

OPzV series adopts an immobilized gel and tubular positive plate technology. It offers high reliability and Stable performance, By using diecasted positive grid and patented active material formula, It exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom out door applications, renewable energy systems and other harsh environment applications.

2V Voltage	500Ah Capacity	Tubular Gel	20+ years Design life
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- Complied standards**
- IEC 60896-21/22
 - DIN40742
 - IEC61427
 - YD/T1360
 - Eurobat guide, long life
 - BS6290 part 4

Features and Benefits

- Excellent deep cycling performance;
- Wide operating temperature range from -40°C to 60°C
- Tubular positive plate with prolonged cycle life
- Fumed Silica gel electrolyte
- Lead Calcium die cast grid with improved corrosion resistance capability
- Low self-discharge rate and long shelf life (1 year at 25°C)
- Excellent deep discharge recovery capability

Construction

- Positive plate - Tubular plate with die cast Pb-Sb alloy grid
- Negative plate - Balanced Pb-Ca grid for improved recombination efficiency
- Electrolyte - Dilute high purity sulphuric acid with fumed Silica gel
- Battery container and cover - ABS
- Pillar seal - 100% factory tested, proven two layers epoxy resin seal
- Relief valve - Complete with integrated flame arrestor

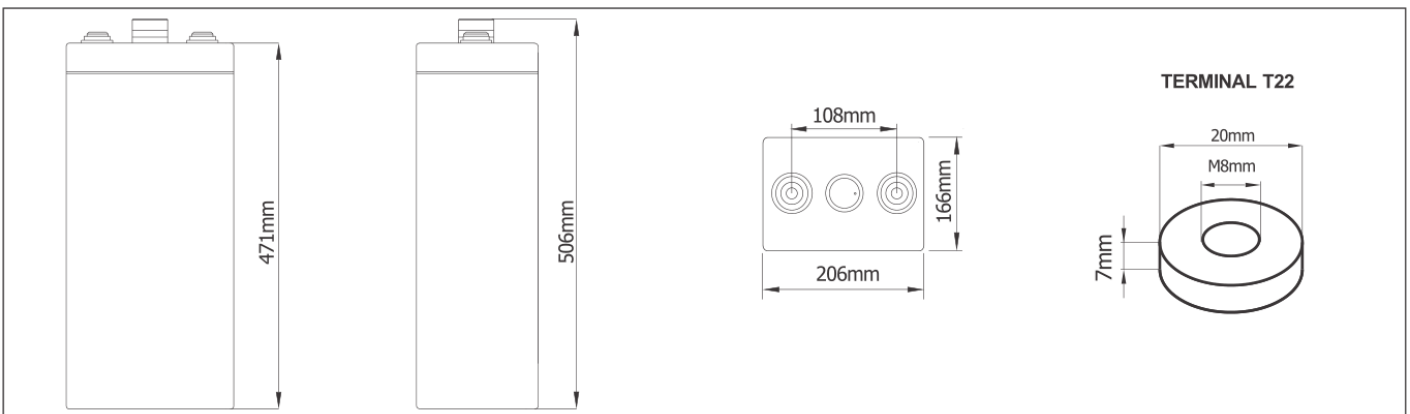
Applications

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

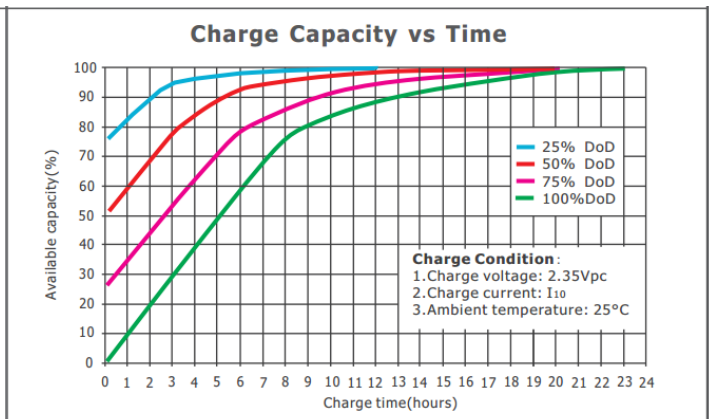
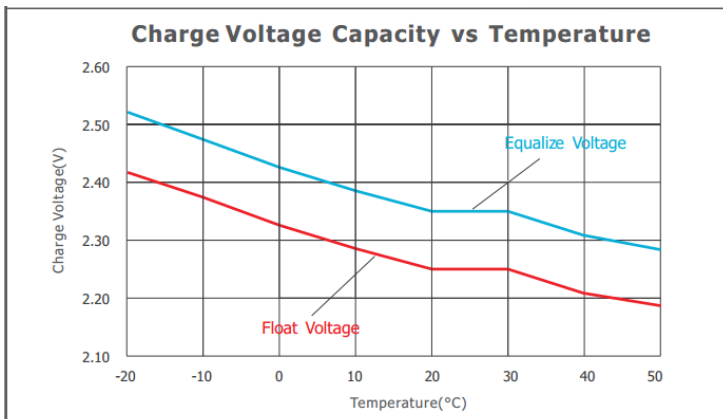
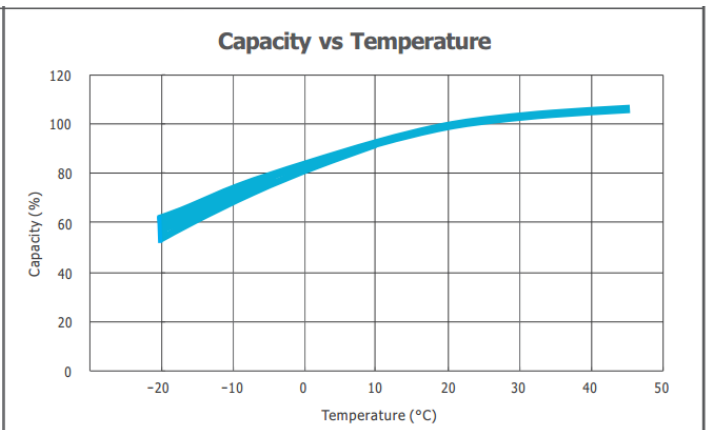
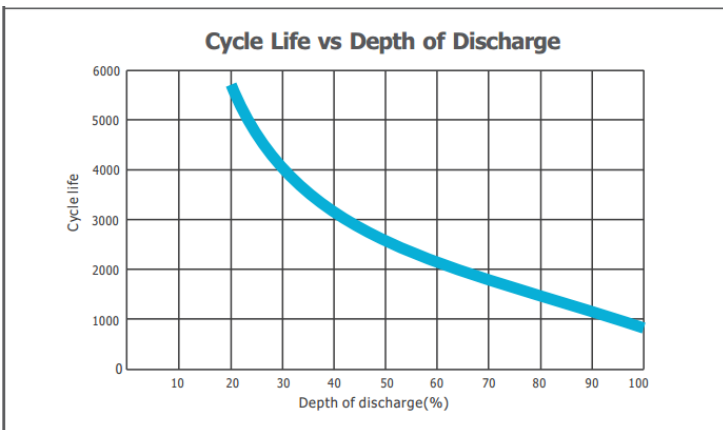
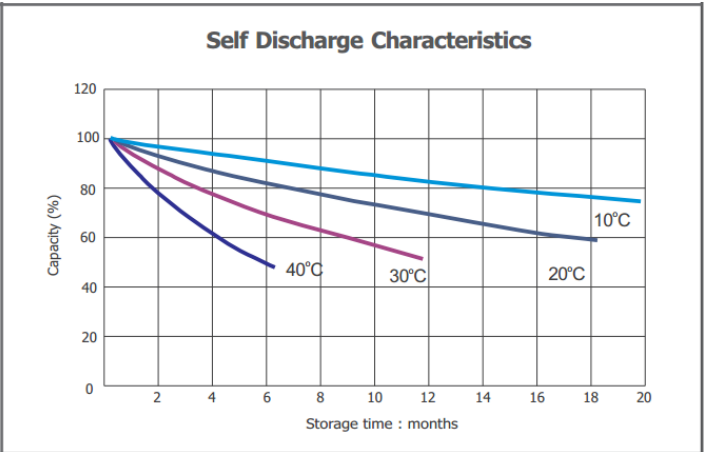
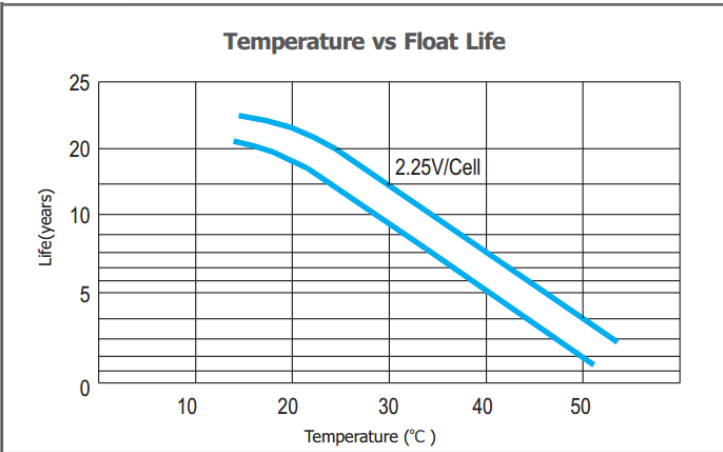
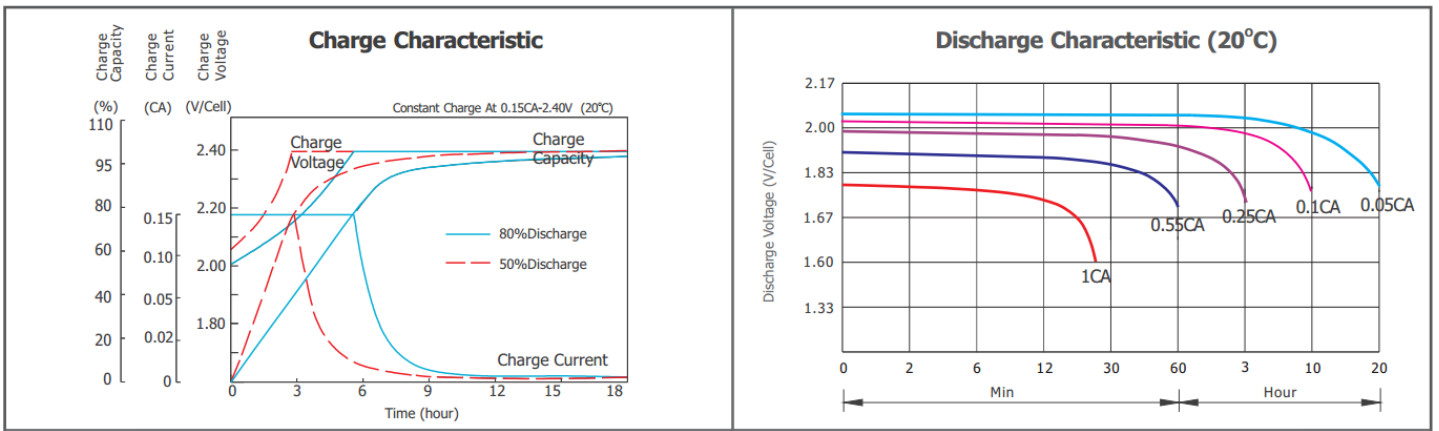
Technical Specifications

