



OPzV420 (2V420AH) Tubular GEL Battery



Specification

Nominal Voltage	2V	
Capacity	420.0Ah@10hr to 1.80V/cell	
Dimension	Length	145±2mm (5.17 inches)
	Width	206±3mm (8.11 inches)
	Container Height	471±3mm (18.5 inches)
	Total Height (with Terminal)	506±3mm (19.9 inches)
Approx Weight	Approx 33.5 kg (75.0lbs)	
Container Material	ABS	
Rated Capacity	420 AH/42.0A	(10hr, 1.80V/cell, 20°C/68°F)
	365.5 A H/73.1A	(5hr, 1.75V/cell, 20°C/68°F)
	324 AH/108A	(3hr, 1.75V/cell, 20°C/68°F)
	239 AH/239A	(1hr, 1.60V/cell, 20°C/68°F)
Max. Discharge Current	4800A (5s)	
Internal Resistance	Approx 0.8mΩ	
Operating Temp. Range	Discharge	-20~55°C (-4~131°F)
	Charge	0~40°C (32~104°F)
	Storage	-20~50°C (-4~122°F)
Cycle Use	Initial Charging Current less than 105.0A.	Voltage 2.40V~2.50V at 20°C(68°F)Temp. Coefficient -5mV/°C
	Standby Use	No limit on Initial Charging Current Voltage 2.25V~2.30V at 20°C(68°F)Temp. Coefficient -3mV/°C
Self-discharge	<2% pre month @ 20°C(68°F)	

Applications

- ◆ Solar energy/wind energy
- ◆ Electric power/nuclear power
- ◆ Communication
- ◆ Ship, maritime affairs
- ◆ UPS, medical facilities and emergency lighting
- ◆ Situation with high environmental protection and energy-saving
- ◆ Better safety performance and reliability
- ◆ Designed service life of 22 years

Main Technical Advantages

- ◆ Plate: positive plate adopts tubular plate which can prevent active material falling, and adopts multi-component alloy frame. have fine corrosion-resisting performance and long service life. Negative plate adopts special radiated structure.
- ◆ Separator: adopt special micro-pore PVC-SiO₂ separator from Europe AMER-SIL Company, separator have big porosity and low resistance.
- ◆ Electrolyte: adopts Germany gas silicon dioxide, electrolyte in gel state in the battery without flowing, leakage and lamination can be avoided.
- ◆ Safety valve: adopt Germany technology, constant opening and closing, accumulator case expansion, damage and electrolyte dry up can be avoided.

Constant Current Discharge (Amperes) at 20 °C (68°F)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.85V/cell	329	303	248	188	126	97.2	66.5	46.4	39.3
1.80V/cell	405	367	289	212	139	106	71.8	49.7	42.0
1.75V/cell	479	411	308	220	142	108	73.1	50.6	42.7
1.70V/cell	537	449	326	229	146	110	74.3	51.2	43.2
1.65V/cell	577	474	339	235	149	112	75.4	51.8	43.6
1.60V/cell	604	490	347	239	151	114	76.2	52.3	43.9

Constant Power Discharge (Watts) at 20 °C (68°F)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.85V/cell	612	570	473	363	245	190	131	92	78.2
1.80V/cell	740	680	546	407	268	206	141	98.4	83.4
1.75V/cell	860	751	576	420	274	209	143	99.8	84.6
1.70V/cell	948	808	604	434	280	213	145	101	85.4
1.65V/cell	1000	840	621	443	284	216	146	102	86.2
1.60V/cell	1026	857	631	448	286	217	147	102	86.6

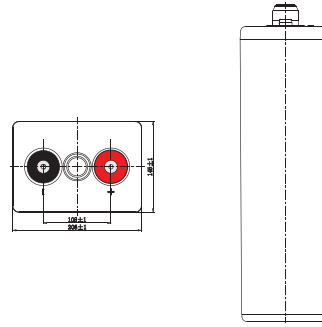
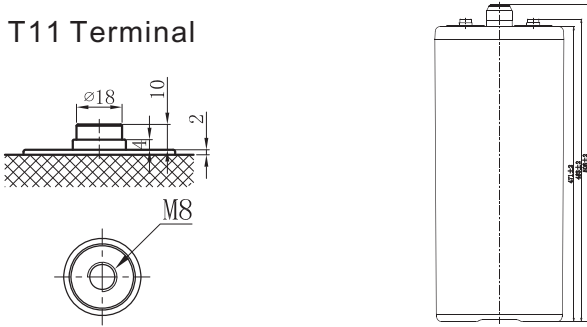
Note The above data are average values, and can be obtained with 3 charge/discharge cycles. These are not minimum values.



