

The OPzS series is a traditional tubular plate flooded battery which offers 20+ years design life According to the standard IEC60896-11. With a new design and technical improvement, it offers maximum efficiency and reliability for the widest variety of applications. This series is highly suited for all standby power applications that require the highest levels of reliability and security.

<b>2V</b> Voltage	<b>150Ah</b> Capacity	<b>Tubular</b> Flooded	<b>20+years</b> Design life
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- Complied standards**
- IEC 60896-11
  - DIN40736
  - IEC61427
  - Eurobat guide, long life

**Features and Benefits**

- Tubular positive plate with prolonged cycle life
- Wide operating temperature range from -40°C to 60°C
- Tubular positive plate with prolonged cycle life
- Lead calcium die cast grid with improved corrosion resistance capability
- Dry charged package and delivery ensure longer shelf life
- Explosive-proof with special designed vented plug
- Excellent deep discharge recovery capability

**Construction**

- Positive plate Tubular plate with die cast Pb-Ca alloy grid
- Negative plate - Balanced Pb-Ca grid for improved recombination

**Efficiency**

- Separator - Leaf shape rubber separator
- Electrolyte - Dilute high purity sulphuric acid of 1.240 specific Gravity
- Battery container is SAN, cover is ABS
- Pillar seal - 100% factory tested, proven two layers epoxy resin Seal
- Relief valve - Complete with integrated flame arrestor

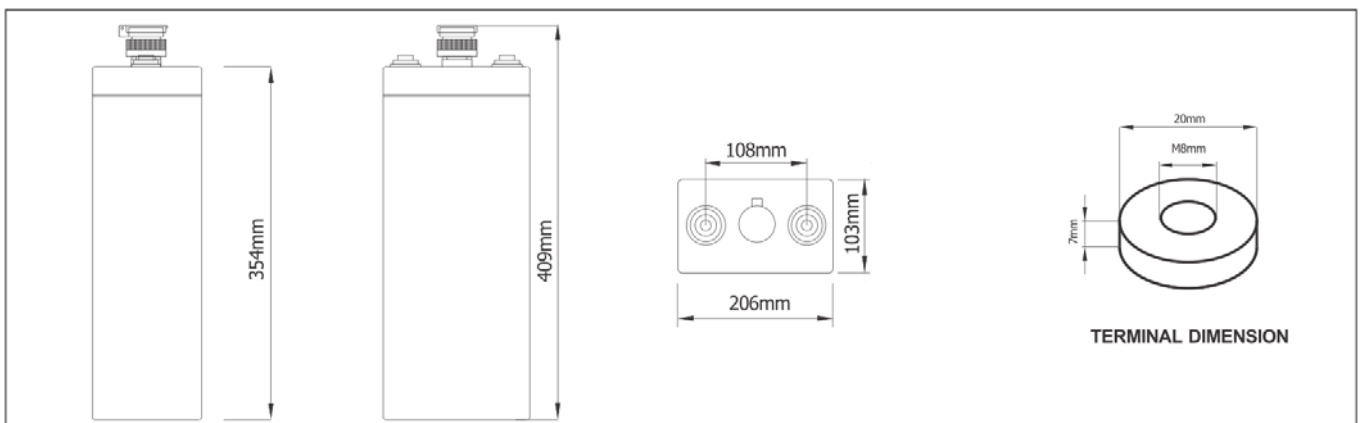
**Applications**

- Telecom
- Electric Utilities
- Railroad Utilities
- Outdoor applications
- Power Utility
- UPS systems
- Photovoltaic Systems
- Medical Equipments
- Renewable Energy Systems

