

Motive Battery

Energy Storage Battery

Reserve Battery

Motorcycle Battery



## Energy Storage Battery-Tubular GEL Technology-OPzV Series

# OPzV490E

(2V 490Ah)

### GENERAL FEATURES

- ◆ 20 years design life at floating condition
- ◆ Wide operating temperature range from -40°C to +60°C
- ◆ Tubular positive plate with prolonged cycle life
- ◆ Fumed silica gel electrolyte
- ◆ lead-calcium grid significantly improves the corrosion resistance ability
- ◆ Low self-discharge rate and long shelf life
- ◆ Excellent deep discharge recovery capability



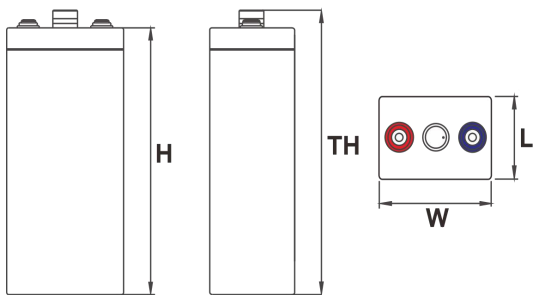
### Application

- ◆ Renewable energy system
- ◆ Hybrid solar power system
- ◆ Uninterrupted Power Supply (UPS)
- ◆ Communications and electric equipment
- ◆ Emergency lighting equipment
- ◆ Fire alarm and security systems
- ◆ Control equipment, and other factory automation equipment
- ◆ Emergency power supply (EPS)
- ◆ Lighting equipment

### Dimension

Unit:mm

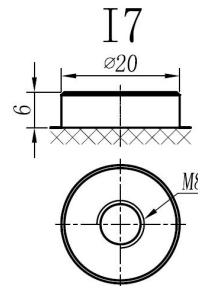
Length	166±2mm / 6.54inch
Width	206±2mm / 8.11inch
Container Height	473±3mm / 18.62inch
Total Height	505±3mm / 19.88inch



### Terminal

Unit:mm

Terminal Type: I7



### Weight

36.5kg 80.47lbs



This document is subject to change without prior notification

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## OPzV490E

### Specification

<b>Nominal Voltage</b>	2V	
<b>Rated Capacity(25°C)</b>	519Ah	20hr Rate(1.80V/cell)
	490Ah	10hr Rate(1.80V/cell)
	428Ah	5hr Rate(1.75V/cell)
	383Ah	3hr Rate(1.70V/cell)
	293Ah	1hr Rate(1.60V/cell)
<b>Container Material</b>	ABS (Fire-proofing ABS container available)	
<b>Operating Temperature Range</b>	<b>Discharge</b>	-40 ~ +60°C
	<b>Charge</b>	0 ~ +40°C
	<b>Storage</b>	-20 ~ +40°C
<b>Capacity Effected by Temperature</b>	<b>40°C / 104°F</b>	106%
	<b>25°C / 77°F</b>	100%
	<b>0°C / 32°F</b>	86%
	<b>-20°C / -4°F</b>	60%
<b>Charge Voltage</b>	<b>Float Voltage</b>	2.23V/cell@25°C, Compensation Factor: -3mV/cell/°C
	<b>Equalize Voltage</b>	2.35 -2.40V/cell@25°C, Compensation Factor: -3mV/cell/°C
	<b>Cycle Voltage</b>	2.40 -2.50V/cell@25°C, Compensation Factor: -5mV/cell°C
<b>Max Charging Current</b>	98A (0.2C)	
<b>Max. Discharge Current (5S)</b>	2940A	
<b>Internal Resistance</b>	0.5mΩ	
<b>Self Discharge</b>	<3%, OPZV series stored at 25 °C require a supplementary charge every six months, the charging interval would shrink when the ambient temperature went higher	

### Discharge Performance

Constant Current Discharge Table (25°C/77°F) Unit: A

F.V/Time	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	351	281	222	153	117	80.4	57.3	47.4	25.1
1.80V/cell	390	310	244	162	122	83.3	59.6	49.0	26.0
1.75V/cell	417	331	257	170	125	85.5	61.0	50.2	26.6
1.70V/cell	442	350	270	174	128	87.5	61.7	50.9	27.0
1.65V/cell	466	368	281	179	130	89.0	62.7	51.4	27.2
1.60V/cell	491	380	293	182	131	89.8	63.3	51.9	27.3

Constant Power Discharge Table (25°C/77°F) Unit: W

F.V/Time	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	660	534	425	295	226	157	112	93.2	49.6
1.80V/cell	718	577	461	310	235	161	116	95.6	51.0
1.75V/cell	755	606	481	322	239	165	118	97.5	51.9
1.70V/cell	788	633	502	330	243	168	119	98.3	52.6
1.65V/cell	816	660	518	337	247	170	120	99.0	52.8
1.60V/cell	847	670	535	340	248	171	121	99.6	52.9



