

**OPzV series** are 2V cells made in gel technology, with a tubular (armoured) positive plate. Thanks to this, their design life can reach in the standby use **over 18 years at 25°C**. EUROPOWER OPzV cells are also suitable for deep discharges and their cyclic life amounts to 1700 cycles for 80% discharge depth.

### TECHNICAL DATA

Nominal voltage	2 V	
Nominal capacity	500 Ah / C <sub>10</sub>	
Cell per unit	1	
Technology	GEL	
Design life	over 20 years @ 20°C* over 18 years @ 25°C	
Dimensions	height	505,0 mm
	length	166,0 mm
	width	206,0 mm
Weight	~41 kg	
Capacity @ 25°C	24h 22,3A @1,80V/cell	535,2 Ah
	10h 50,0A @1,80V/cell	500,0 Ah
	3h 126A @1,75V/cell	378,0 Ah
	1h 281A @1,70V/cell	281,0 Ah
Ambient nominal temperature range	charge	0°C ~ 40°C
	discharge	-20°C ~ 50°C
	storage	-20°C ~ 40°C
Internal resistance @ fully charge battery	≤0,495 mΩ	
Charging voltage @ 20°C	standby use	2,25V (-3 mV/°C)
	cycle use	2,35 V do 2,40V (-4 mV/°C)
Charging current	recommended	50 A
	maximum	125 A
Capacity retention during storage @ 20°C (self discharge)	after 1 month	99 %
	after 6 months	92 %
	after 12 months	84 %
Container material	standard	ABS UL 94-HB
	optional	ABS UL 94-V0**
Terminal	faston F1 M8	
Terminal hardware initial torque	15,0 Nm	

\* - According to Eurobat (Long Life group)

\*\* - Flame-retardant

### NO TRANSPORT RESTRICTED

Not restricted for air, surface and water transport. Classified as non-hazardous material (IATA/ICAO Special Provision A67, DOT-CFR Title 49 parts 171-189, IMDG amendment 27)

### DISCHARGE CHARACTERISTICS

#### • Constant current (Current [A], 25°C / 77°F)

F.V. V/cell	Discharge time										
	30 min	1h	3h	4h	5h	6h	8h	10h	24h	48h	100h
1,90	254	193	106	89	76,2	65,8	53,0	44,1	19,8	11,0	5,9
1,85	298	242	119	96	81,9	71,3	58,5	49,0	21,6	11,7	6,4
1,80	354	260	123	99	84,6	73,8	60,2	50,0	22,3	12,3	6,6
1,75	387	273	126	101	86,6	75,7	61,6	51,2	22,8	12,6	6,8
1,70	402	281	129	104	88,1	77,2	62,8	52,0	23,3	12,7	7,0

#### • Constant power (Power [W/cell], 25°C / 77°F)

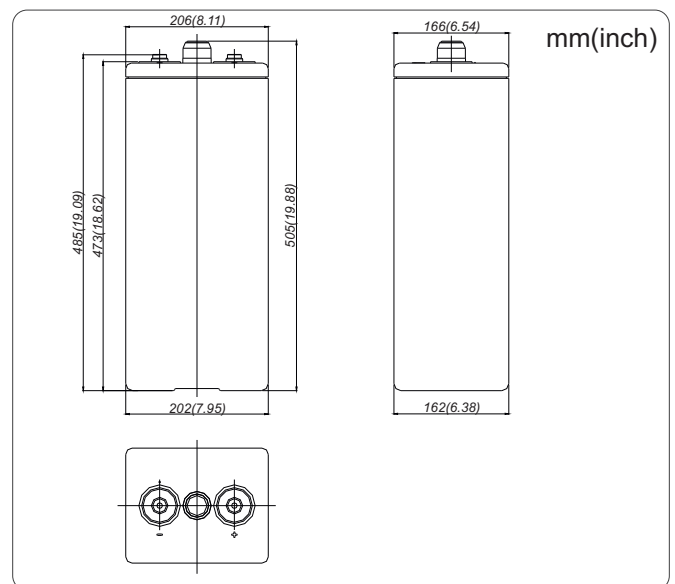
F.V. V/cell	Discharge time										
	30 min	1h	2h	3h	4h	5h	6h	8h	10h	16h	24h
1,90	628	422	290	234	182	156,1	125,8	104,3	87,8	56,7	38,5
1,85	688	474	319	243	191	160,9	138,7	115,0	96,8	62,5	42,5
1,80	716	509	332	255	200	165,3	144,8	121,0	101,0	65,2	44,3
1,75	746	540	344	262	205	173,3	152,5	127,0	106,4	68,7	46,8
1,70	777	573	354	269	214	179,6	155,4	129,1	108,4	70,0	47,5

