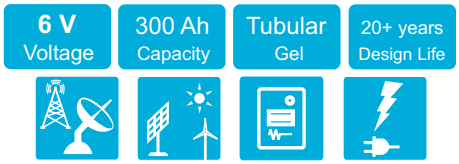
CATE®
Storage Battery Expert

OPzV 6-300

www.catepower.com

6V TUBULAR GEL SERIES VRLA BATTERY

The OPzV series adopts an Immobilized Gel and Tubular Positive Plate technology. It offers high reliability and stable performance. By using die-casted 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

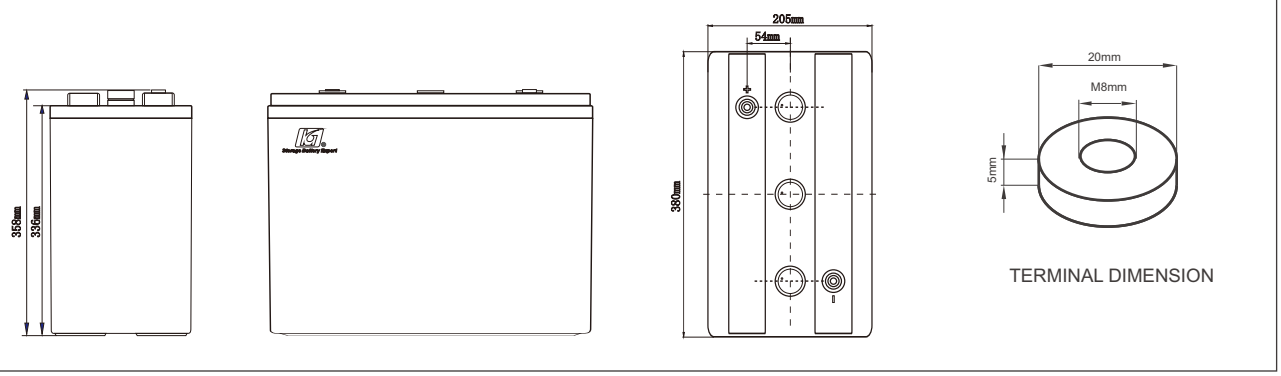
Nominal Voltage (V)	6
Designed Floating Life （20°C）	20+ Years
Nominal Capacity (20°C)	300 Ah @ C_{10} (to 1.80Vpc)
Demensions	L380mm×W205mm×H336mm
Approx. Weight	68kg (149.91 lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 2.30mOhm (fully charged @ 20°C)
Max. Charge Current	60 A
Max. Discharge Current (5S)	1500 A
Short Circuit Current	2600 A
Self Discharge	Approx. 2% per month @ 20°C
Ambient Temperature	Discharge: -40~65°C Charge: -30~65°C Storage: -25~45°C
Float Charge Voltage (20~25°C)	6.75-6.85V (-3mV / ℃/ cell)
Equalize Charge Voltage (20~25°C)	7.05-7.20V (-5mV / ℃/ cell)
Container Material	ABS(UL94-V0 optional)

ISO9001 ISO14001

Complied standards

- IEC 60896-21/22
- UL1989
- JIS C8704
- GB/T19639

DIMENSIONS



TERMINAL DIMENSION

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	110	107	100	84.6	71.6	60.0	44.4	32.0	26.4
1.87V	151	140	123	98.4	80.0	66.2	48.2	33.8	27.2
1.85V	172	158	137	107	88.2	71.0	51.2	35.4	28.8
1.83V	202	177	147	116	94.0	75.2	52.4	36.4	29.4
1.80V	224	204	165	129	99.4	78.8	53.6	37.0	30.0
1.75V	238	223	193	141	103	81.0	54.5	37.6	30.8
1.70V	258	246	212	150	107	82.5	55.6	38.2	31.4
1.65V	302	275	230	159	111	84.0	56.8	38.8	32.2
1.60V	330	304	244	163	113	85.6	57.7	39.4	32.8

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

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	106	104	976	166	141	119	89.0	64.4	53.2
1.87V	284	266	238	189	156	130	95.8	67.3	55.6
1.85V	322	295	256	204	170	139	101	70.0	57.3
1.83V	371	326	273	224	180	145	102	70.8	58.0
1.80V	408	371	304	242	188	151	103	71.6	58.6
1.75V	426	402	352	260	193	152	104	72.0	59.4
1.70V	458	435	380	272	199	153	105	72.4	60.2
1.65V	526	484	408	284	200	154	106	72.8	60.6
1.60V	560	518	424	290	204	155	107	73.3	61.2

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

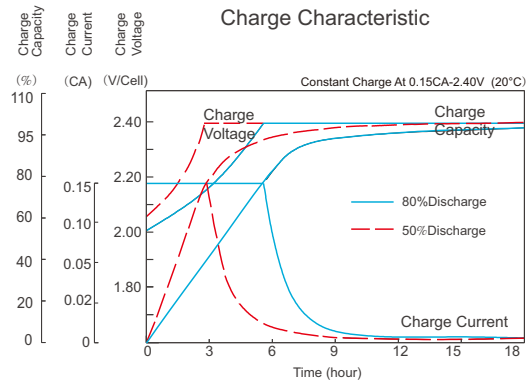
Capacity	C_{20} (Ah)	C_{24} (Ah)	C_{48} (Ah)	C_{72} (Ah)	C_{100} (Ah)	C_{120} (Ah)	C_{240} (Ah)
OPzV 6-300	326	340	366	378	384	388	398
Final Voltage	1.80V	1.85V					