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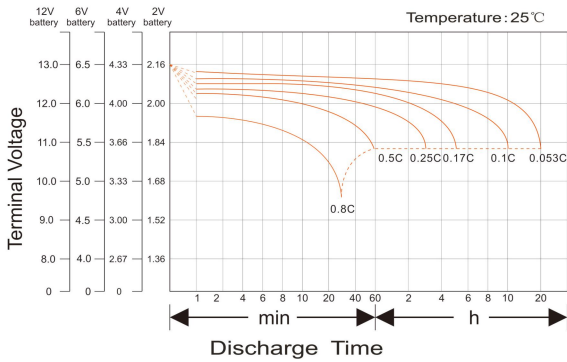


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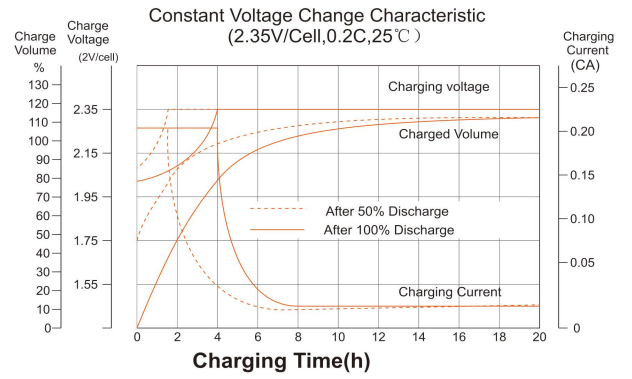


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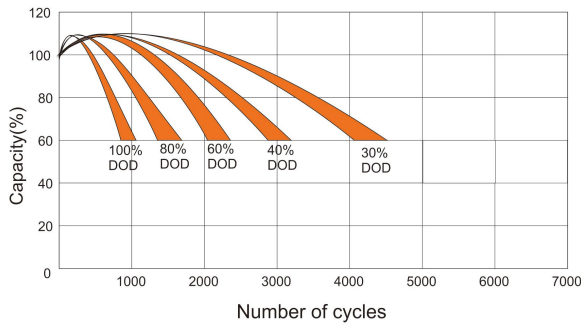
### Discharge Characteristics Curve



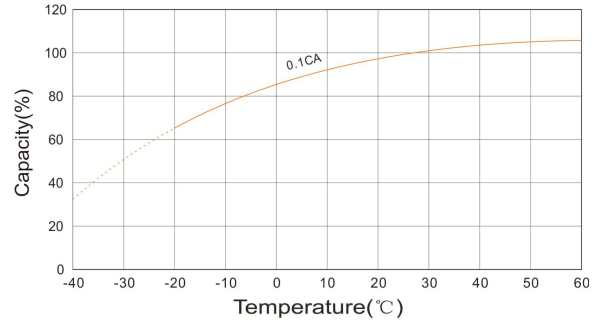
### Charging Characteristics Curve



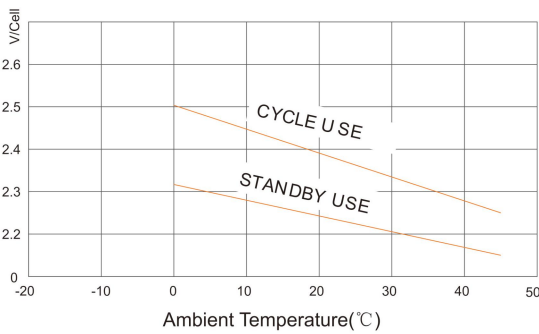
### Cycle life in relation to depth of Discharge



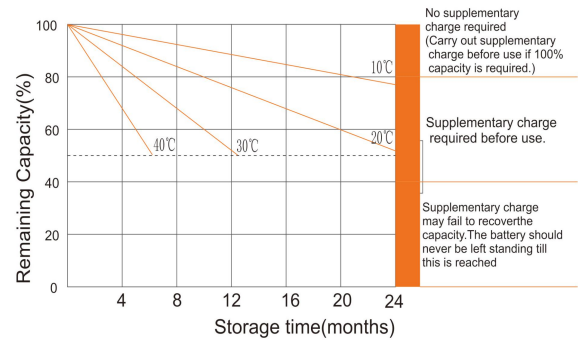
### Temperature effects on Capacity



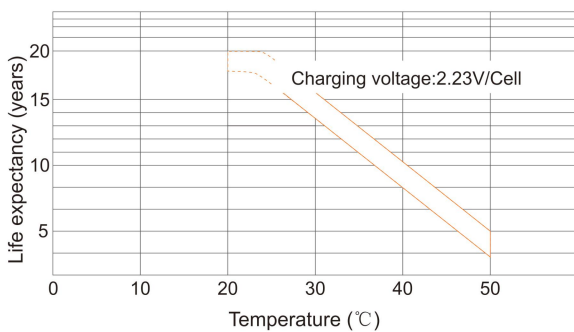
### Relationship between charging voltage and temperature



### Self-discharge Characteristics



### Temperature effects on Float life



### Life Characteristics of Standby use

