



BATTERIES

VRLA / GELL
OPzV(2V 1000Ah)

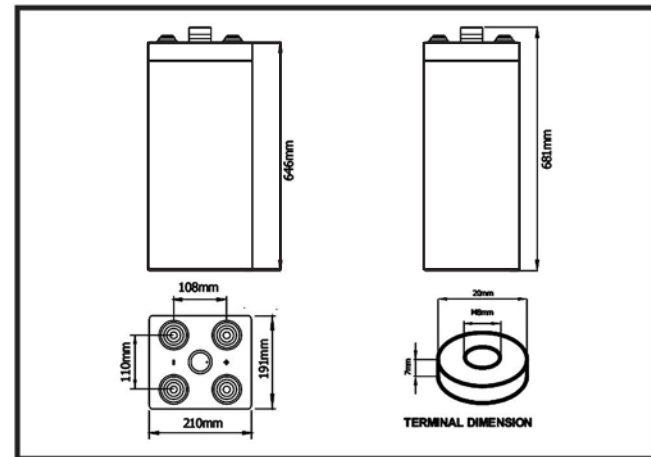
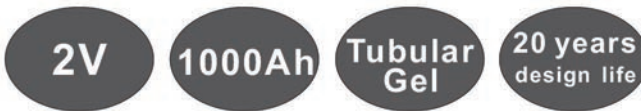
 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

The 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 outdoor applications, renewable energy systems and other harsh environment applications.



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	1000 Ah @ C10 (to 1.80Vpc)
Demensions	L233mm×W210mm×H681mm
Approx. Weight	73kg (161.2lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.34mOhm (fully charged @ 20°C)
Max. Charge Current	200A
Max. Discharge Current (5S)	4000A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	358	348	325	273	234	196	145	104	86.6
1.87V	487	455	403	319	261	216	157	110	91.6
1.85V	561	514	442	348	288	232	168	115	95.2
1.83V	653	572	478	384	308	245	172	119	97.0
1.80V	731	663	535	423	325	257	175	121	100
1.75V	775	728	627	460	339	265	178	123	102
1.70V	843	800	689	486	352	270	181	124	104
1.65V	985	900	751	517	362	274	185	126	106
1.60V	1072	988	796	533	369	279	189	129	108

Constant Power Discharge Characteristics: W/cell (20°C)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	691	673	633	536	462	390	291	209	173
1.87V	923	865	772	615	511	425	313	220	182
1.85V	1047	963	835	664	556	453	330	229	187
1.83V	1206	1061	893	724	588	473	333	232	189
1.80V	1330	1212	986	788	613	491	337	234	191
1.75V	1388	1310	1141	846	631	497	339	235	194
1.70V	1489	1419	1236	882	648	501	341	237	197
1.65V	1708	1573	1326	925	658	504	344	238	198
1.60V	1823	1691	1380	938	662	505	347	240	200

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

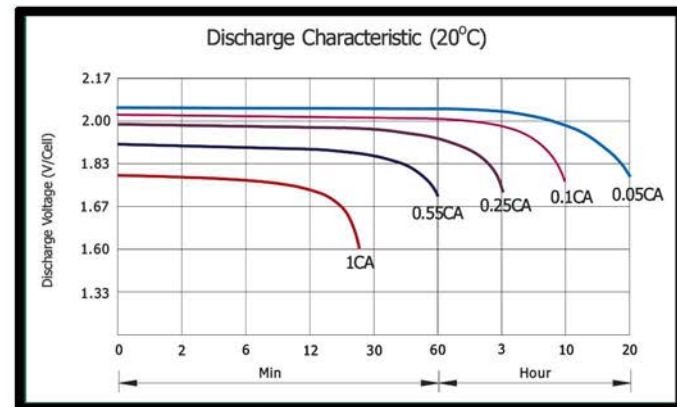
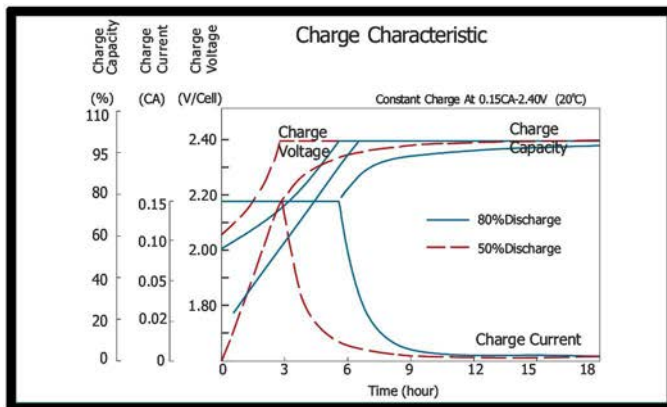
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-1000	1080	1100	1150	1200	1250	1270	1300
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

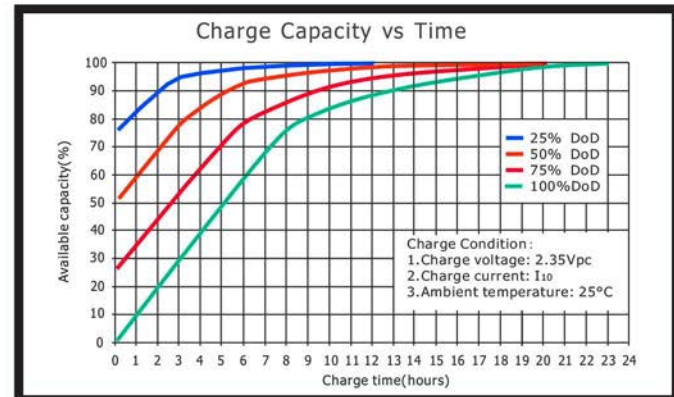
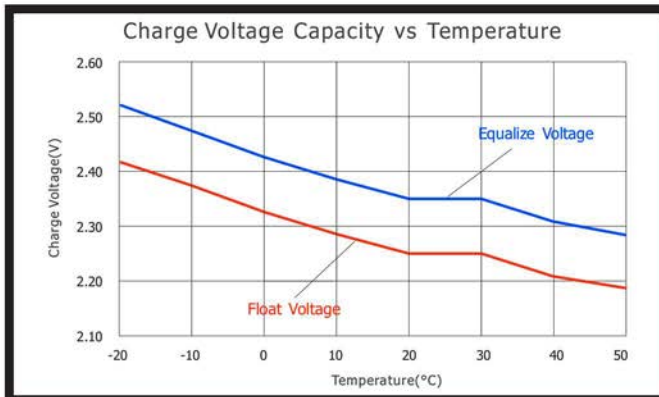
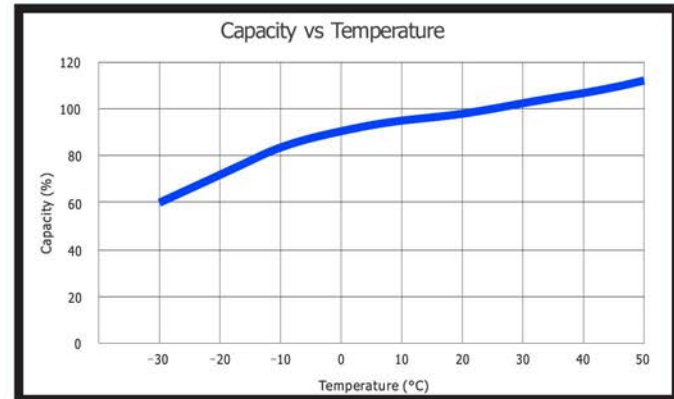
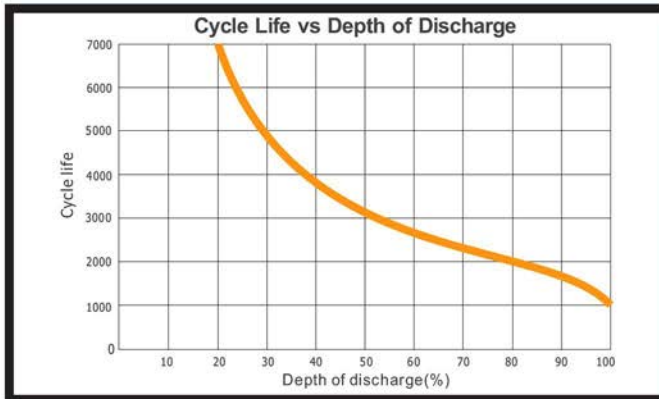
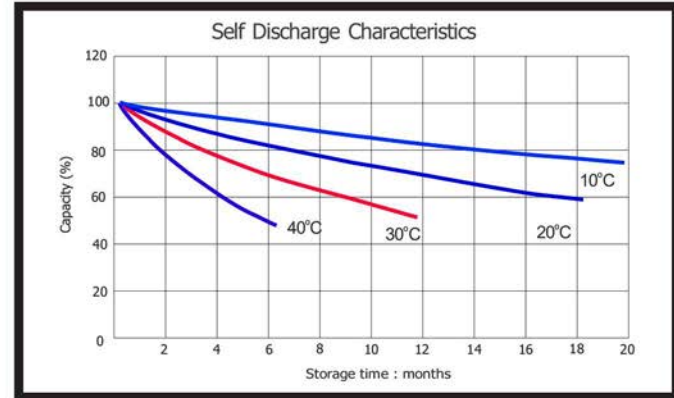
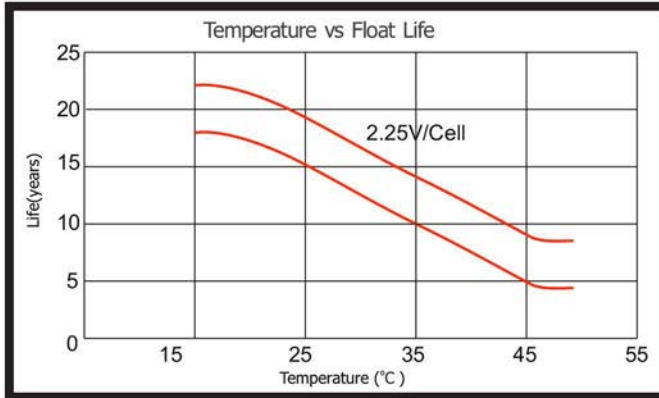
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 1200Ah)

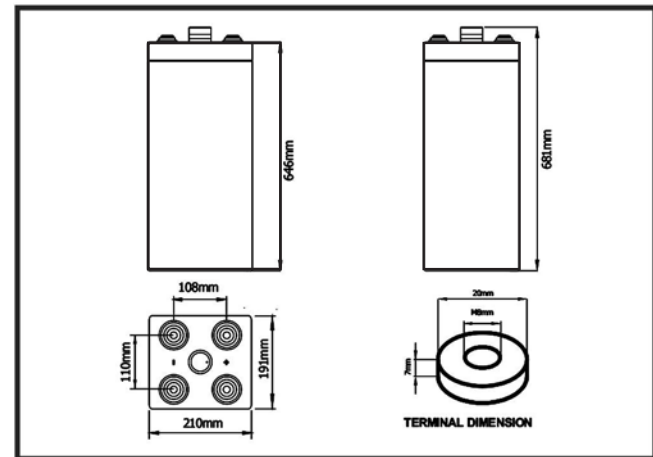
 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

The 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 outdoor applications, renewable energy systems and other harsh environment applications.