Nominal Voltage.....	2V(1 cells per unit)
Nominal Capacity(20°C).....	500Ah
Dimension(mm).....	L166 x W206 x H471x TH506mm
Approx. Weight	37.0kg (81.57lbs)
Terminal Type.....	Female Copper Insert M8(torque:10~12N.m)
Internal Resistance.....	0.75mΩ(fully Charged @20°C)
Max.Charge Current.....	100A
Max.Discharge Current (5s).....	2000A
Short Circuit Current.....	2600A
Ambient Temperature	
Discharge.....	-40-65°C
Charge.....	-30-65°C
Storage.....	-25-45°C
Capacity Affected by Temp. (10 hour)	
105% @40°C	
85% @0°C	
60% @-20°C	
Self-Discharge @20°C.....	Approx. 2% per month
Charge Voltage @20~25°C	
Float charge voltage.....	2.25V-2.29V
Equalize Charge Voltage.....	2.35V-2.40V

Dimensions



Performance Characteristics



Battery Discharge

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

F.V/Time	10 min	15 min	30 min	1 h	2 h	3 h	5 h	8 h	10 h
1.90V	180	175	163	137	117	98.0	72.6	51.9	43.8
1.87V	245	229	203	160	131	108	78.7	55.1	46.3
1.85V	282	258	222	175	144	116	83.8	57.7	48.1
1.83V	328	287	240	193	154	123	85.8	59.5	49.0
1.80V	367	333	269	212	162	129	87.5	60.3	50.0
1.75V	390	366	315	231	169	132	89.2	61.3	50.5
1.70V	424	402	346	244	176	135	90.7	62.2	51.5
1.65V	495	452	377	260	181	137	92.6	63.2	52.4
1.60V	539	497	400	268	185	140	94.6	64.4	53.4

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

F.V/Time	10 min	15 min	30 min	1 h	2 h	3 h	5 h	8 h	10 h
1.90V	347	338	318	269	231	195	145	104	88.4
1.87V	464	435	388	309	255	213	156	110	92.7
1.85V	526	484	420	334	278	226	165	114	95.6
1.83V	606	533	449	364	294	237	167	115	96.4
1.80V	669	609	496	396	306	245	168	116	97.4
1.75V	697	659	573	425	316	248	169	117	97.2
1.70V	748	713	621	443	324	250	170	118	98.3
1.65V	859	790	667	465	329	252	172	119	99.1
1.60V	916	850	693	471	331	253	174	120	100

Final Voltage Settings Recommended According To the Discharge Current

Discharge Current I (A)	$I < 0.05C$	$0.05C \leq I < 0.08C$	$0.08C \leq I < 0.2C$	$0.2C \leq I < 0.6C$	$0.6C \leq I < 1.0C$	$1C \leq I \leq 2C$
Final of Voltage	≥ 1.90 Vpc	≥ 1.85 Vpc	≥ 1.80 Vpc	≥ 1.75 Vpc	≥ 1.7 Vpc	≥ 1.6 Vpc

Long time discharge capacity for solar & wind applications

Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-500	545	565	610	630	636	640	652
Final Voltage	1.80V	1.85V					

Solar & wind applications parameters settings

Over voltage disconnect:	2.45±0.01V/cell @ 20~25°C
Regulation/equalize voltage:	2.40±0.01V/cell @ 20~25°C
Array reconnection voltage:	2.25±0.005V/cell @ 20~25°C
Float voltage setting:	2.27±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:	-5mV/cell/°C