



OPzV Series-Tubular Gel

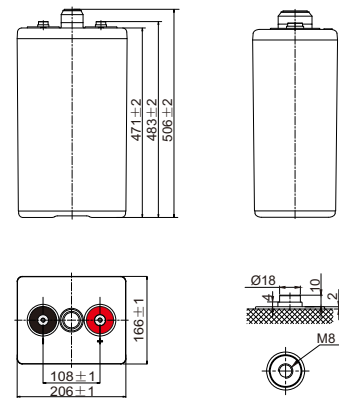
7 OPzV490(2V490Ah)

Specifications

Rated Voltage	2V	
Nominal Capacity	490Ah	(C ₁₀ , 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



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Applications

- Telecommunications
- Radio and cellular telephone relay stations
- Emergency lighting systems
- Power stations, Conventional power stations, alternative pwer(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

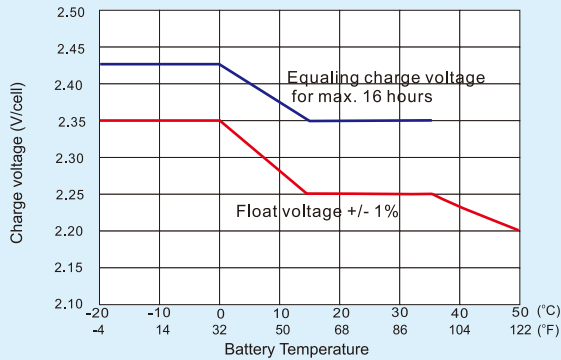
General Features

- 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
- Build in copper core based in lead will carry large current
- Separator imported form AMER-SIL high porosity, PVC-SiO₂ and low resistance
- Pasted negative plate special grid design increase the active material.availability large current discharge and charge ability
- Tubuler type positive plate (polyester tube) prevent the active material from falling. Muti metal alloy pressed positive grid increase the anti corrosion ability and service life

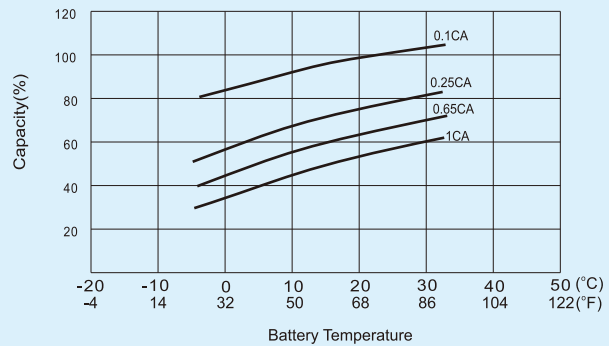
Standards

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

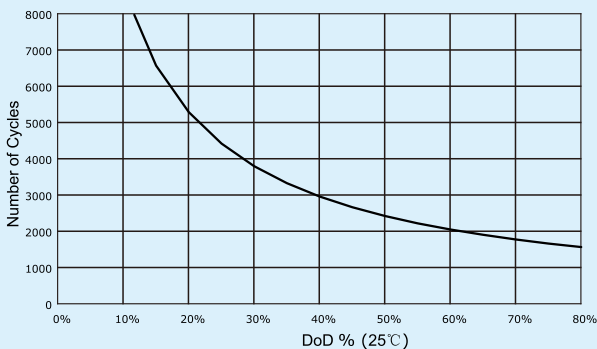
Charge voltage vs ambient temperature curve



Temperature effects in relation to battery capacity



Cycle Life in Relation to DOD



General Relation of Capacity VS. Storage Time