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	1200 Ah @ C10 (to 1.80Vpc)
Demensions	L275mm×W210mm×H681mm
Approx. Weight	88kg (194lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.28mOhm (fully charged @ 20°C)
Max. Charge Current	240A
Max. Discharge Current (5S)	4800A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10 min	15 min	30 min	1h	2h	3h	5h	8h	10h
1.90V	429	417	390	328	280	235	174	125	103
1.87V	585	546	484	382	314	259	189	132	109
1.85V	673	616	530	417	346	279	201	138	113
1.83V	784	686	573	460	369	294	206	143	115
1.80V	877	796	642	507	389	309	210	145	120
1.75V	930	874	753	552	407	318	214	147	121
1.70V	1012	959	827	583	422	323	218	149	123
1.65V	1182	1080	901	620	434	329	222	152	126
1.60V	1287	1186	956	640	443	335	227	155	128

Constant Power Discharge Characteristics: W/cell (20°C)

F.V/Time	10 min	15 min	30 min	1h	2h	3h	5h	8h	10h
1.90V	829	808	759	643	554	468	349	251	208
1.87V	1108	1038	927	738	613	510	375	264	218
1.85V	1257	1156	1003	797	668	543	395	274	225
1.83V	1447	1273	1071	869	705	568	400	280	227
1.80V	1597	1455	1184	946	736	589	404	281	229
1.75V	1665	1572	1369	1015	757	596	406	282	233
1.70V	1787	1703	1483	1058	777	601	409	284	236
1.65V	2050	1887	1592	1110	790	605	413	285	238
1.60V	2188	2030	1656	1126	794	606	417	288	240

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

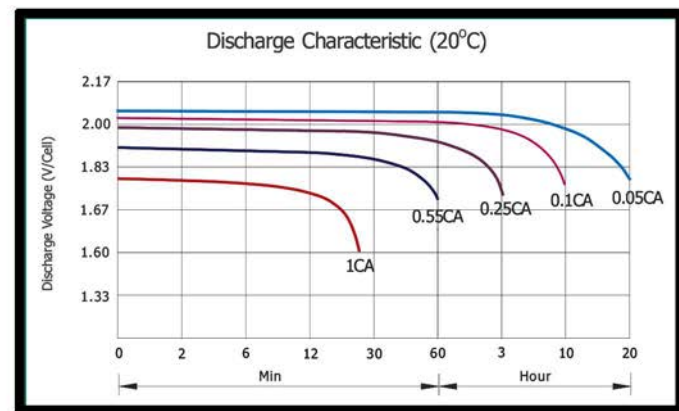
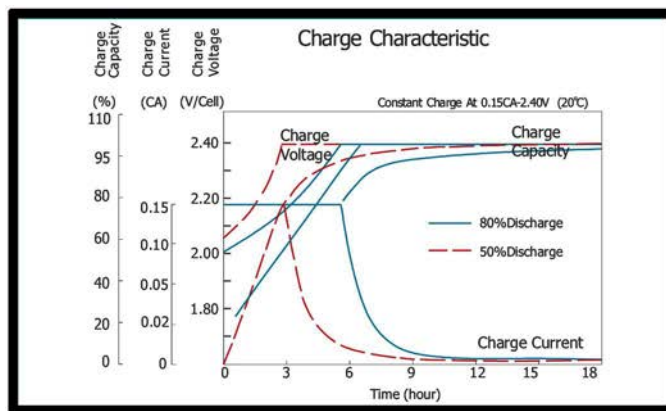
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-1200	1296	1320	1380	1440	1500	1524	1560
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

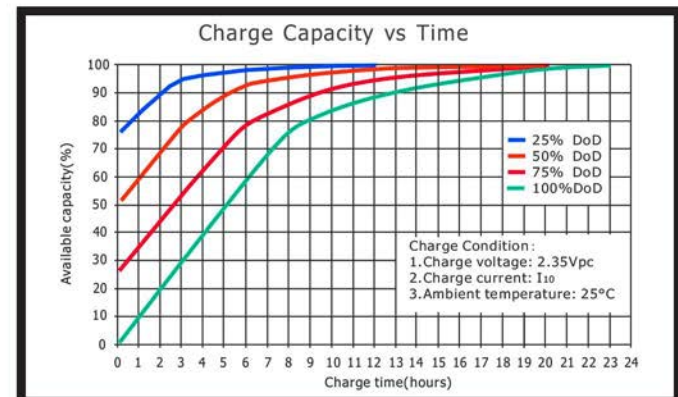
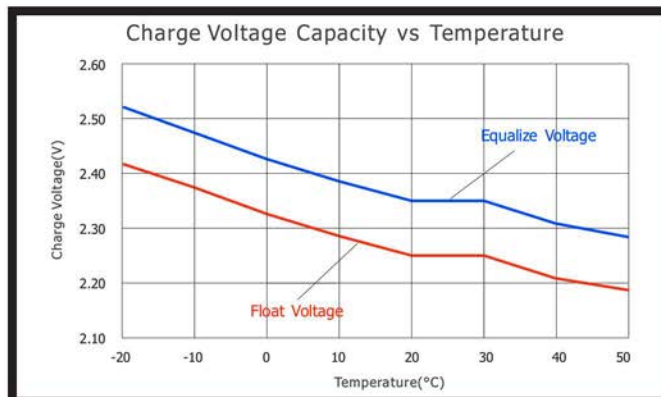
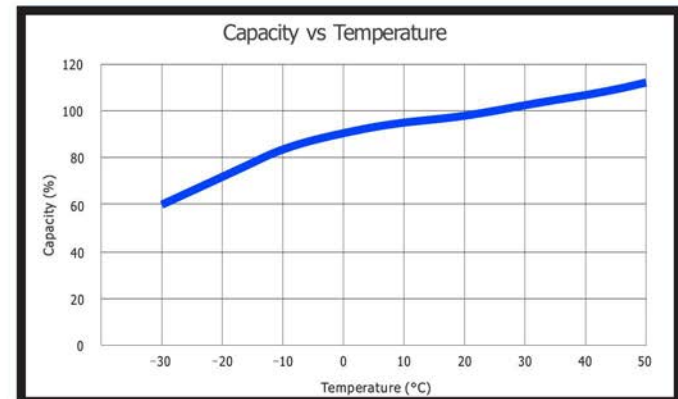
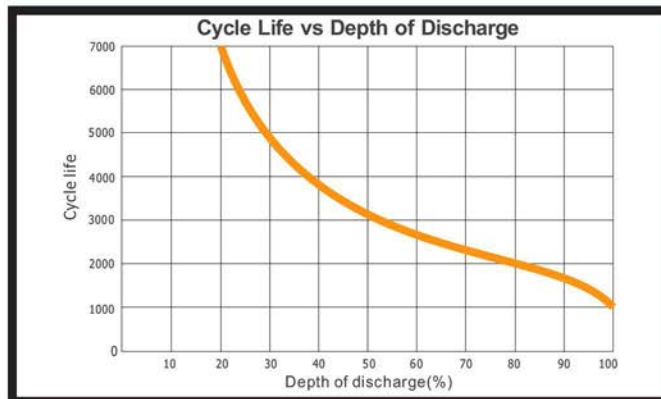
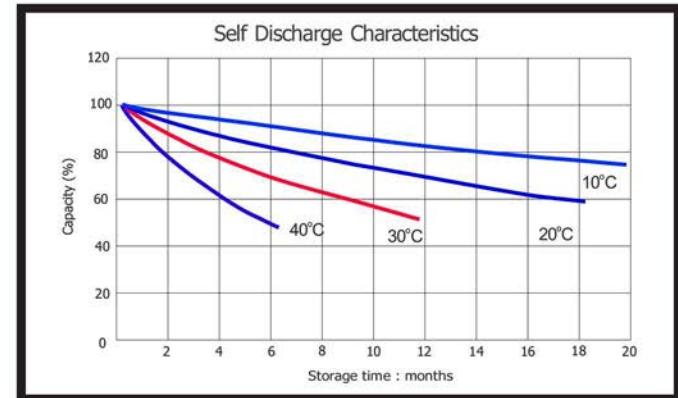
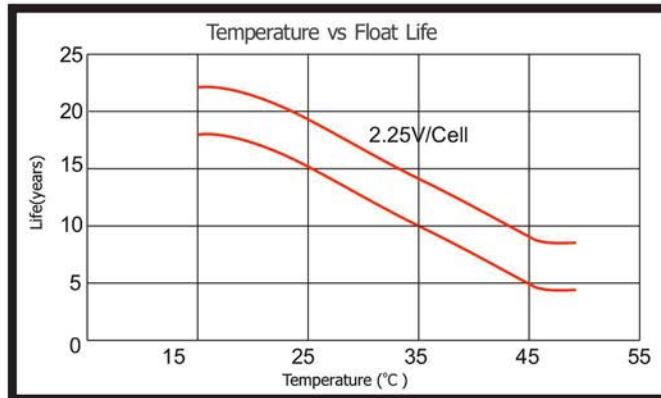
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 1500Ah)

 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

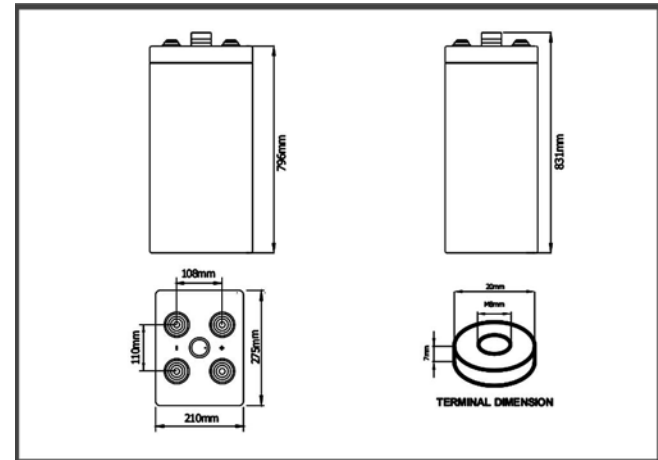
The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using diecasted positive grid and patented active material formula, it exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom outdoor applications, renewable energy systems and other harsh environment applications.

2V

1500Ah

Tubular
Gel

20 years
design life



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	1500Ah @ C10 (to 1.80Vpc)
Demensions	L275mm×W210mm×H831mm
Approx. Weight	110kg (242.3lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.24mOhm (fully charged @ 20°C)
Max. Charge Current	300A
Max. Discharge Current (5S)	5500A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~46C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10m in	15m in	30min	1h	2h	3h	5h	8h	10h
1.90V	534	519	485	407	350	294	218	156	129
1.87V	727	679	601	475	392	324	236	165	136
1.85V	837	766	660	519	432	349	251	173	141
1.83V	975	854	713	572	462	368	257	179	144
1.80V	1091	989	798	631	487	386	262	181	150
1.75V	1157	1086	936	686	508	397	268	184	151
1.70V	1259	1193	1028	725	528	404	272	187	154
1.65V	1470	1343	1120	771	543	412	278	190	157
1.60V	1600	1474	1188	795	554	419	284	193	160

Constant Power Discharge Characteristics: W/cell (20°C)

F.V/Time	10m in	15m in	30min	1h	2h	3h	5h	8h	10h
1.90V	1031	1005	944	799	693	585	436	313	260
1.87V	1378	1291	1152	918	766	638	469	330	272
1.85V	1563	1438	1247	991	834	679	494	343	281
1.83V	1800	1583	1332	1080	882	710	500	350	284
1.80V	1985	1809	1472	1176	919	736	505	351	286
1.75V	2071	1956	1702	1262	947	745	508	353	292
1.70V	2223	2118	1845	1316	971	751	511	355	295
1.65V	2549	2347	1979	1381	987	756	516	357	297
1.60V	2721	2524	2059	1400	993	758	521	359	300

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

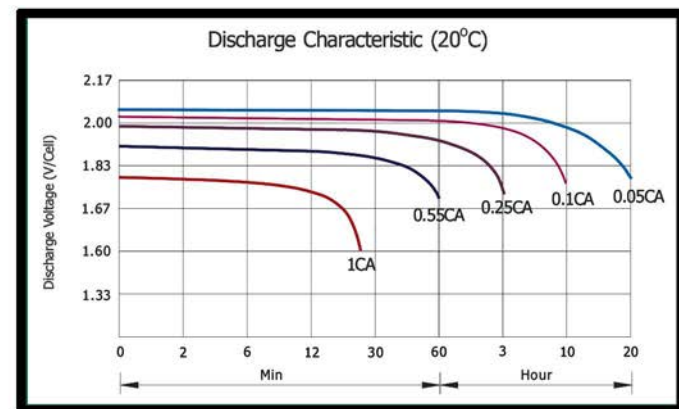
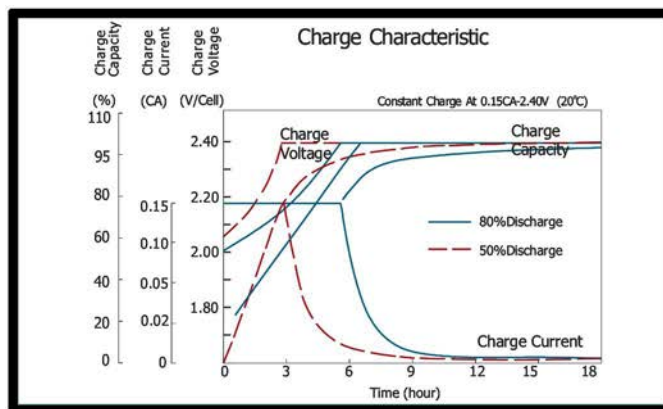
Capacity	C20 (Ah)	C24 (Ah)	C48 (Ah)	C72 (Ah)	C100 (Ah)	C120 (Ah)	C240 (Ah)
OPzV2-1500	1620	1635	1725	1800	1875	1905	1950
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