Solar & Wind applications parameters settings

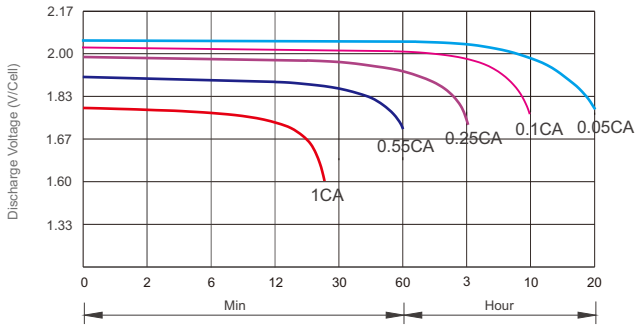
Over voltage disconnect:	2.45±0.01V/cell @ 20～25°C
Regulation/equalize voltage:	2.40±0.01V/cell @ 20～25°C
Array roconnection voltage:	2.25±0.005V/cell @ 20～25°C
Float voltage setting:	2.27±0.005V/cell @ 20～25°C
Low voltage alarm voltage:	1.95±0.005V/cell @ 20～25°C
Low voltage disconnect:	1.90±0.005V/cell @ 20～25°C
Load reconnect voltage:	2.09±0.01V/cell @ 20～25°C
Temp. compensate coefficienty:	-5mV/cell/°C

CHARACTERISTICS

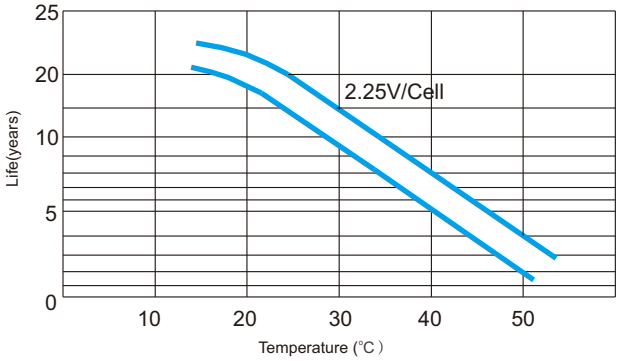
Charge Characteristic



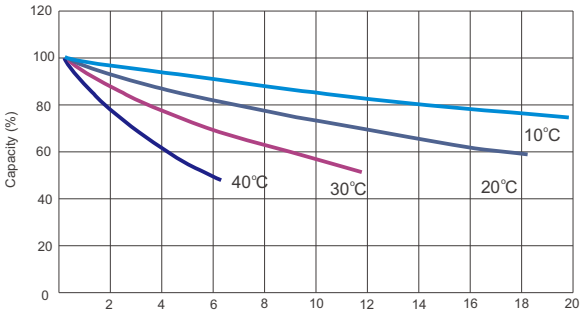
Discharge Characteristic (20°C)



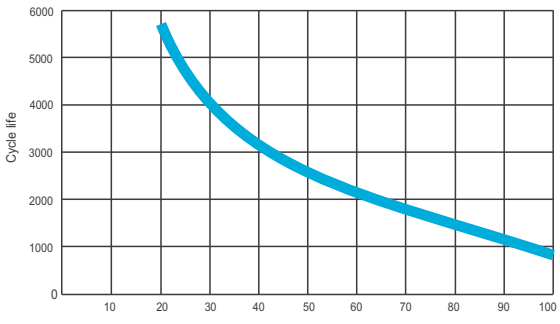
Temperature vs Float Life



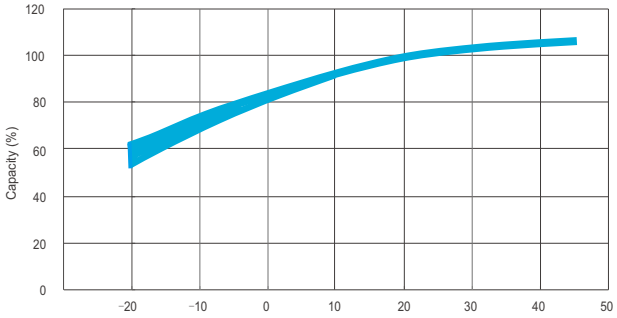
Self Discharge Characteristics



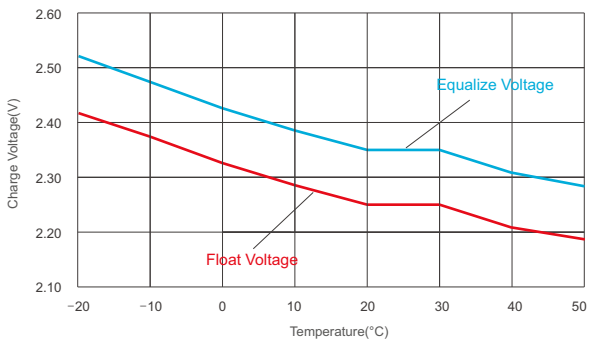
Cycle Life vs Depth of Discharge



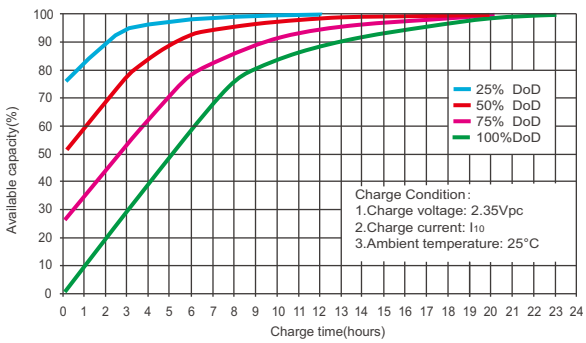
Capacity vs Temperature



Charge Voltage Capacity vs Temperature



Charge Capacity vs Time



FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

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