteries are characteristic of long service life, excellent charge acceptance, low self-discharge, good deep discharge tolerance, strong recovery capability, high safety and environment – friendliness and RoHS compliance.



**Battery Construction, Material and Features**

<p><b>Positive grids: Lead Oxide</b> <b>Negative grids: Lead</b></p>	<p>Grid adopts Pb Ca Sn Al alloy with 4.7mm thickness. 99,994% Pure Lead batteries of good corrosion resistance and long cycle life</p>
<p><b>Plates: Grid pasted with Lead powder and active material</b></p>	<p>Using humidity curing temperature is 75°C and special additives from Japan, rich utilization rate of active material, make battery has strong charging ability and long cycle life</p>
<p><b>Separator: Styrofoam</b></p>	<p>With ultra-fine styrofoam separator, the batteries have high oxygen recombination capability up to 99,999%, low internal resistance, high rate discharge performance</p>
<p><b>Container: ABS</b></p>	<p>Using high strength ABS material, the batteries are characterized with anti-corrosion, anti-impact, high strength, good-looking appearance, free of potential leakage and deformation risk</p>
<p><b>Terminals: Copper</b></p>	<p>Copper core with large diameter and high conductivity, it is of good corrosion resistance and strong current carrying capacity</p>
<p><b>Electrolyte: Sulfuric Acid and Silicon GEL</b></p>	<p>High density nanoscale fumed silicon GEL electrolyte improved battery cycle life</p>
<p><b>Terminal Seal: Epoxy</b></p>	<p>Structure and high-temperature curing epoxy adhesive to ensure batteries safety and reliability</p>
<p><b>Safety Valve: ABS and Rubber</b></p>	<p>Using labyrinth structure, double filter acid explosion-proof valve structure, accurately control the open/close valve pressure and acid mist filtering function.</p>

**SPECIFICATIONS**

Battery Type	VRLA GEL Battery
Nominal Voltage	2V
Nominal Capacity	500Ah (10hr, to 1.8V, 25 <sup>0</sup> C)
Cell number	1
Dimension (L*W*H)	240 (mm) ×171 (mm) ×333 (mm)
Designed Life (Float charge, 25 <sup>0</sup> C)	20 Years
The reference weight	29.5 Kg
Operation Ambient Temperature and Humidity	-45 <sup>0</sup> C~60 <sup>0</sup> C, 5%~95%
Optimal Ambient Temperature and Humidity	15 <sup>0</sup> C~25 <sup>0</sup> C, 5%~95%
Self-discharge Capacity	Self-discharge rate <2% per month (25 <sup>0</sup> C)
Terminal	Copper Φ20(mm), 2xM8 Female
Short circuit current	3800A
Max. discharge current (5s)	1800A
Internal Resistance	≤ 0.4mΩ ( 25 <sup>0</sup> C)
Cycle life expected at 25 <sup>0</sup> C	> 4280 times at 30% DoD > 2500 times at 50% DoD > 1770 times at 80% DoD > 1260 times at 100% DoD
Product standards	GB/T19638-2014, YD/T1360-2005, ISO9001:2015, IEC60896-2:2004, CE2004/108/EC, DIN43534, IEC61427, RoHS, Eurobat Guide, ISO14001:2004, BS6290 part 4, UL94-1985, OHS18001:2007, EMC EN61000-3-2:2006+A2:2009, EN61000-3-3:2013, DIN40742, JISC8704-2-2, ISO45001:2018, UL94-V0
Applications range	Communications, Communication station, Power station, Power transmission and transformation system, Computer system protection, Emergency power supply, UPS, Wireless stations and Standby power automatic control, Solar, etc

**Constant Discharge Ratings-Amperes/Cell at 25<sup>0</sup>C**

F.V/Time	5min	10min	15min	20min	30min	1h	2h	3h	5h	10h
1.6V/cell	1060.5	818.2	676.7	462.0	353.5	292.8	173.5	127.7	86.7	51.3
1.65V/cell	964.5	750.0	626.2	436.8	337.8	287.8	172.7	127.0	86.2	51.0
1.70V/cell	881.2	689.3	580.8	411.5	323.3	280.3	171.8	126.3	85.8	50.8
1.75V/cell	770.2	633.8	545.3	399.0	318.7	277.8	171.0	125.7	85.3	50.5
1.80V/cell	676.7	585.8	515.2	383.8	305.7	265.2	170.0	125.2	85.0	50.0

