



# OPzV Series-Tubular Gel

## 6 OPzV420(2V420Ah)

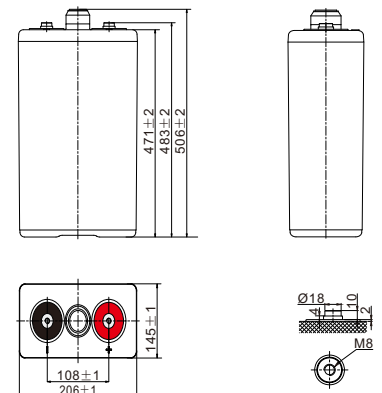


### Specifications

Rated Voltage	2V	
Nominal Capacity	420Ah	(C <sub>10</sub> , 1.80V/cell)
Dimension	Length	145mm(5.71 in.)
	Width	206mm(8.11 in.)
	Container Height	471mm(18.54 in.)
	Total Height	506mm(19.92 in.)
Approx Weight	34.5Kg (76.06 lbs)	
Terminal	M8	
Container Material	ABS	
Rated Capacity (25°C)	420.0 Ah	(10hr,42.0A,1.80V/cell)
	365.5 Ah	(5hr,73.1A,1.75V/cell)
	324.0 Ah	(3hr,108.0A,1.75V/cell)
	235.0 Ah	(1hr,235.0A,1.65V/cell)
Max. Discharge Current (5s)	3360A	
Internal Resistance(25°C)	Approx.0.80mΩ	
Operating Temp.Range	Discharge	-20°C~55°C (-4°F~131°F)
	Charge	0°C~40°C (32°F~104°F)
	Storage	-20°C~50°C (-4°F~122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max.Charging Current(25°C)	105.0A	
Charge voltage(25°C)	Float	2.25V
	Temp. Coefficient	-3mV/cell/°C
	Cycle(Equalization)	2.35~2.40V
Effect of temp. to Capacity	40°C (104°F)	106%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	≤3% per month at 25°C	



### Layout



### Constant Current Discharge (Amperes) at 25 °C (77 °F)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	329.0	303.0	248.0	188.0	126.0	97.2	66.5	46.8	39.3	20.6
1.80V/cell	405.0	367.0	289.0	212.0	139.0	106.0	71.8	50.0	42.0	22.1
1.75V/cell	479.0	411.0	308.0	220.0	142.0	108.0	73.1	51.0	42.7	22.4
1.70V/cell	537.0	449.0	326.0	229.0	146.0	110.0	74.3	51.5	43.2	22.7
1.65V/cell	577.0	474.0	339.0	235.0	149.0	112.0	75.4	52.0	43.6	22.9
1.60V/cell	604.0	490.0	347.0	239.0	151.0	114.0	76.2	52.8	43.9	23.0

### Constant Power Discharge (Watts/cell) at 25 °C (77 °F)

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	612.0	570.0	473.0	363.0	245.0	190.0	131.0	92.8	78.2	41.1
1.80V/cell	740.0	680.0	546.0	407.0	268.0	206.0	141.0	99.0	83.4	43.8
1.75V/cell	860.0	751.0	576.0	420.0	274.0	209.0	143.0	100.6	84.6	44.4
1.70V/cell	948.0	808.0	604.0	434.0	280.0	213.0	145.0	101.6	85.4	44.8
1.65V/cell	1,000.0	840.0	621.0	443.0	284.0	216.0	146.0	102.4	86.2	45.3
1.60V/cell	1,026.0	857.0	631.0	448.0	286.0	217.0	147.0	103.0	86.6	45.5



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### Applications

- Telecommunications
- Radio and cellular telephone relay stations
- Emergency lighting systems
- Power stations, Conventional power stations, alternative power (solar, wind)
- Large UPS and computer back-up
- Railway signaling
- Maritime standby power on ships and ashore
- Process and control engineering
- Standby power
- Buoy lighting

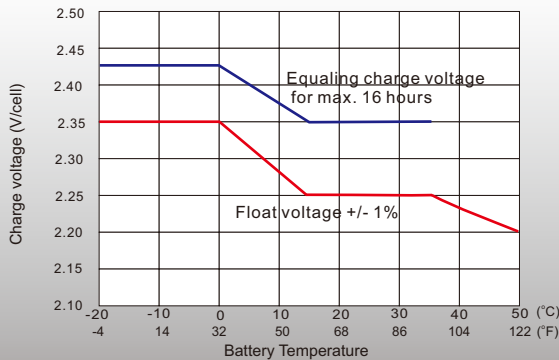
### General Features

- 20 years design life (20°C)
- Better recovery performance
- Wide working temperature range (-20~55°C)
- No electrolyte stratification provides longer service life
- High recombination efficient
- Built in copper core based in lead will carry large current
- Separator imported from AMER-SIL high porosity, PVC-SiO<sub>2</sub> and low resistance
- Pasted negative plate special grid design increase the active material, availability large current discharge and charge ability
- Tubular type positive plate (polyester tube) prevent the active material from falling. Multi metal alloy pressed positive grid increase the anti corrosion ability and service life

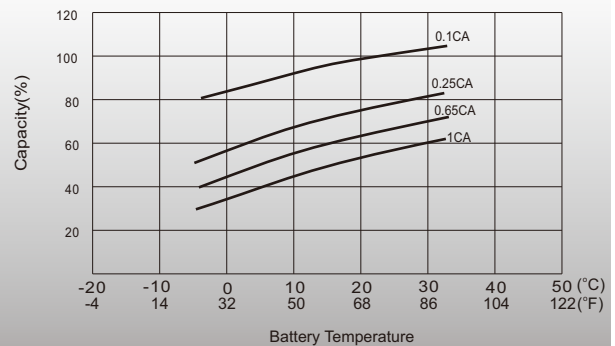
### Standards

- Compliance with IEC 60896, IEC 61427, DIN 40742 standards
- UL, CE Certified
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

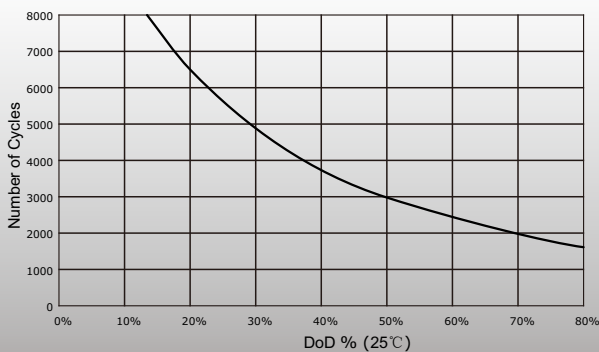
### Charge voltage vs ambient temperature curve



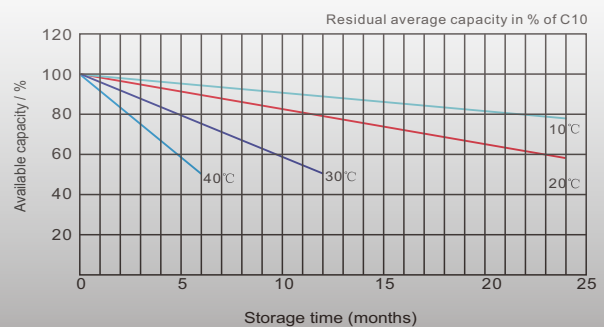
### Temperature effects in relation to battery capacity



### Cycle Life in Relation to DOD



### General Relation of Capacity VS. Storage Time



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