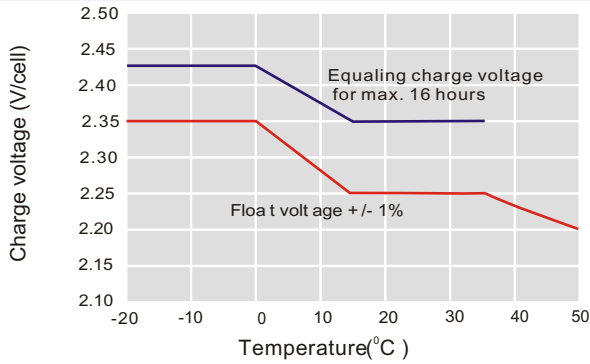
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Dimensions

T11 Terminal

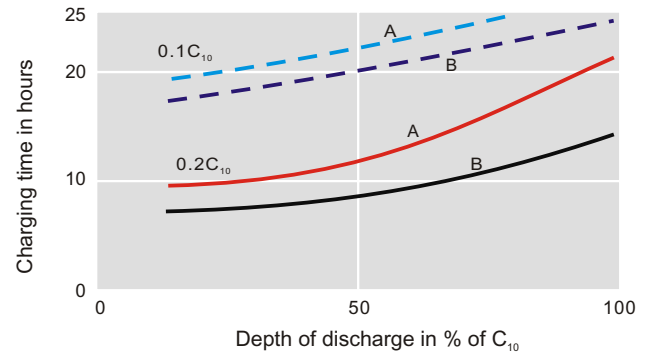


Discharge Characteristics



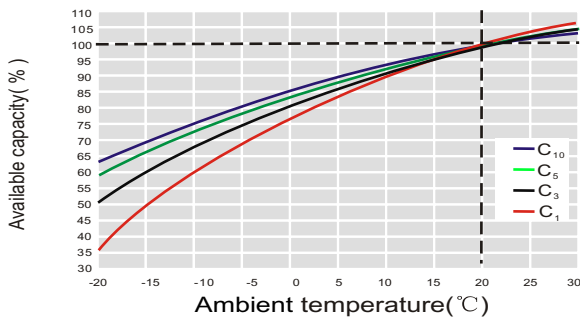
For continuous charging we recommend a voltage of 2.25 V. The charging voltage must be compensated to the curve for continuously different battery ambient temperature.

Charging Characteristics

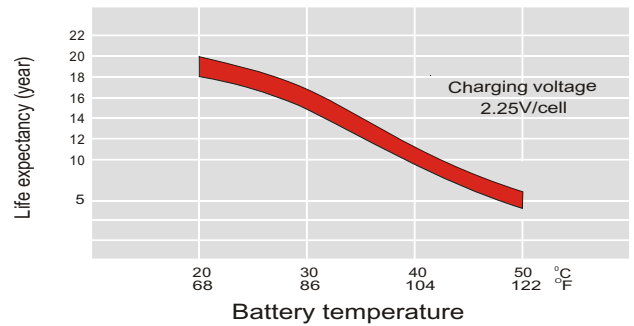


Charge voltage:
 A—2.25 V/cell B—2.40 V/cell
 - - - State of charge 100 % — State of charge 90 %

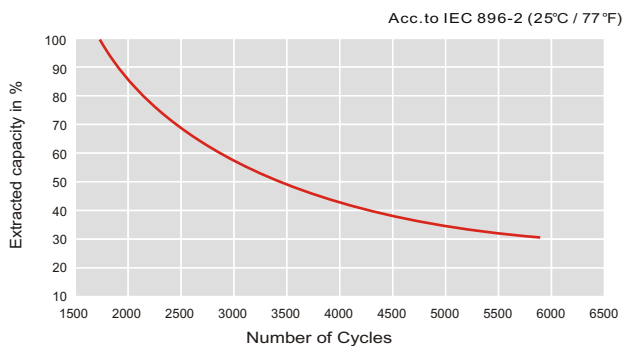
Temperature Effects in Relation to Battery Capacity



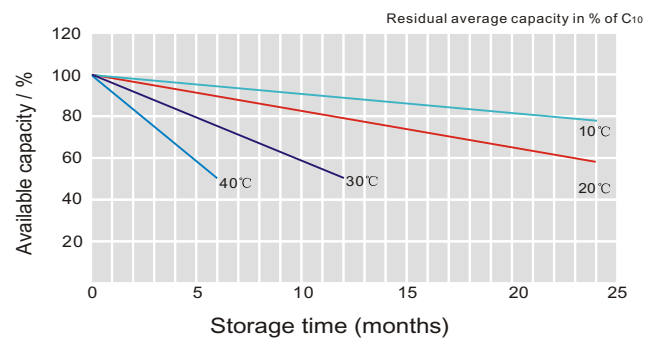
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



General Relation of Capacity VS. Storage Time



JYC OPzV BATTERIES

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