



## OPzV Series-Tubular Gel

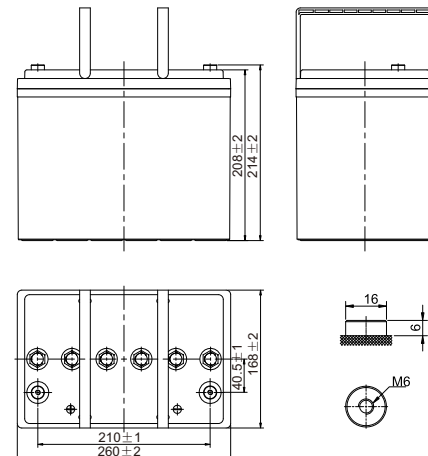
### 12V 2OPzV40(12V40Ah)

#### Specifications

Rated Voltage	12V	
Nominal Capacity	40.0Ah	(C <sub>10</sub> , 1.80V/cell)
Dimension	Length	260mm(10.24 in.)
	Width	168mm(6.61 in.)
	Container Height	208mm(8.19 in.)
	Total Height	214mm(8.43 in.)
Approx Weight	19.0Kg (41.9 lbs)	
Terminal	M6	
Container Material	ABS	
Rated Capacity (25°C)	40.0 Ah	(10hr,4.0A,1.80V/cell)
	35.0 Ah	(5hr,7.0A,1.75V/cell)
	30.3 Ah	(3hr,10.1A,1.75V/cell)
	23.7 Ah	(1hr,23.7A,1.67V/cell)
Max. Discharge Current (5s)	320A	
Internal Resistance(25°C)	Approx.11.7mΩ	
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)	10.0A	
Charge voltage(25°C)	Float	13.5V
	Temp. Coefficient	-3mV/cell/°C
	Cycle(Equalization)	14.1~14.4V
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	38.6	34.1	25.5	18.6	11.8	9.00	6.44	4.52	3.82
1.80V/cell	46.4	39.3	28.5	20.4	12.7	9.67	6.73	4.72	4.00
1.75V/cell	53.3	43.9	30.7	21.7	13.4	10.1	7.00	4.84	4.08
1.70V/cell	58.1	47.7	32.9	22.9	13.9	10.5	7.20	4.92	4.12
1.67V/cell	63.6	51.2	34.4	23.7	14.3	10.9	7.33	5.00	4.20
1.60V/cell	67.9	54.1	35.7	24.4	14.9	11.1	7.53	5.08	4.28

#### 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	63.5	58.4	48.5	36.2	23.1	17.6	12.7	8.93	7.67
1.80V/cell	76.8	69.6	54.5	39.5	24.9	18.8	13.3	9.33	7.93
1.75V/cell	89.3	76.8	58.1	41.9	26.0	19.7	13.7	9.60	8.13
1.70V/cell	98.4	82.7	61.7	44.0	26.8	20.3	14.1	9.73	8.20
1.67V/cell	103.7	86.1	63.9	45.2	27.5	20.9	14.3	9.87	8.33
1.60V/cell	106.4	87.9	65.5	46.3	28.3	21.3	14.7	10.1	8.47



## OPzV Series-Tubular Gel 12V 20PzV40(12V40Ah)

### 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

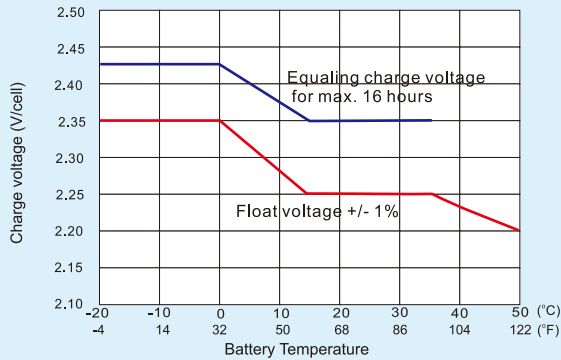
### General Features

- 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-SiO<sub>2</sub> 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

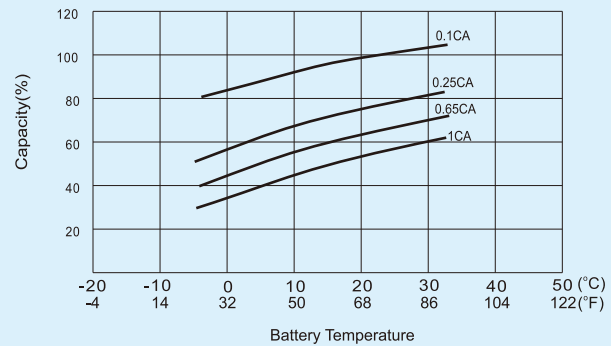
### Standards

- 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

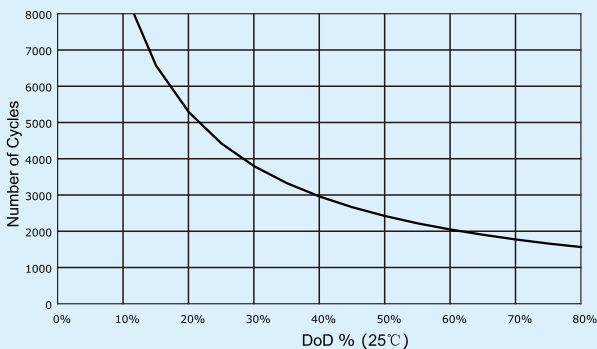
### Charge voltage vs ambient temperature curve



### Temperature effects in relation to battery capacity



### Cycle Life in Relation to DOD



### General Relation of Capacity VS. Storage Time