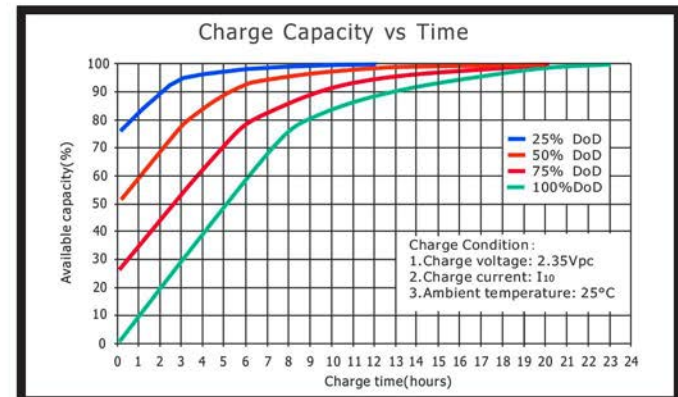
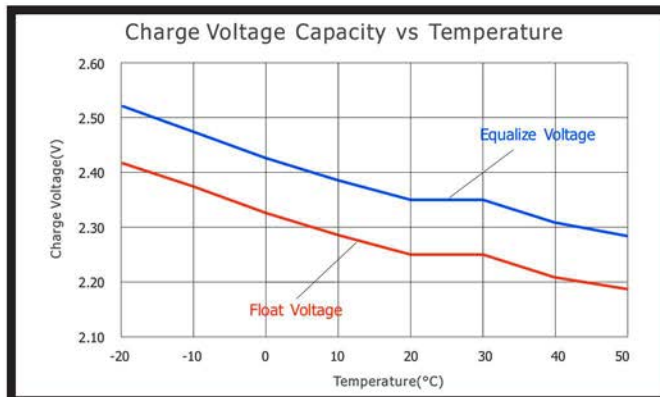
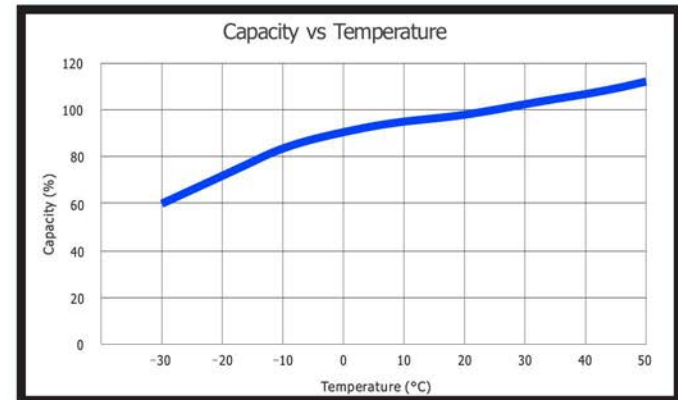
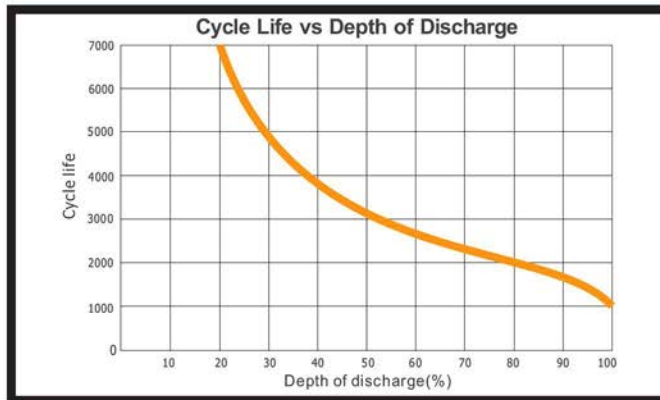
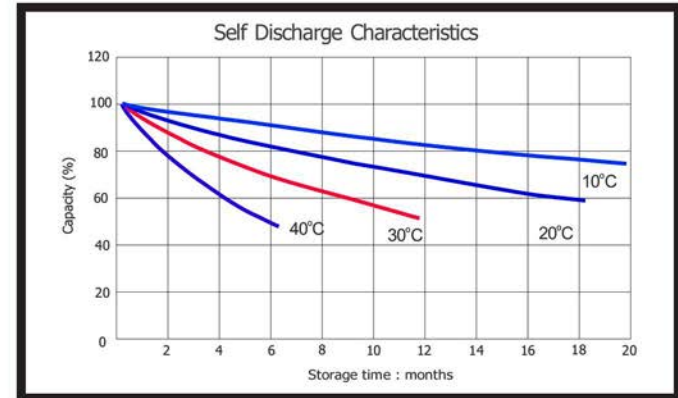
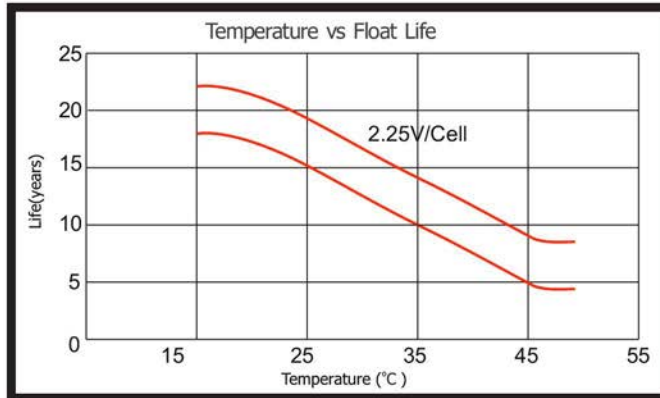
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 2000Ah)

 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerful Batteries

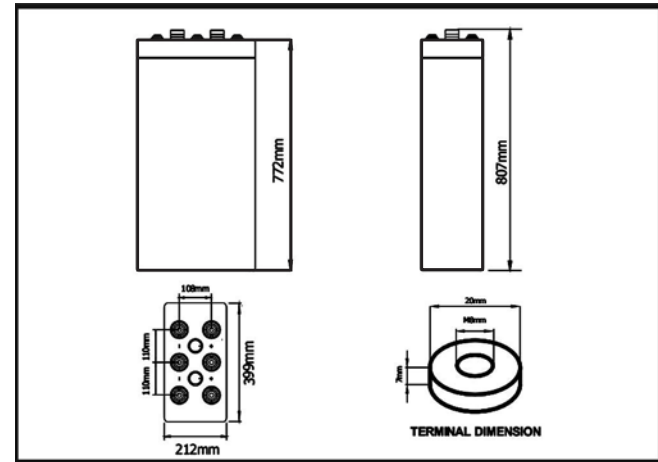
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2V

2000Ah

Tubular
Gel

20 years
design life



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	2000Ah @ C10 (to 1.80Vpc)
Demensions	L399mm×W212mm×H807mm
Approx. Weight	150kg (330.9lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.22mOhm (fully charged @ 20°C)
Max. Charge Current	400A
Max. Discharge Current (5S)	7200A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10 min	15 min	30 min	1 h	2 h	3 h	5 h	8 h	10 h
1.90V	708	688	643	543	467	392	290	208	172
1.87V	965	901	798	634	523	432	315	221	181
1.85V	1110	1016	875	692	576	465	335	231	188
1.83V	1293	1132	946	763	616	491	343	238	192
1.80V	1447	1312	1058	841	649	515	350	241	200
1.75V	1534	1441	1242	915	678	529	357	245	202
1.70V	1669	1583	1364	967	704	539	363	249	206
1.65V	1949	1782	1486	1028	724	549	370	253	210
1.60V	2123	1956	1576	1061	739	559	378	258	214

Constant Power Discharge Characteristics: W/cell (20°C)

F.V/Time	10 min	15 min	30 min	1 h	2 h	3 h	5 h	8 h	10 h
1.90V	1367	1333	1253	1066	924	780	581	418	347
1.87V	1828	1713	1528	1224	1021	851	626	441	363
1.85V	2073	1907	1654	1321	1113	906	659	457	375
1.83V	2387	2099	1767	1440	1176	946	667	467	378
1.80V	2634	2400	1953	1568	1226	982	673	468	382
1.75V	2747	2594	2258	1683	1262	994	677	470	389
1.70V	2948	2810	2447	1755	1295	1001	681	473	393
1.65V	3382	3113	2625	1841	1316	1008	688	475	397
1.60V	3609	3348	2731	1867	1323	1011	694	479	400

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

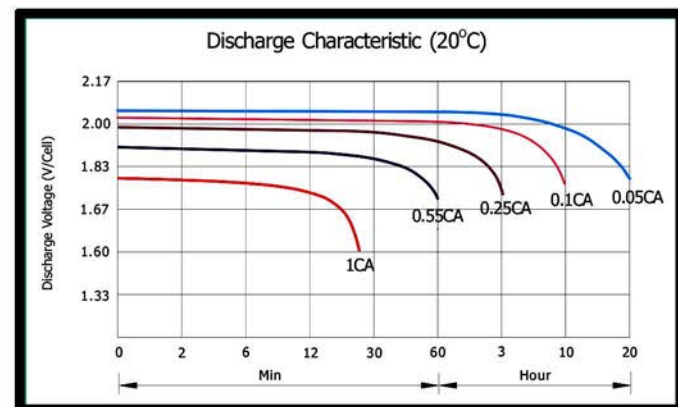
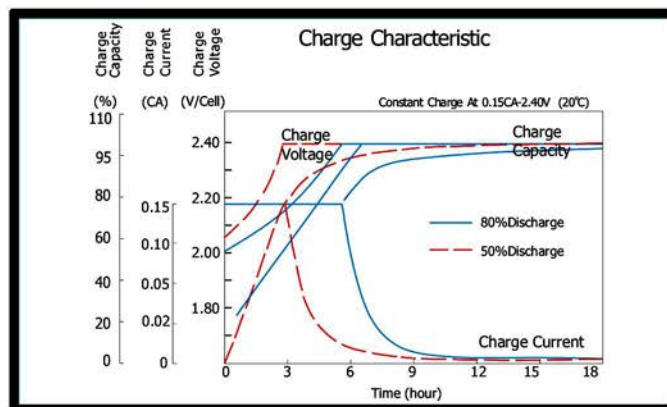
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-2000	2160	2200	2300	2400	2500	2540	2600
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

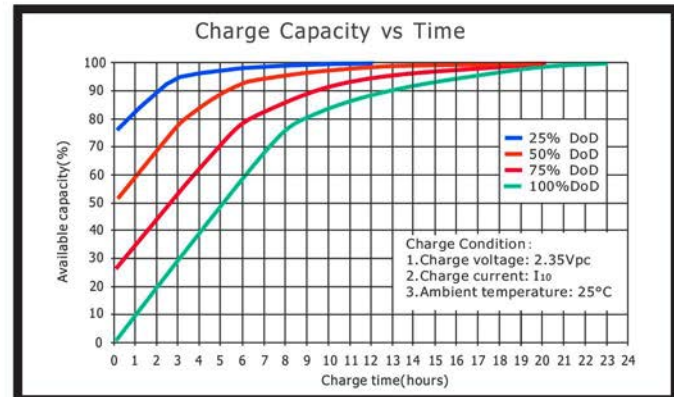
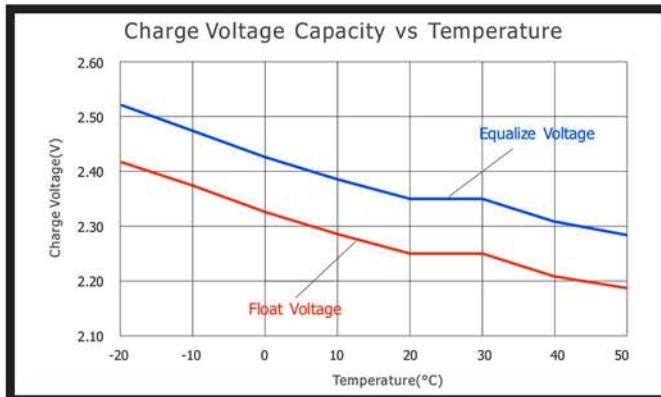
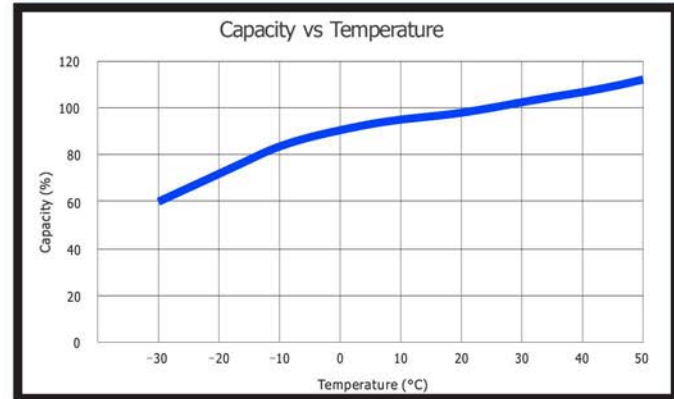
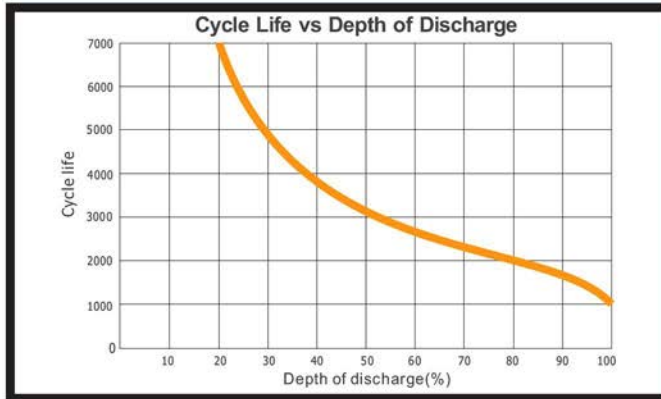
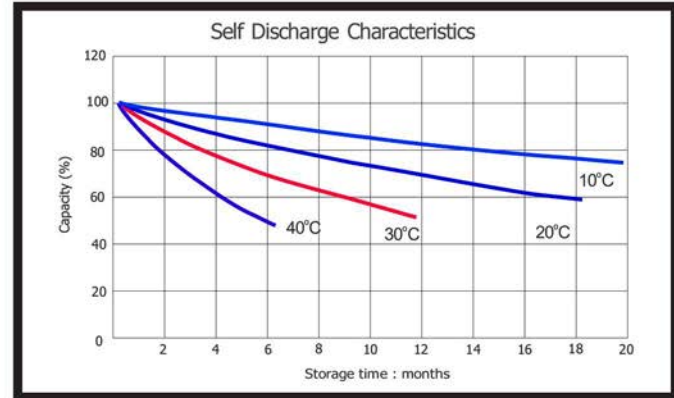
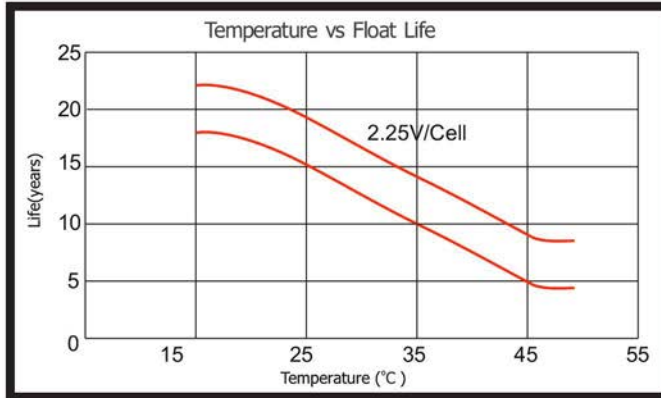
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 2500Ah)

