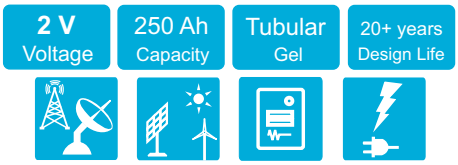
CATE®
Storage Battery Expert

OPzV2-250

www.catepower.com

2V 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

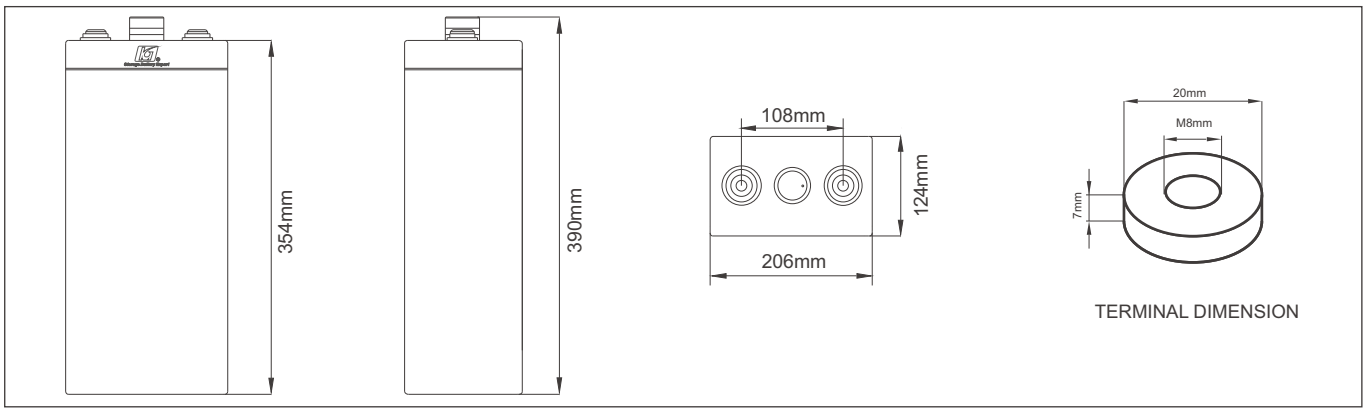
Nominal Voltage (V)	2
Designed Floating Life （20°C)	20+ Years
Nominal Capacity (20°C)	250 Ah @ C_{10} (to 1.80Vpc)
Demensions	L124mm×W206mm×H390mm
Approx. Weight	20.3 kg (44.8 lbs)
Terminal Type	Female Copper Insert M8 (torque:10~12N.m)
Internal Resistance	Approx. 0.87mOhm (fully charged @ 20°C)
Max. Charge Current	50 A
Max. Discharge Current (5S)	1000 A
Short Circuit Current	2300 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)	2.25-2.29V (-3mV /°C/ cell)
Equalize Charge Voltage (20~25°C)	2.35-2.40V (-5mV /°C/ cell)
Container Material	ABS(UL94-V0 optional)

ISO9001 ISO14001

Complied standards

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

DIMENSIONS



BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (20°C)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	91.7	89.2	83.3	70.0	59.6	50.0	37.0	26.5	21.9
1.87V	125	117	103	81.7	66.7	55.1	40.2	28.1	23.1
1.85V	144	132	113	89.2	73.5	59.3	42.8	29.4	24.0
1.83V	167	147	123	98.3	78.5	62.6	43.8	30.4	24.5
1.80V	187	170	137	108	82.8	65.7	44.6	30.8	25.0
1.75V	199	187	161	118	86.5	67.5	45.5	31.3	25.8
1.70V	216	205	177	125	89.8	68.8	46.3	31.8	26.3
1.65V	252	231	193	133	92.3	70.0	47.3	32.3	26.8
1.60V	275	253	204	137	94.3	71.3	48.3	32.9	27.3

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

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.90V	177	173	162	137	118	100	74.1	53.3	44.2
1.87V	237	222	198	158	130	108	79.8	56.2	46.3
1.85V	269	247	214	170	142	116	84.1	58.3	47.8
1.83V	309	272	229	186	150	121	85.1	59.6	48.2
1.80V	341	311	253	202	156	125	85.9	59.7	48.7
1.75V	356	336	293	217	161	127	86.4	60.0	49.6
1.70V	382	364	317	226	165	128	86.9	60.4	50.2
1.65V	438	403	340	237	168	129	87.7	60.6	50.6
1.60V	467	434	354	241	169	129	88.6	61.1	51.0

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

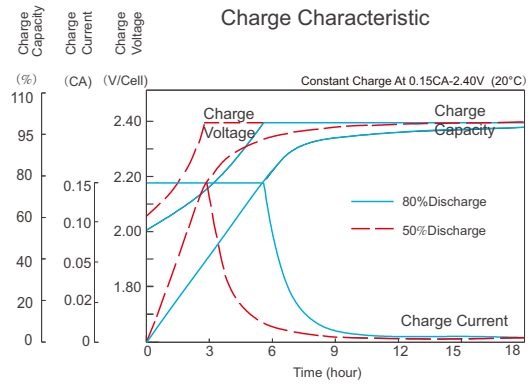
Capacity	C_{20} (Ah)	C_{24} (Ah)	C_{48} (Ah)	C_{72} (Ah)	C_{100} (Ah)	C_{120} (Ah)	C_{240} (Ah)
OPzV2-250	270	283	305	315	319	323	331
Final Voltage	1.80V	1.85V					