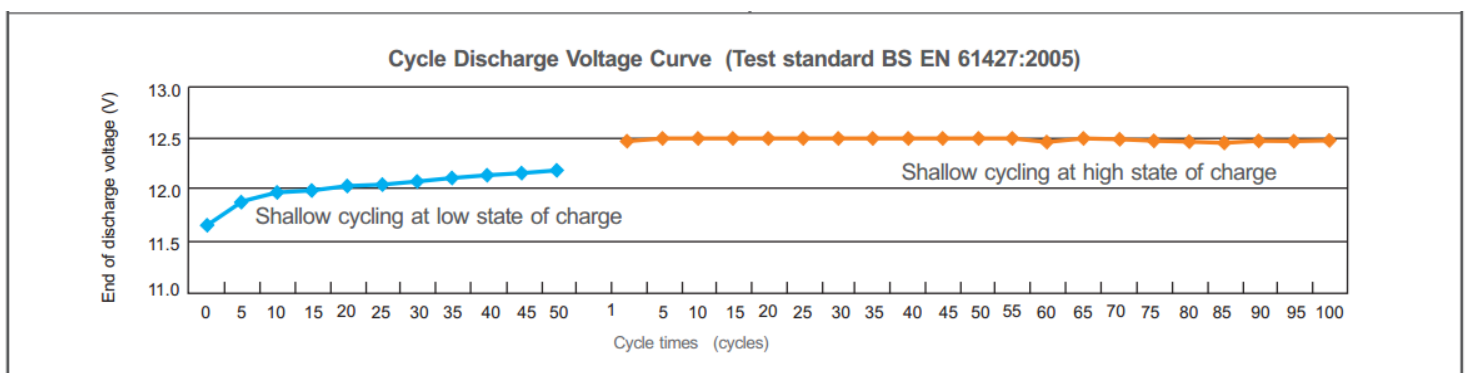
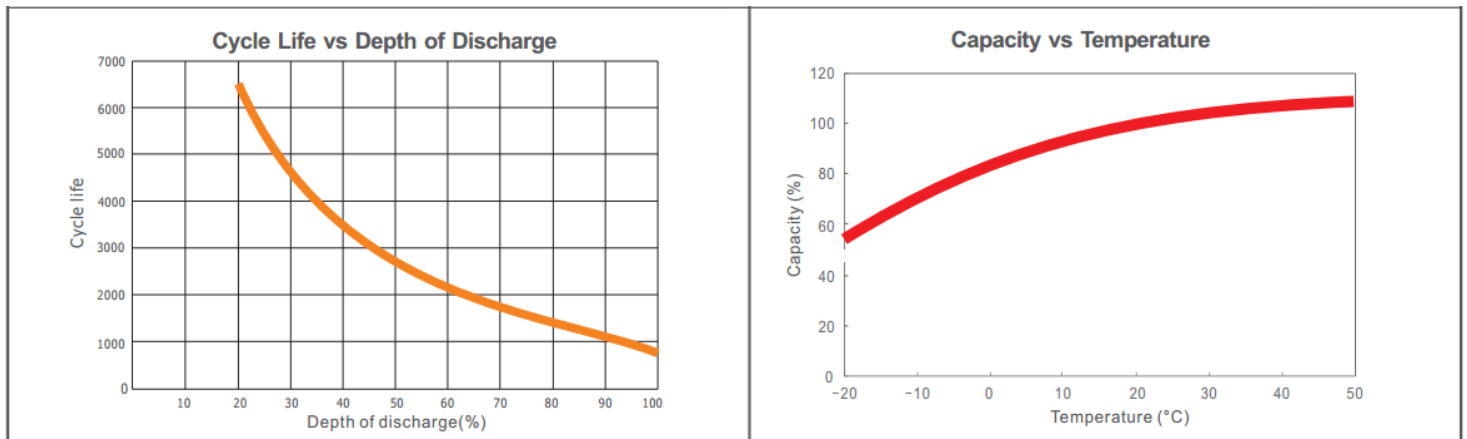
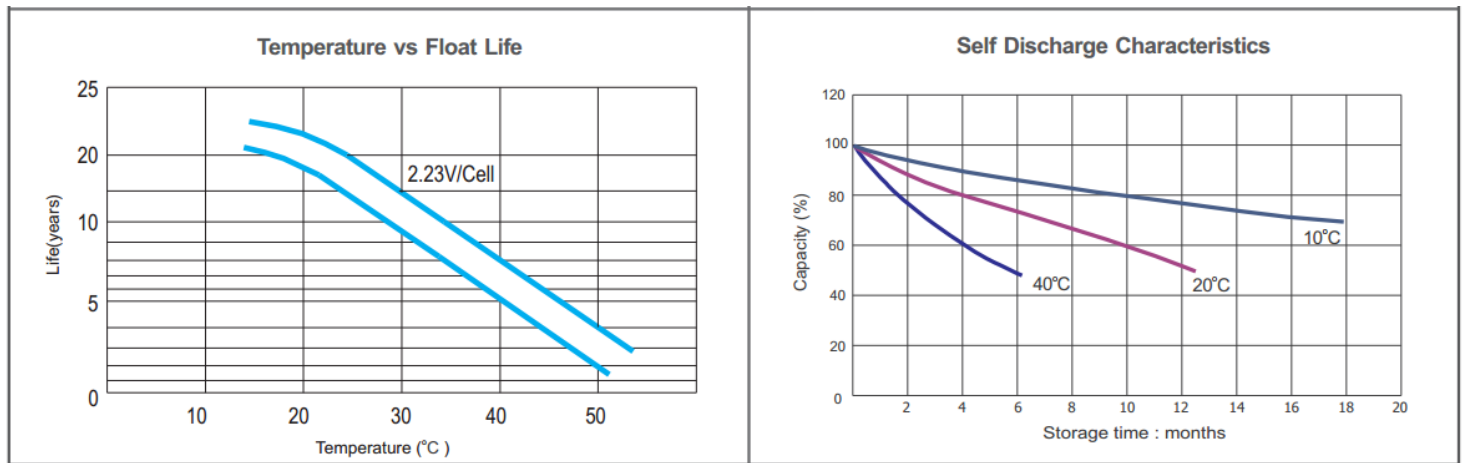
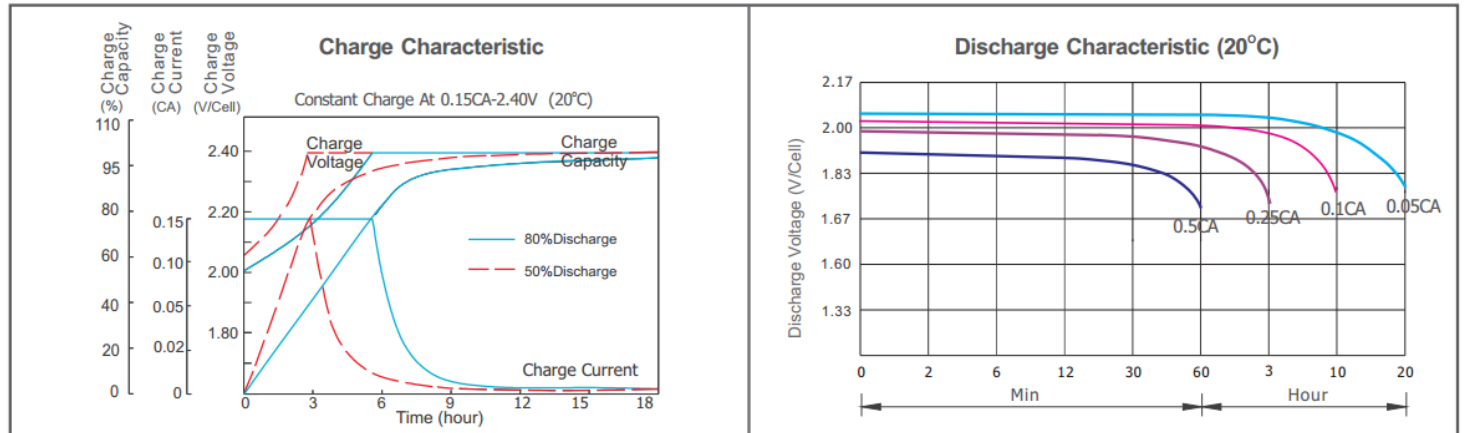
**Technical Specifications**