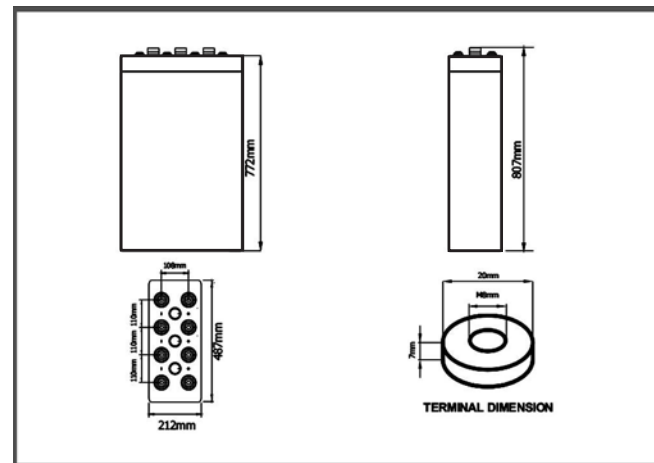
 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

The 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 outdoor applications, renewable energy systems and other harsh environment applications.



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	2500Ah @ C10 (to 1.80Vpc)
Demensions	L487mm×W212mm×H807mm
Approx. Weight	185kg (407.8lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.20mOhm (fully charged @ 20°C)
Max. Charge Current	500A
Max. Discharge Current (5S)	10300A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	885	860	804	679	584	490	363	259	214
1.87V	1206	1126	997	792	653	540	394	276	227
1.85V	1387	1271	1094	865	720	581	419	288	236
1.83V	1616	1415	1182	954	770	613	429	298	240
1.80V	1809	1641	1323	1051	811	644	437	301	250
1.75V	1918	1801	1552	1144	847	662	446	306	252
1.70V	2087	1978	1705	1208	880	674	453	311	257
1.65V	2437	2228	1858	1285	905	686	463	316	262
1.60V	2654	2445	1970	1326	924	698	473	322	267

Constant Power Discharge Characteristics: W/cell (20°C)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	1709	1666	1566	1332	1154	976	726	522	433
1.87V	2285	2141	1911	1530	1277	1063	782	551	454
1.85V	2591	2384	2067	1651	1391	1132	824	572	468
1.83V	2984	2624	2209	1800	1470	1183	833	584	473
1.80V	3292	3000	2441	1960	1532	1227	841	586	477
1.75V	3434	3242	2823	2103	1578	1242	846	588	486
1.70V	3685	3512	3059	2193	1619	1252	852	592	492
1.65V	4227	3892	3282	2301	1646	1259	859	594	496
1.60V	4511	4185	3414	2333	1654	1263	868	599	500

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

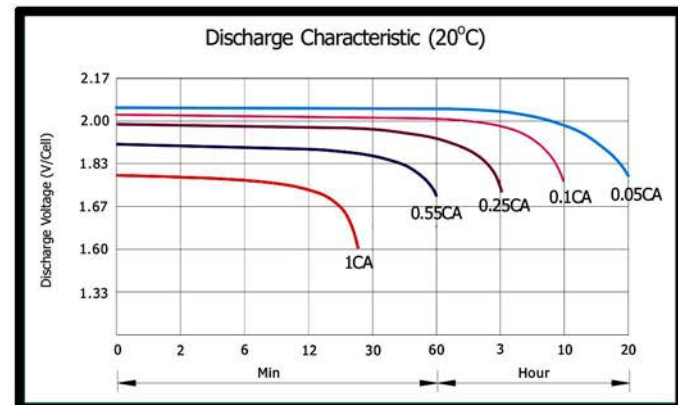
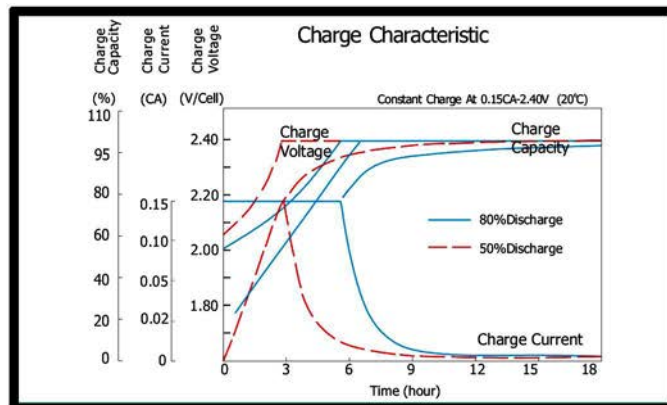
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-2500	2700	2750	2875	3000	3125	3175	3250
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

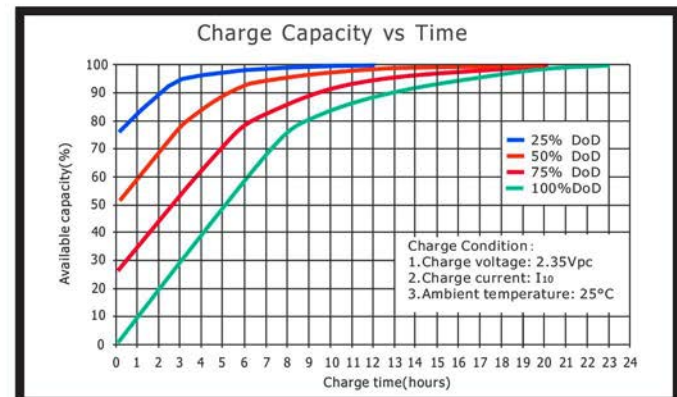
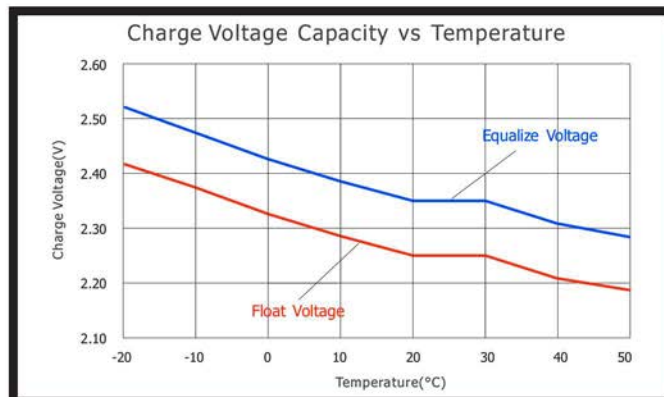
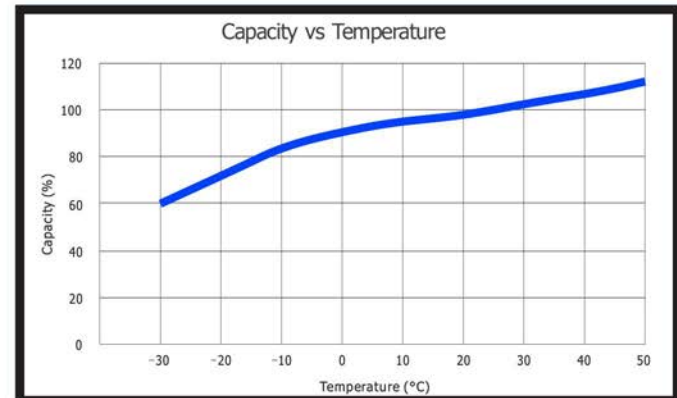
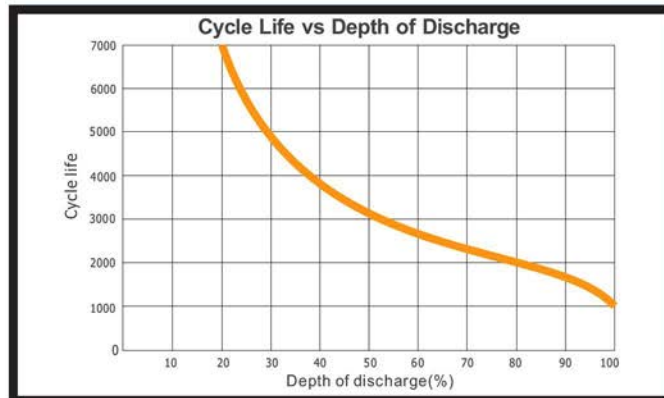
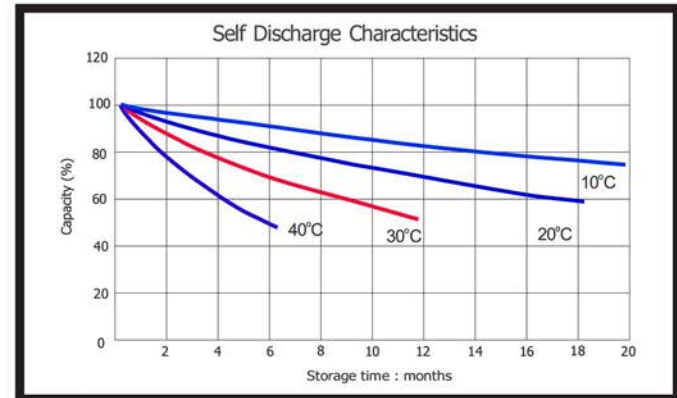
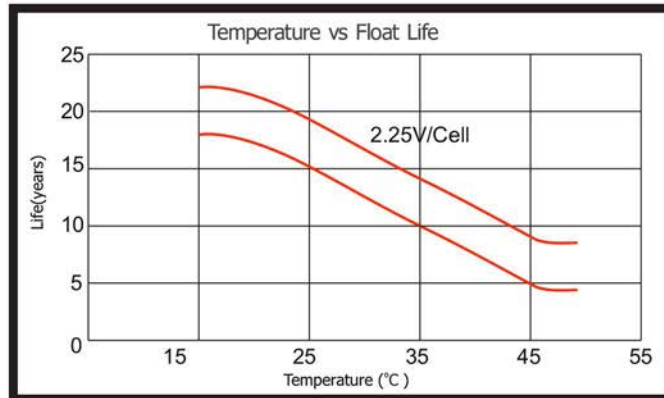
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 3000Ah)

 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

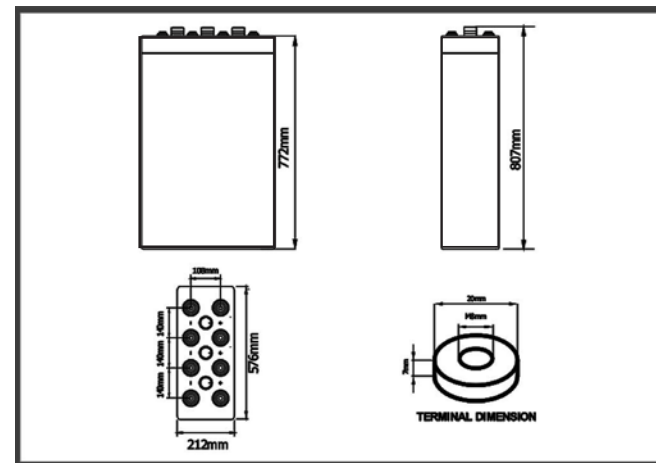
The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using diecasted positive grid and patented active material formula, it exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom outdoor applications, renewable energy systems and other harsh environment applications.