Solar & Wind applications parameters settings

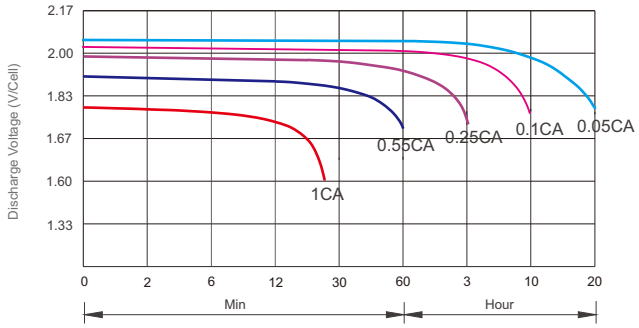
Over voltage disconnect:	2.45±0.01V/cell @ 20～25°C
Regulation/equalize voltage:	2.40±0.01V/cell @ 20～25°C
Array roconnection voltage:	2.25±0.005V/cell @ 20～25°C
Float voltage setting:	2.27±0.005V/cell @ 20～25°C
Low voltage alarm voltage:	1.95±0.005V/cell @ 20～25°C
Low voltage disconnect:	1.90±0.005V/cell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

CHARACTERISTICS

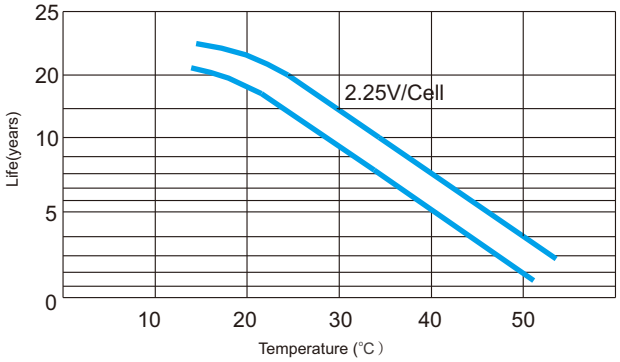
Charge Characteristic



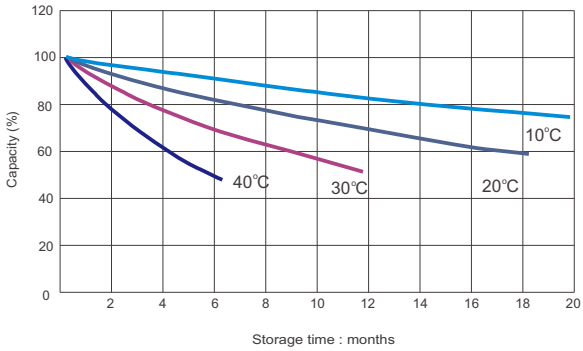
Discharge Characteristic (20°C)



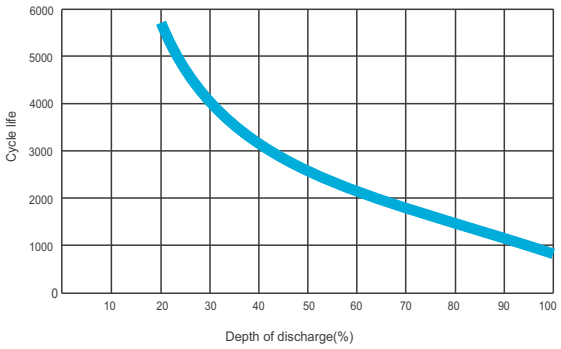
Temperature vs Float Life



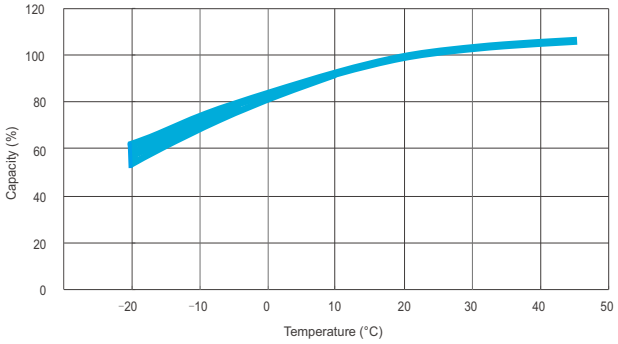
Self Discharge Characteristics



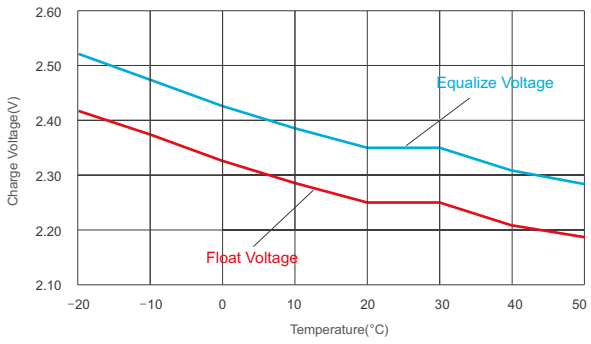
Cycle Life vs Depth of Discharge



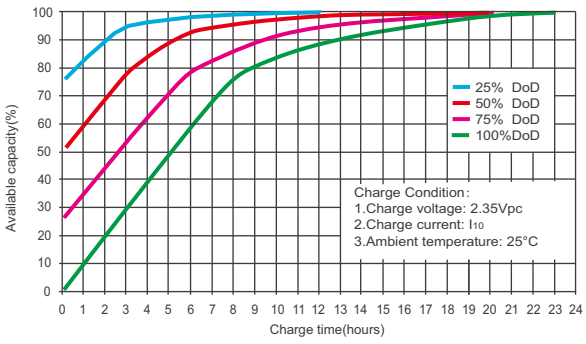
Capacity vs Temperature



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