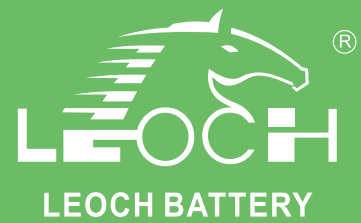




# OPzV Series-Tubular Gel

## 7 OPzV490(2V490Ah)

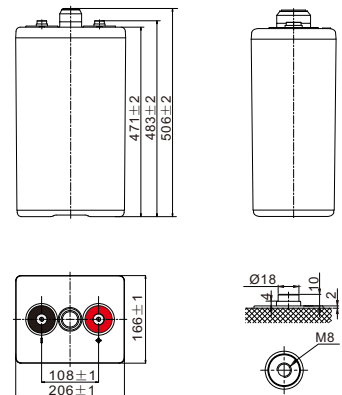


### Specifications

Rated Voltage	2V	
Nominal Capacity	490Ah	(C <sub>10</sub> , 1.80V/cell)
Dimension	Length	166mm(6.53 in.)
	Width	206mm(8.11 in.)
	Container Height	471mm(18.54 in.)
	Total Height	506mm(19.92 in.)
Approx Weight	39.0Kg (85.98 lbs)	
Terminal	M8	
Container Material	ABS	
Rated Capacity (25°C)	490.0 Ah	(10hr,49.0A,1.80V/cell)
	426.5 Ah	(5hr,85.3A,1.75V/cell)
	378.0 Ah	(3hr,126.0A,1.75V/cell)
	274.0 Ah	(1hr,274.0A,1.65V/cell)
Max. Discharge Current (5s)	3920A	
Internal Resistance(25°C)	Approx.0.73mΩ	
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)	122.5A	
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
1.85V/cell	384.0	354.0	289.0	219.0	147.0	113.0	77.6	54.5	45.9
1.80V/cell	472.0	429.0	337.0	247.0	162.0	123.0	83.7	58.3	49.0
1.75V/cell	559.0	480.0	359.0	257.0	166.0	126.0	85.3	59.3	49.8
1.70V/cell	627.0	523.0	380.0	267.0	170.0	129.0	86.7	60.1	50.3
1.65V/cell	673.0	553.0	395.0	274.0	174.0	131.0	88.0	60.8	50.9
1.60V/cell	704.0	572.0	405.0	279.0	176.0	133.0	88.9	61.2	51.2

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

F.V/Time	10min	15min	30min	1h	2h	3h	5h	8h	10h
1.85V/cell	714.0	665.0	552.0	424.0	286.0	221.0	153.0	107.6	91.3
1.80V/cell	863.0	794.0	637.0	474.0	313.0	240.0	164.0	115.6	97.3
1.75V/cell	1003.0	876.0	672.0	491.0	320.0	244.0	167.0	116.6	98.7
1.70V/cell	1106.0	942.0	704.0	506.0	326.0	248.0	169.0	118.6	99.7
1.65V/cell	1166.0	980.0	725.0	517.0	332.0	252.0	171.0	119.6	101.0
1.60V/cell	1197.0	1000.0	736.0	523.0	334.0	253.0	172.0	120.4	102.0



# OPzV Series-Tubular Gel

## 7 OPzV490(2V490Ah)



### 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

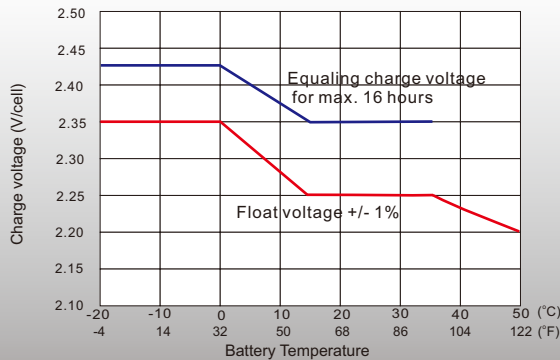
### General Features

- 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

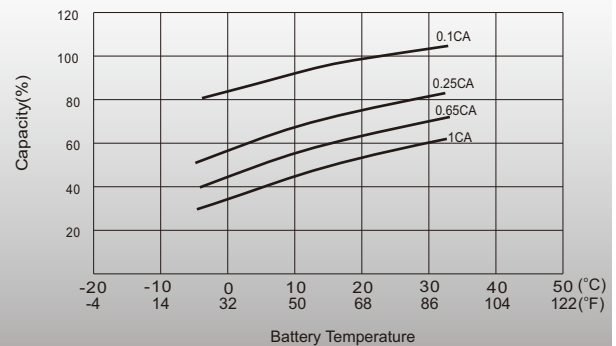
### Standards

- Compliance with IEC 60896, IEC 61427, DIN 40742 standards
- UL, CE Certified
- Manufactured in Leoch@IATF16949, OHSAS 18001, ISO 9001 and ISO 14001 certified production facilities

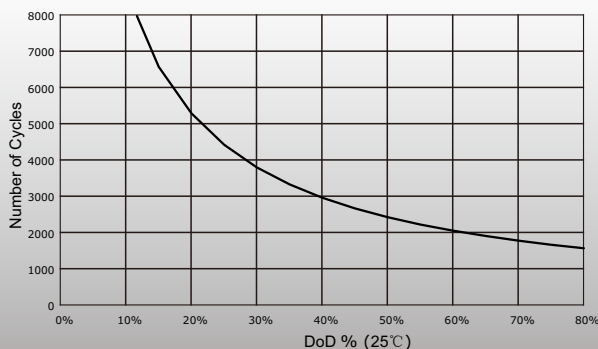
### Charge voltage vs ambient temperature curve



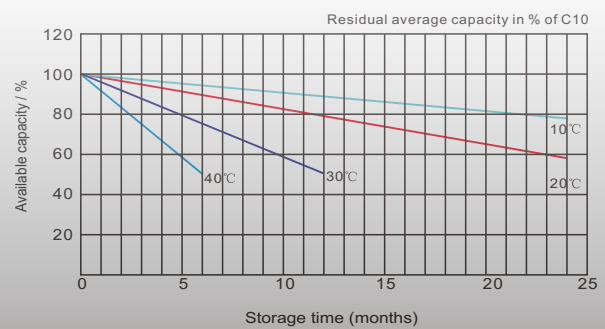
### Temperature effects in relation to battery capacity



### Cycle Life in Relation to DOD



### General Relation of Capacity VS. Storage Time



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Publication No.:LB-7 OPzV490-PD-EN-V1.1-201906