2V

3000Ah

Tubular
Gel

20 years
design life



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	3000Ah @ C10 (to 1.80Vpc)
Demensions	L576mm×W212mm×H807mm
Approx. Weight	228kg (502.6lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.19mOhm (fully charged @ 20°C)
Max. Charge Current	600A
Max. Discharge Current (5S)	12000A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	1062	1033	965	815	701	588	435	311	257
1.87V	1447	1351	1197	951	784	648	472	331	272
1.85V	1665	1525	1312	1038	864	697	503	346	283
1.83V	1940	1698	1419	1145	923	736	515	357	288
1.80V	2171	1969	1587	1261	974	772	525	362	300
1.75V	2302	2162	1862	1373	1017	794	535	368	303
1.70V	2504	2374	2046	1450	1056	809	544	373	309
1.65V	2924	2673	2229	1542	1086	823	556	379	315
1.60V	3184	2934	2364	1591	1108	838	567	386	320

Constant Power Discharge Characteristics: W/cell (20°C)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	2051	1999	1879	1599	1385	1171	872	627	520
1.87V	2742	2570	2293	1836	1532	1276	938	661	545
1.85V	3110	2860	2481	1981	1669	1358	989	686	562
1.83V	3581	3149	2651	2160	1764	1419	1000	701	567
1.80V	3950	3600	2929	2352	1839	1473	1010	703	573
1.75V	4121	3891	3387	2524	1894	1491	1016	706	583
1.70V	4422	4214	3670	2632	1943	1502	1022	710	590
1.65V	5072	4670	3938	2761	1975	1511	1031	713	595
1.60V	5414	5022	4097	2800	1985	1516	1041	719	600

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

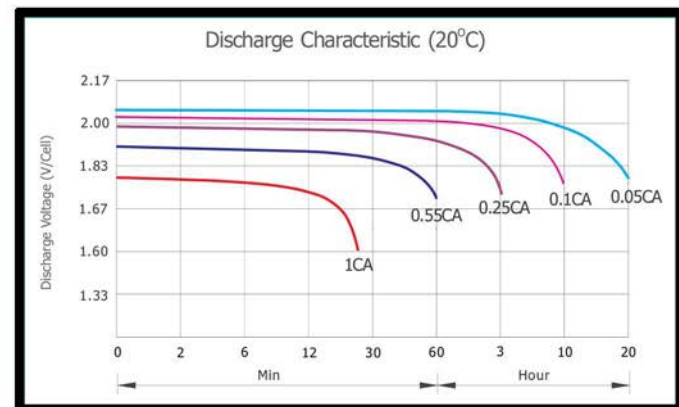
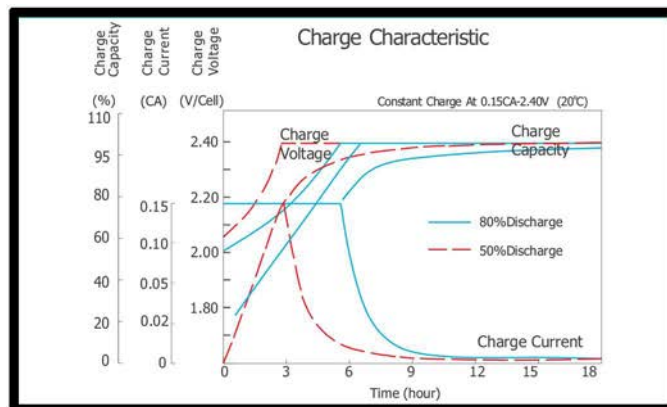
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-3000	3240	3300	3450	3600	3750	3810	3900
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

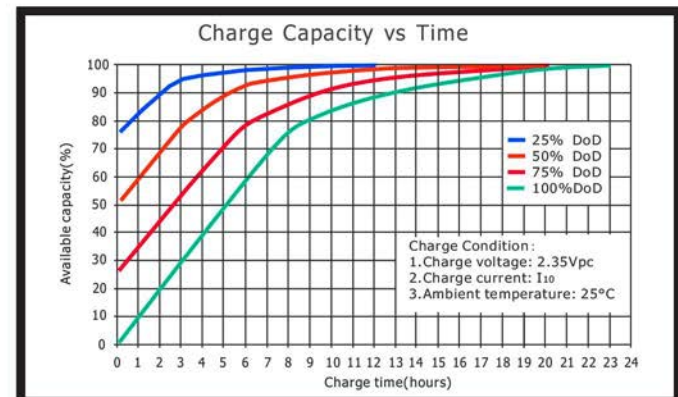
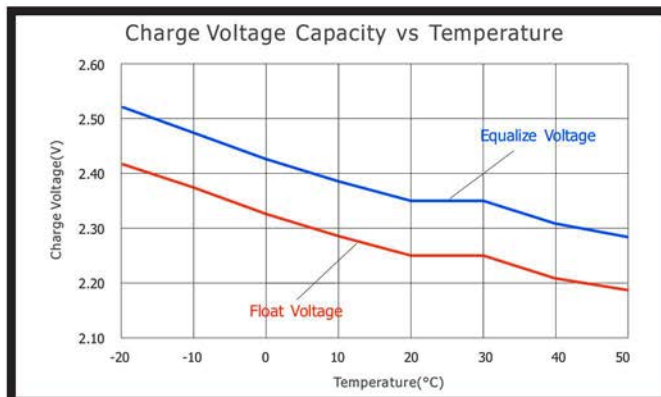
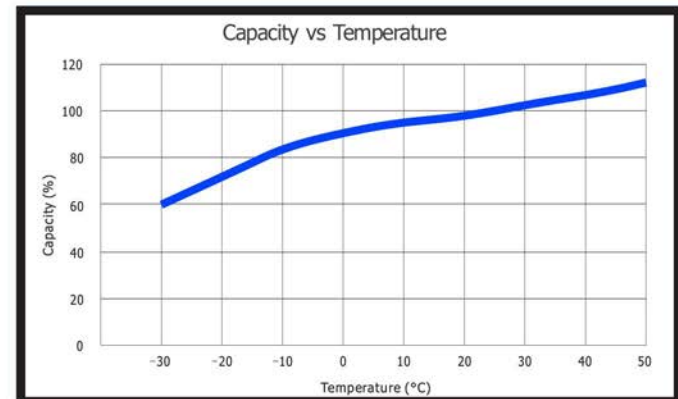
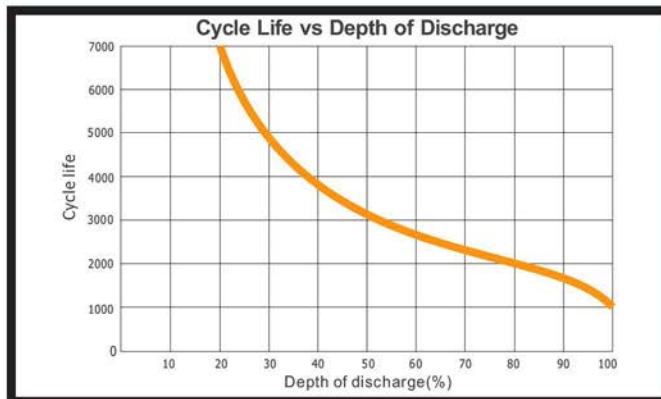
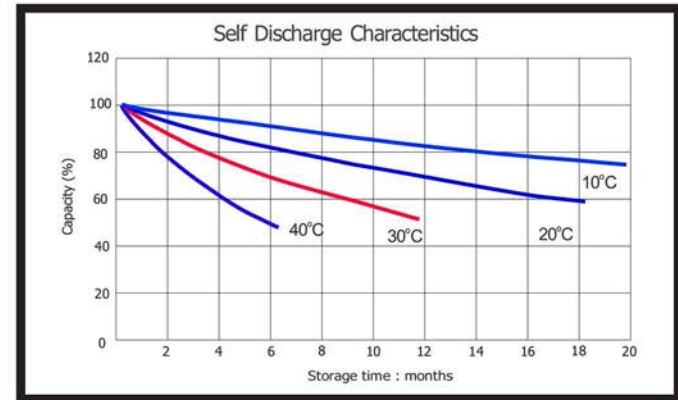
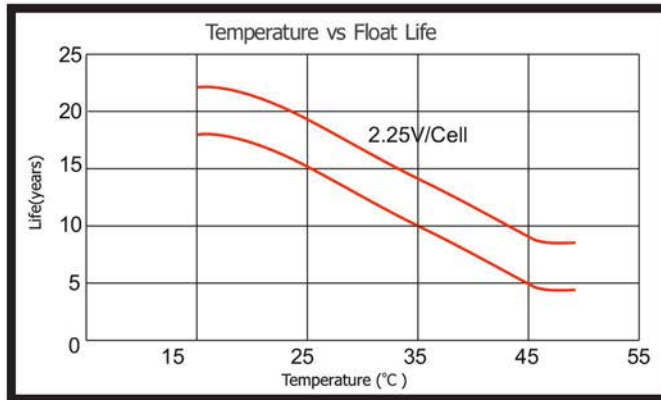
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 420Ah)

 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

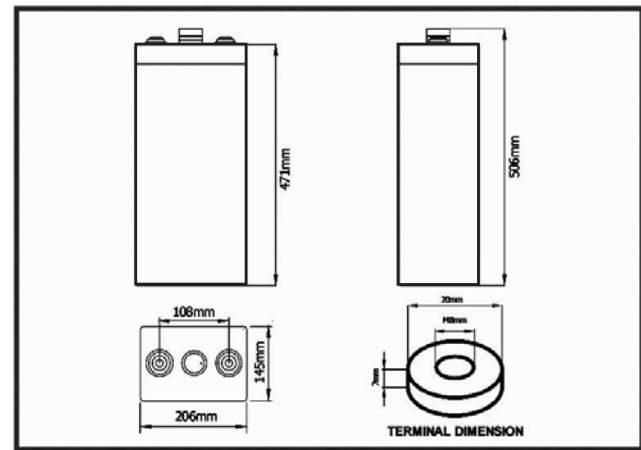
The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using diecasted positive grid and patented active material formula, it exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom outdoor applications, renewable energy systems and other harsh environment applications.

2V

420Ah

Tubular
Gel

20 years
design life



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	420Ah @ C10 (to 1.80Vpc)
Dimensions	L145mm×W206mm×H506mm
Approx. Weight	33kg (72.8lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.63mOhm (fully charged @ 20°C)
Max. Charge Current	84A
Max. Discharge Current (5S)	2020A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10m in	15m in	30m in	1h	2h	3h	5h	8h	10h
1.90V	154	150	140	118	100	84.0	62.2	44.5	36.8
1.87V	210	196	174	137	112	92.6	67.5	47.3	38.9
1.85V	241	221	190	150	123	100	71.8	49.4	40.4
1.83V	281	246	206	165	132	105	73.5	51.0	41.2
1.80V	315	286	230	182	139	110	75.0	51.7	42.0
1.75V	334	314	270	198	145	113	76.4	52.5	43.3
1.70V	363	344	297	209	151	116	77.7	53.3	44.1
1.65V	424	388	323	223	155	118	79.4	54.2	44.9
1.60V	462	426	343	230	158	120	81.1	55.2	45.8

Constant Power Discharge Characteristics: W/cell (20°C)

F.V/Time	10m in	15m in	30m in	1h	2h	3h	5h	8h	10h
1.90V	297	290	273	231	198	167	125	89.5	74.3
1.87V	398	373	333	265	219	182	134	94.4	77.9
1.85V	451	415	360	286	238	194	141	98.0	80.3
1.83V	519	457	385	312	252	203	143	99.0	81.0
1.80V	573	522	425	339	263	210	144	100	81.8
1.75V	598	564	491	364	271	213	145	101	83.3
1.70V	642	611	532	380	278	215	146	102	84.3
1.65V	736	678	571	399	282	216	147	103	85.0
1.60V	785	729	594	404	284	217	149	104	85.7