**Constant Power Discharge Ratings-Watts/Cell at 25<sup>0</sup>C**

F.V/Time	5min	10min	15min	20min	30min	1h	2h	3h	5h	10h
1.60V/cell	1541.0	1323.6	1117.1	777.0	614.9	512.5	328.6	244.5	165.6	99.5
1.65V/cell	1415.1	1203.0	1021.9	721.6	580.0	494.9	318.6	238.0	162.6	97.6
1.70V/cell	1249.1	1102.5	951.4	674.0	551.4	479.9	308.6	233.0	160.4	97.0
1.75V/cell	1120.9	1019.5	886.0	631.4	520.4	457.4	301.1	228.1	157.6	95.6
1.80V/cell	1030.1	933.9	813.0	591.1	478.5	437.1	293.5	223.6	154.9	94.6

**Discharge Current and Recommend Discharge Final Voltage Setting**

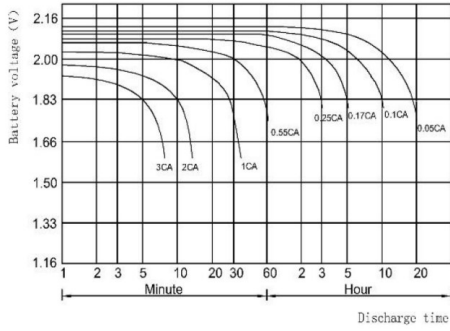
Discharge Current	0.1C	0.17C	0.25C	0.55C	3C
Final Voltage (V)	1.8	1.8	1.8	1.75	1.6

**Charge method**

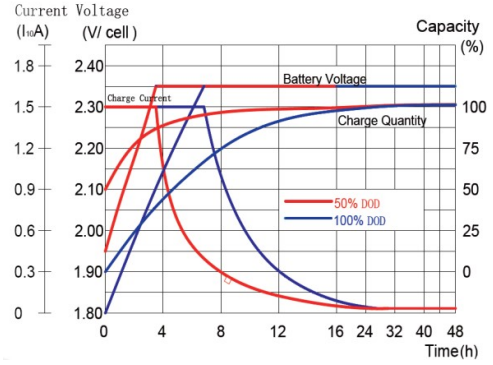
Type	Voltage (V)	Compensation Coefficient	Charge Current (A)
Boost Charge	2.35 ~ 2.45	-4mV/°C	0.1C ~ 0.25C (50A~125A)
Float Charge	2.20 ~ 2.30	-3mV/°C	

**Characteristic curves**

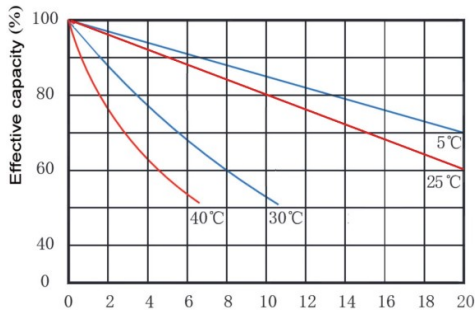
**1. Discharging Curve**



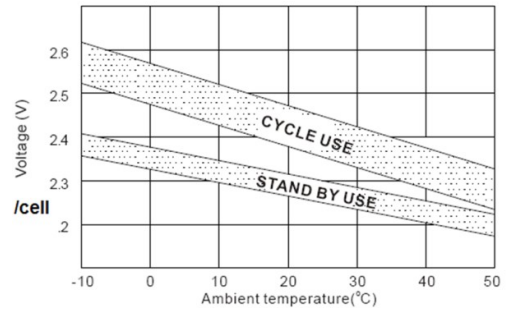
**2. Charging Curve**



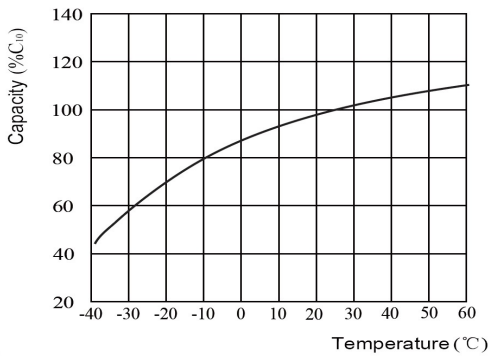
**3. Self-discharge Characteristics**



**4. Relationship of Charging Voltage and Temperature**



**5. Relationship of Capacity and Temperature**



**6. Effect of Temperature on Long Term Float Life**