Nominal Voltage.....	2V(1 cells per unit)
Nominal Capacity(20°C).....	200Ah
Dimension(mm).....	L103 x W206 x H354 x TH409mm
Approx. Weight	
Without electrolyte.....	10.5kg (23.2lbs)
With electrolyte.....	14.5kg (32.0lbs)
Electrolyte(Diluted sulphuric acid of 1.240g/cm³ (20°C)).....	4.0kg
Terminal Type.....	Female Copper Insert M8(torque:10~12N.m)
Internal Resistance.....	0.85mΩ(fully Charged @20°C)
Max.Charge Current.....	30A
Max.Discharge Current (5s).....	1000A
Short Circuit Current.....	2400A
Ambient Temperature	
Discharge.....	-25-65°C
Charge.....	-20-65°C
Storage.....	-15-40°C
Capacity Affected by Temp.(10 hour)	
105% @40°C	
85% @0°C	
60% @-20°C	
Self-Discharge @20°C.....	Approx.4% per month
Charge Voltage @20~25°C	
Float charge voltage.....	2.21V-2.25V
Equalize Charge Voltage.....	2.35V-2.40V

**Dimensions**



Performance Characteristics



## Battery Discharge

Discharge Constant Current per Cell (Amperes at 25° C)

F.V./Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8 h	10 h	20h
1.90V	59.9	54.5	49.5	48.5	44.9	35.1	28.4	23.9	20.9	15.5	13.7	7.51
1.85V	64.7	62.0	60.9	60.6	51.0	38.9	31.4	26.4	24.5	16.4	14.3	7.84
1.80V	103	99.0	96.9	83.4	65.6	45.8	38.4	30.0	26.0	18.5	15.0	8.25
1.75V	124	119	115	95.4	73.1	49.5	39.8	31.2	26.7	18.8	15.5	8.66

Discharge Constant Power per Cell (Watts at 25° C)

F.V./Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8 h	10 h	20h
1.90V	116	106	94.8	91.7	86.3	75.0	61.7	52.1	44.7	32.6	28.2	15.1
1.85V	125	120	117	114	98.1	84.8	64.5	57.9	49.7	35.6	30.6	16.5
1.80V	200	192	165	152	129	103	82.1	67.1	56.7	40.1	33.0	17.1
1.75V	240	231	169	153	130	107	86.9	71.0	59.3	40.7	34.4	17.5

Long time discharge capacity for solar & wind applications

Capacity	C <sub>24</sub> (Ah)	C <sub>48</sub> (Ah)	C <sub>72</sub> (Ah)	C <sub>100</sub> (Ah)	C <sub>120</sub> (Ah)	C <sub>240</sub> (Ah)
OPzS2-150	170	186	195	203	206	210
Final Voltage	1.85 V					

Solar & wind applications parameters settings

Over voltage disconnect:	2.47±0.01V/cell @ 20~25°C
Regulation/equalize voltage:	2.40±0.01V/cell @ 20~25°C
Array reconnection voltage:	2.23±0.005V/cell @ 20~25°C
Float voltage setting:	2.25±0.005V/cell @ 20~25°C
Low voltage alarm voltage:	1.95±0.005V/cell @ 20~25°C
Low voltage disconnect:	1.90±0.005V/cell @ 20~25°C
Load reconnect voltage:	2.09±0.01V/cell @ 20~25°C
Temp. compensate coefficient:	-4mV/cell/°C