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

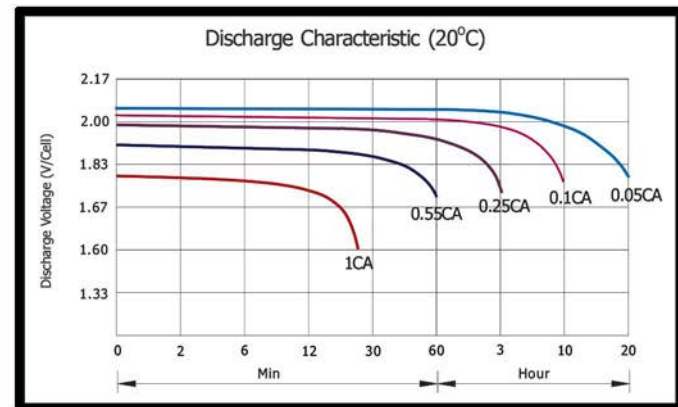
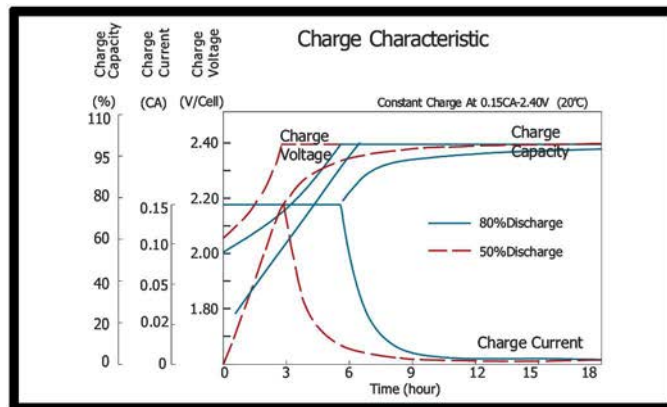
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-420	454	462	483	504	525	533	546
Final Voltage	1.80V						
	1.85V						

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

CHARACTERISTICS

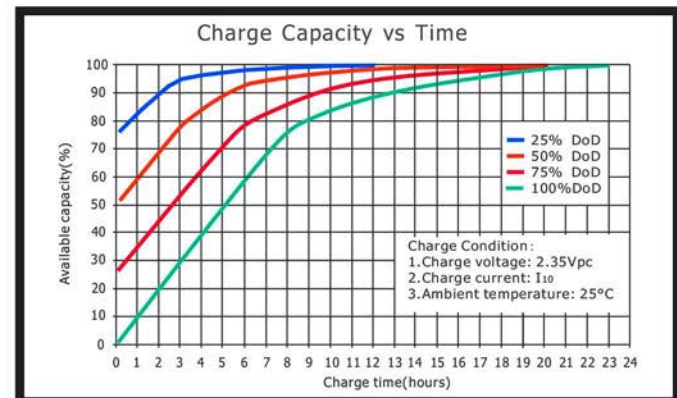
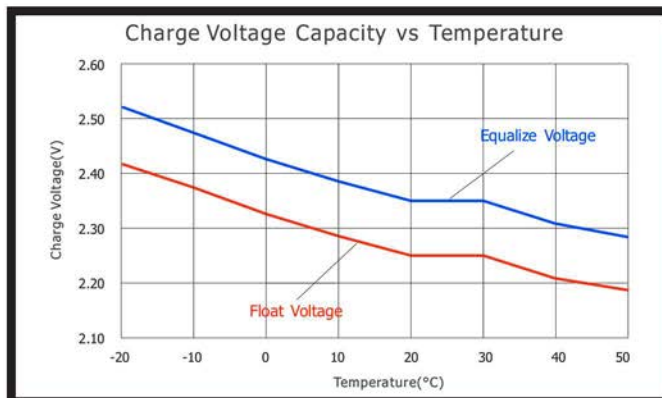
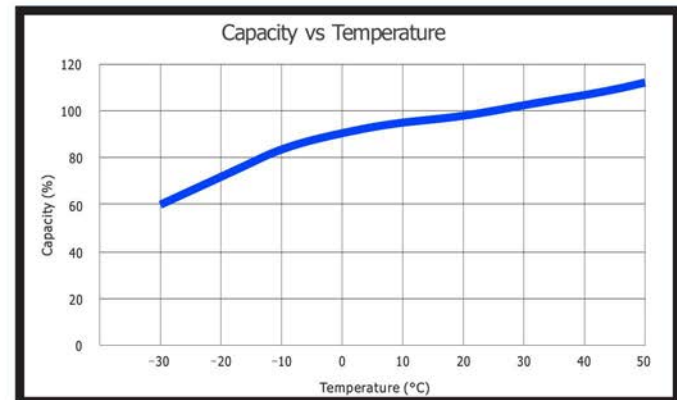
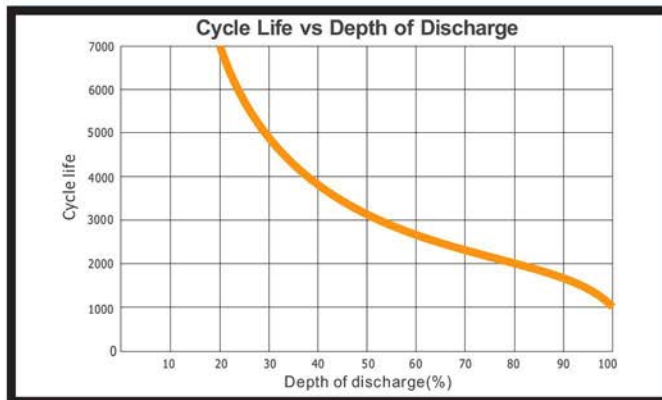
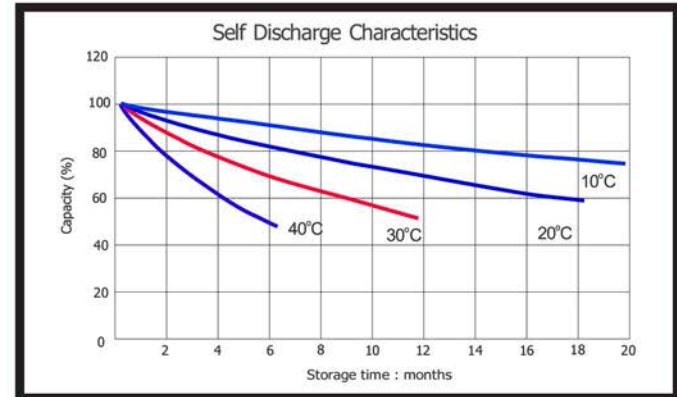
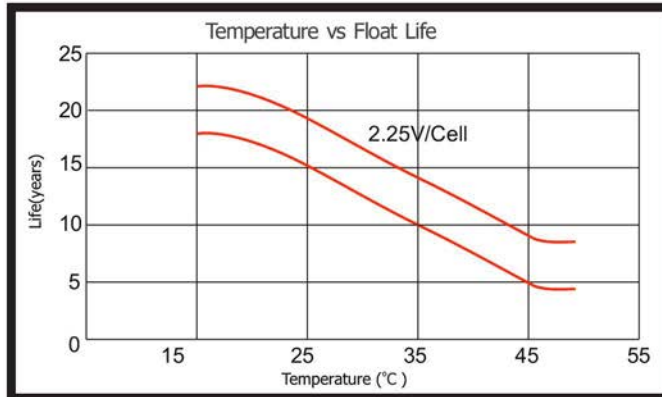
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 500Ah)

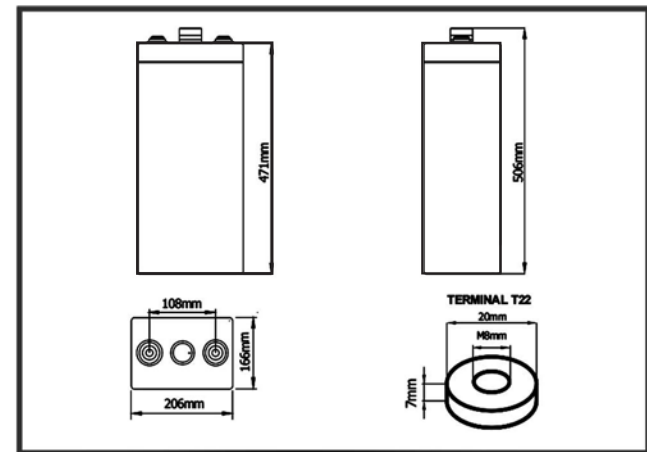
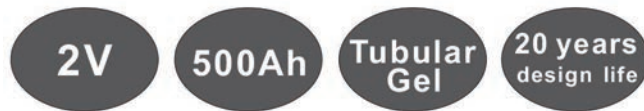
 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Power Full Batteries

The 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 outdoor applications, renewable energy systems and other harsh environment applications.



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	500 Ah @ C10 (to 1.80Vpc)
Demensions	L166mm×W206mm×H506mm
Approx. Weight	38kg (83.7lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.60mOhm (fully charged @ 20°C)
Max. Charge Current	100 A
Max. Discharge Current (5S)	2400 A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)									
F.V/Time	10m in	15m in	30m in	1h	2h	3h	5h	8h	10h
1.90V	180	175	163	137	117	98.0	72.6	51.9	42.9
1.87V	245	229	203	160	131	108	78.7	55.1	45.3
1.85V	282	258	222	175	144	116	83.8	57.7	47.1
1.83V	328	287	240	193	154	123	85.8	59.5	48.0
1.80V	367	333	269	212	162	129	87.5	60.3	49.0
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

Constant Power Discharge Characteristics: W/cell (20°C)									
F.V/Time	10m in	15m in	30m in	1h	2h	3h	5h	8h	10h
1.90V	347	338	318	269	231	195	145	104	86.7
1.87V	464	435	388	309	255	213	156	110	90.8
1.85V	526	484	420	334	278	226	165	114	93.7
1.83V	606	533	449	364	294	237	167	115	94.5
1.80V	669	609	496	396	306	245	168	116	95.5
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

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

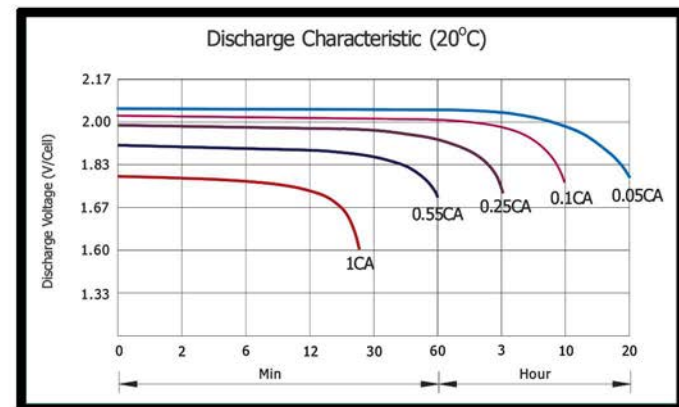
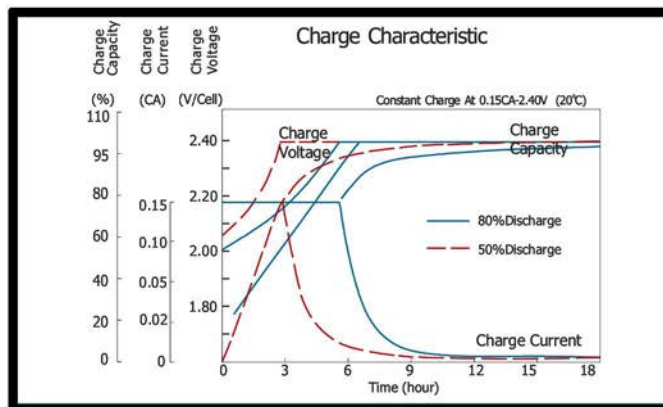
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-500	540	550	575	600	625	635	650
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

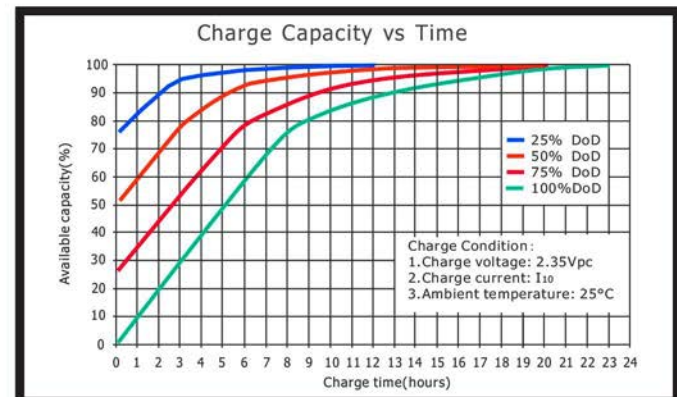
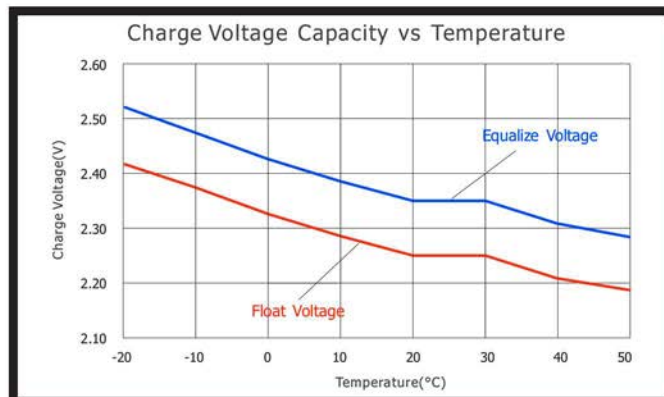
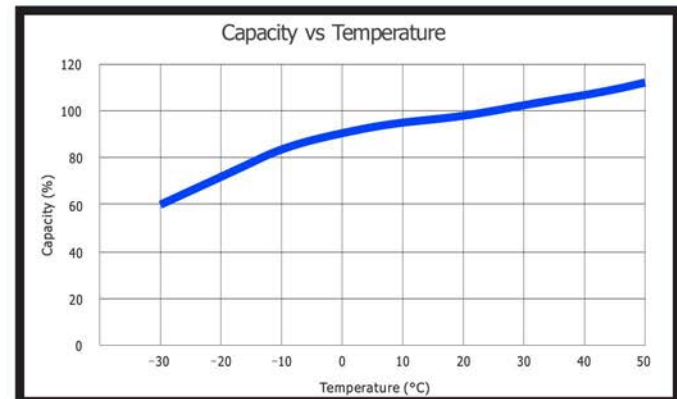
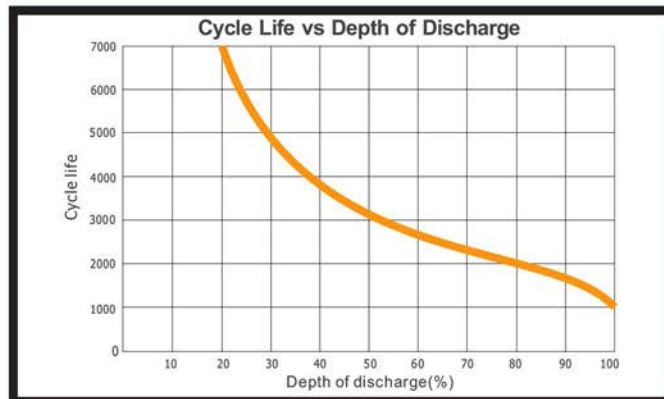
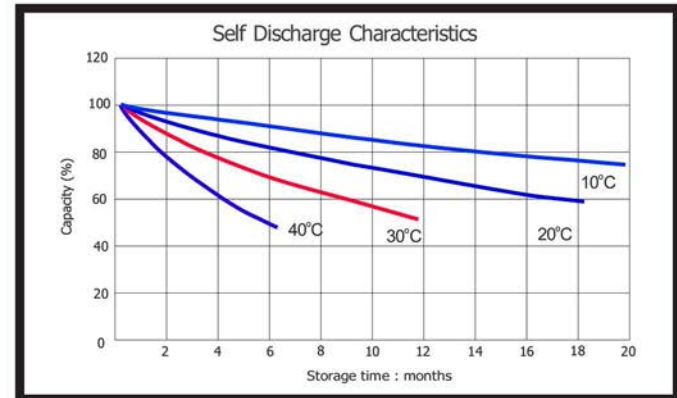
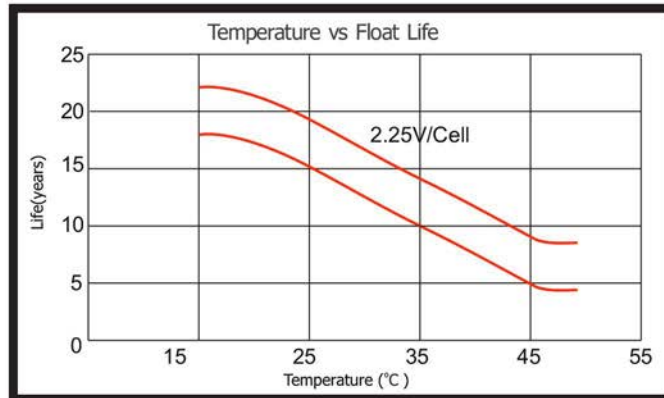
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 600Ah)

 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

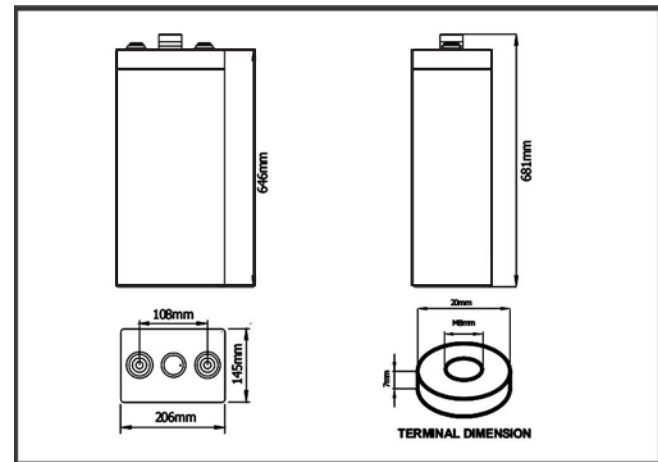
The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using diecasted positive grid and patented active material formula, it exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom outdoor applications, renewable energy systems and other harsh environment applications.

2V

600Ah

Tubular
Gel

20 years
design life



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	600 Ah @ C10 (to 1.80Vpc)
Demensions	L145mm×W206mm×H681mm
Approx. Weight	44.2kg (97.4lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.58mOhm (fully charged @ 20°C)
Max. Charge Current	110 A
Max. Discharge Current (5S)	2750 A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)									
F.V/Time	10m in	15m in	30m in	1h	2h	3h	5h	8h	10h
1.90V	220	214	200	168	143	120	88.9	63.6	52.5
1.87V	300	280	248	196	160	132	96.4	67.5	55.5
1.85V	345	316	272	214	176	142	103	70.6	57.7
1.83V	402	352	294	236	188	150	105	72.9	58.8
1.80V	450	408	329	260	199	158	107	73.8	60.0
1.75V	477	448	386	283	208	162	109	75.0	61.8
1.70V	519	492	424	299	216	165	111	76.2	63.0
1.65V	606	554	462	318	222	168	113	77.4	64.2
1.60V	660	608	490	328	226	171	116	78.9	65.4

Constant Power Discharge Characteristics: W/cell (20°C)									
F.V/Time	10m in	15m in	30m in	1h	2h	3h	5h	8h	10h
1.90V	425	414	389	330	283	239	178	128	106
1.87V	568	533	475	379	313	260	191	135	111
1.85V	644	593	514	409	341	277	202	140	115
1.83V	742	653	549	445	360	290	204	142	116
1.80V	819	746	607	485	375	301	206	143	117
1.75V	854	806	702	520	386	304	207	144	119
1.70V	917	873	761	543	397	307	209	145	120
1.65V	1051	968	816	569	403	308	210	146	121
1.60V	1122	1041	849	577	405	309	213	147	122

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

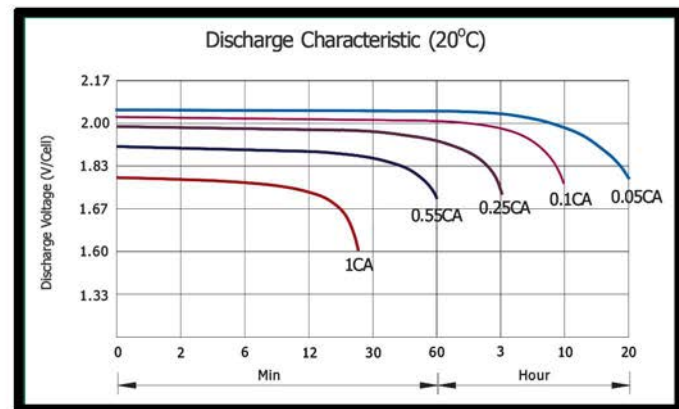
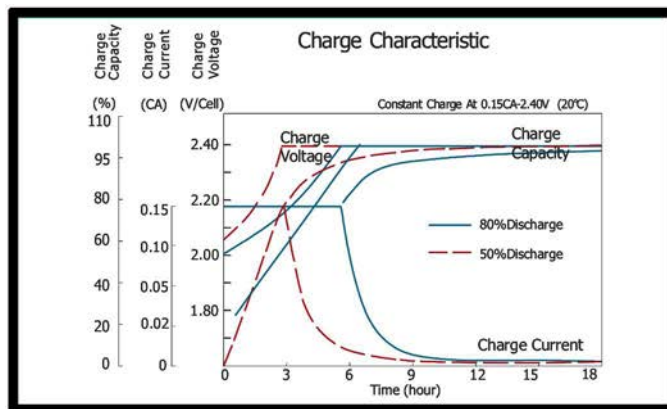
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-600	648	660	690	720	750	762	780
Final Voltage	1.85V						

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

CHARACTERISTICS

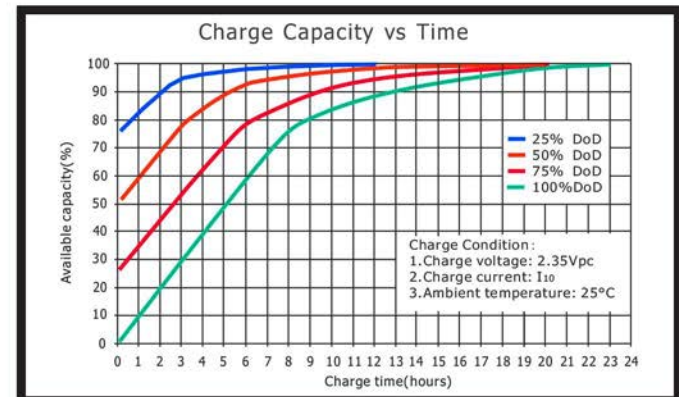
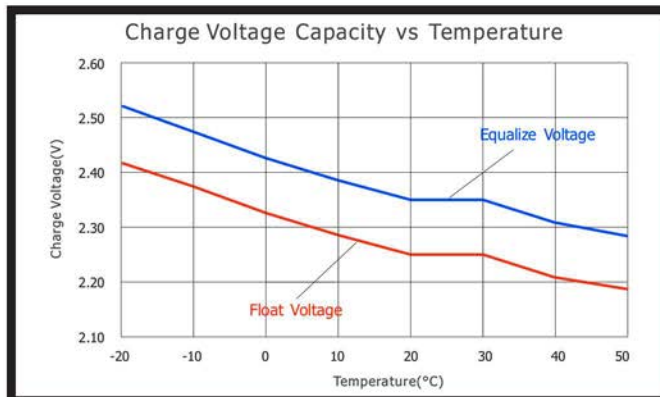
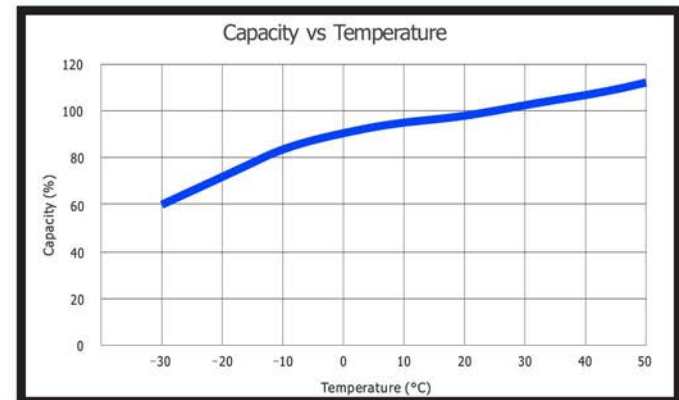
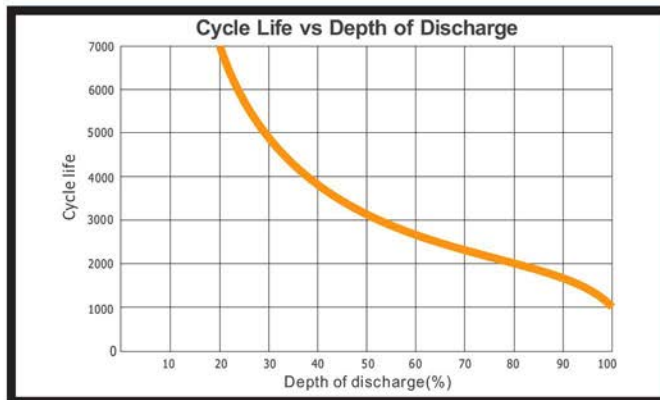
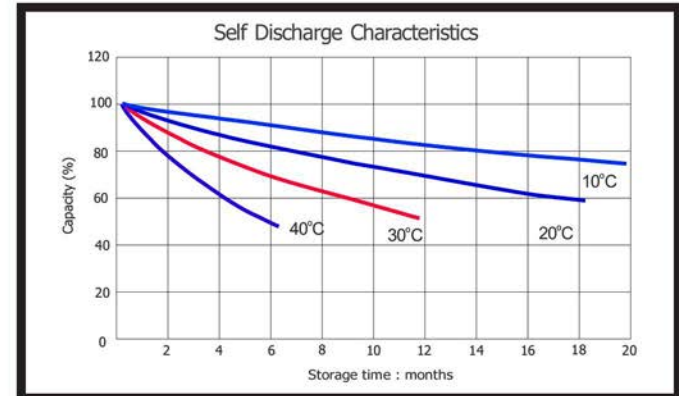
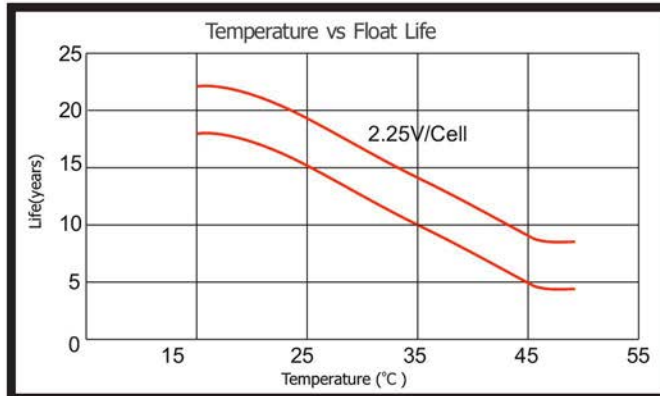
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts





BATTERIES

VRLA / GELL
OPzV(2V 800Ah)

 High Efficiency The
Exceptional Leak Proof

OPzV GEL- VRLA BATTERIES

GEL SERIES 2V VRLA BATTERY

Durable and Powerfull Batteries

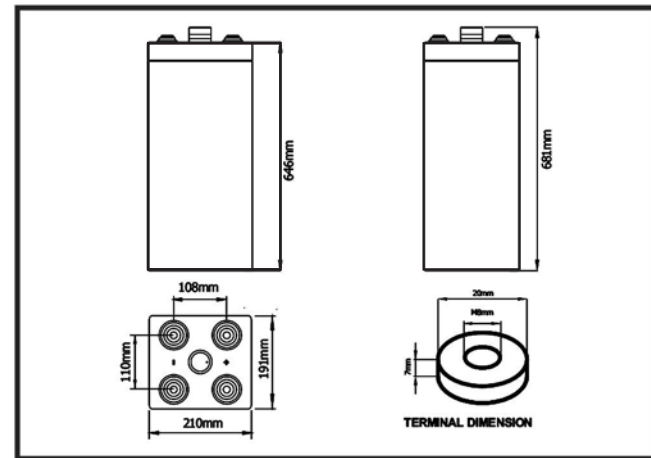
The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using diecasted positive grid and patented active material formula, it exceeds the DIN standard values and offer 20+ years design life in float service. It is very suitable for cyclic use under extreme operating conditions. This series is recommended for telecom outdoor applications, renewable energy systems and other harsh environment applications.

2V

800Ah

Tubular
Gel

20 years
design life



SPECIFICATIONS

Nominal Voltage (V)	2
Designed Floating Life o(20C)	20+ Years
Nominal Capacity (20C)	800 Ah @ C10 (to 1.80Vpc)
Demensions	L191mm×W210mm×H681mm
Approx. Weight	60kg (132.4lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.46mOhm (fully charged @ 20°C)
Max. Charge Current	160A
Max. Discharge Current (5S)	3500 A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~70°C Charge: -15~50C Storage: -15~60C
Float Charge Voltage (20~25C)	2.25-2.29V (-3mV / oC/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV / oC/ cell)
Container Material	ABS(UL94-V0 optional)



OPzV GEL- VRLA BATTERIES

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)									
F.V./Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	289	281	263	221	188	158	117	83.5	69.0
1.87V	394	368	326	257	210	174	127	88.7	72.9
1.85V	453	415	357	281	232	187	135	92.8	75.8
1.83V	528	462	386	310	247	197	138	95.7	77.2
1.80V	591	536	432	341	261	207	141	96.9	80.0
1.75V	626	588	507	372	273	213	143	98.5	81.2
1.70V	682	646	557	393	283	217	146	100	82.7
1.65V	796	728	607	418	291	221	149	102	84.3
1.60V	867	799	644	431	297	225	152	104	85.9

Constant Power Discharge Characteristics: W/cell (20°C)									
F.V./Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	558	544	511	433	371	314	234	168	139
1.87V	746	699	624	497	411	342	251	177	146
1.85V	846	779	675	537	447	364	265	184	151
1.83V	975	857	721	585	473	380	268	186	152
1.80V	1075	980	797	637	493	395	271	188	154
1.75V	1122	1059	922	684	508	400	272	189	156
1.70V	1204	1147	999	713	521	403	274	190	158
1.65V	1381	1271	1072	748	529	405	276	191	159
1.60V	1474	1367	1115	758	532	406	279	193	161

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

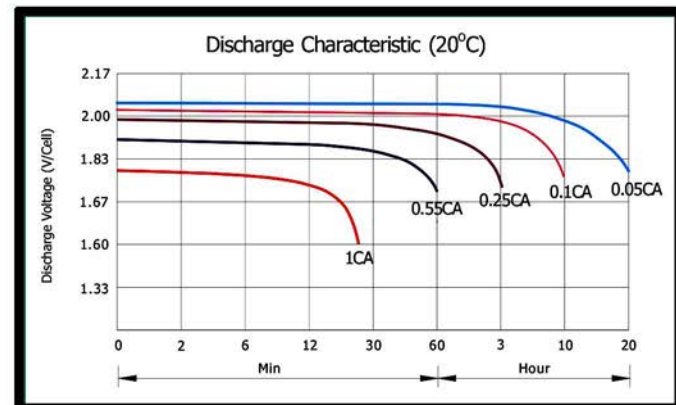
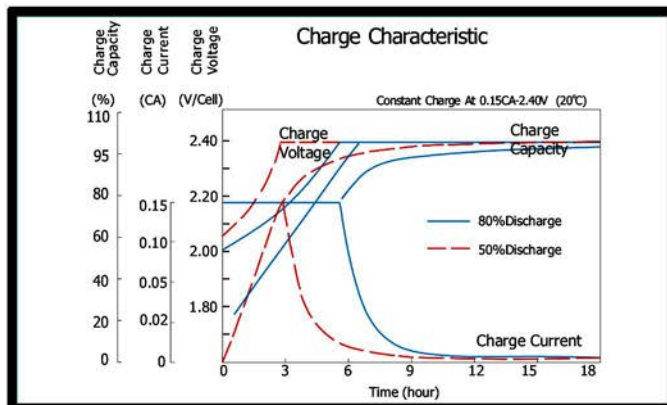
Capacity	C ₂₀ (Ah)	C ₂₄ (Ah)	C ₄₈ (Ah)	C ₇₂ (Ah)	C ₁₀₀ (Ah)	C ₁₂₀ (Ah)	C ₂₄₀ (Ah)
OPzV2-800	864	880	920	960	1000	1016	1040
Final Voltage	1.80V		1.85V				

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

CHARACTERISTICS

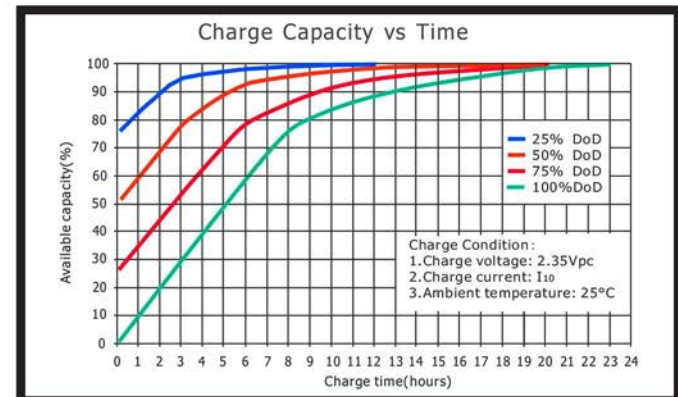
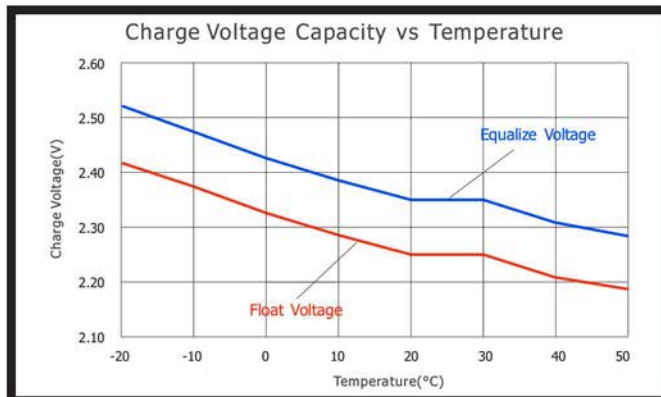
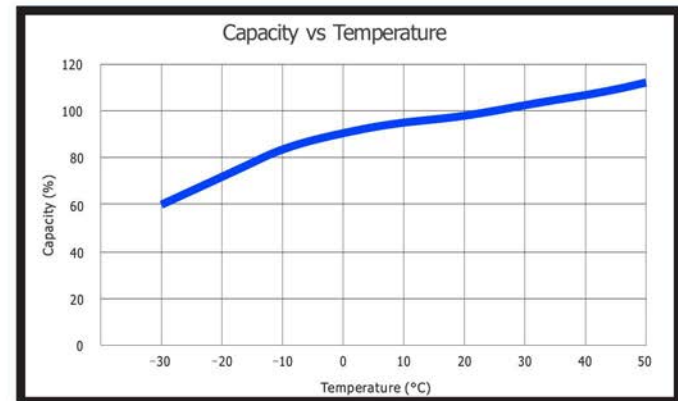
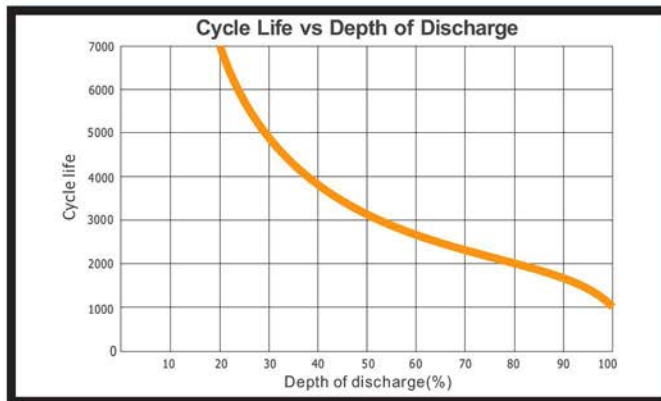
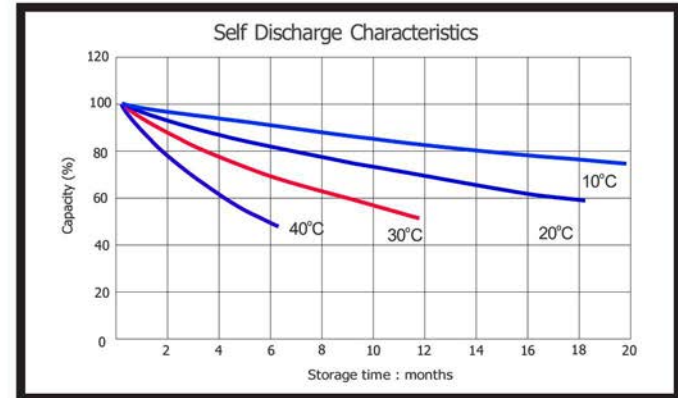
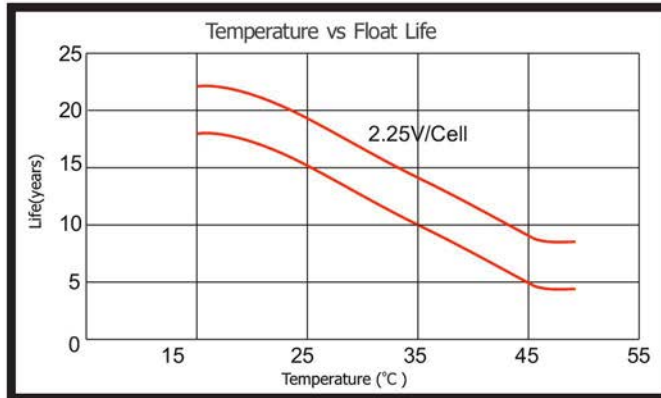
OPzV GEL 2V Characteristic Battery Charts



OPzV GEL- VRLA BATTERIES

CHARACTERISTICS

OPzV GEL 2V Characteristic Battery Charts



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