F.V. - Final voltage

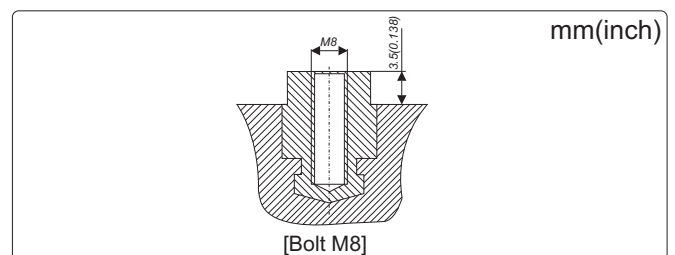
### APPLICATIONS

- Uninterruptible Power Supplies (UPS)
- Telecommunication power plants
- GSM base stations
- Substations
- Cable television
- Renewable energy sources

### DIMENSIONS

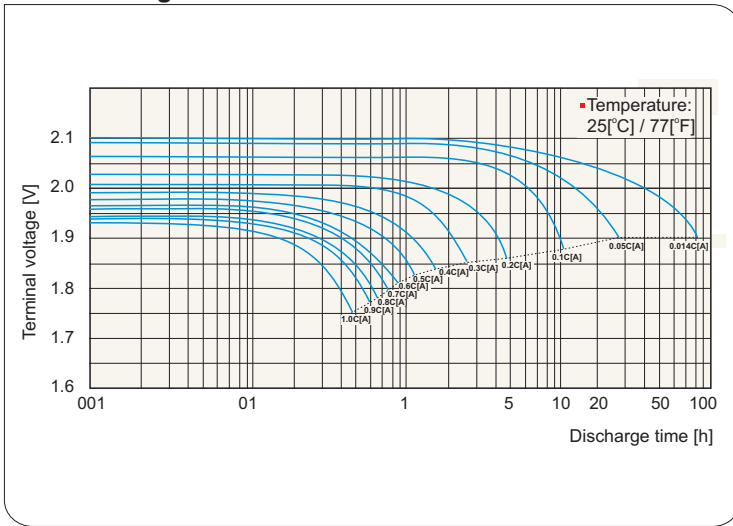


### TERMINALS

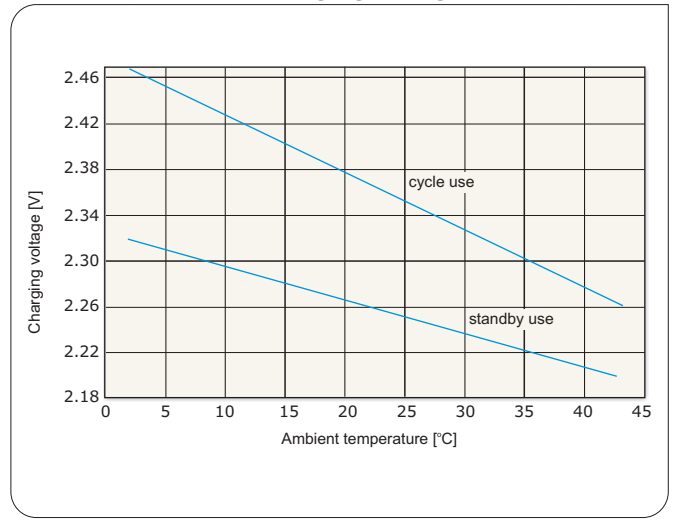


# 7 OPzV 500

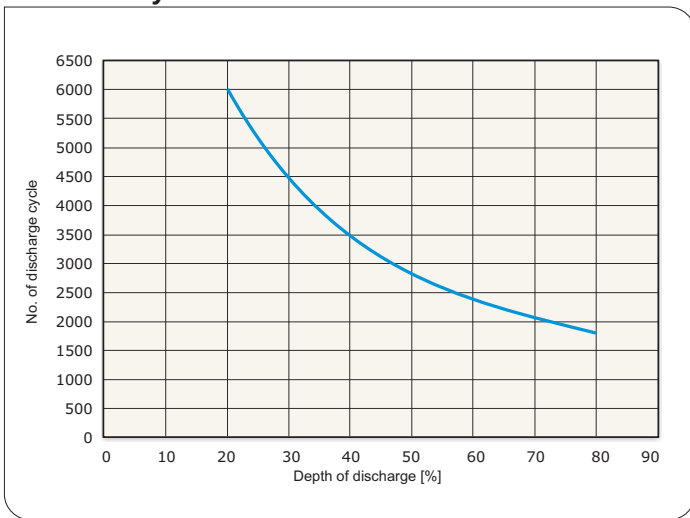
## Cell discharge characteristics



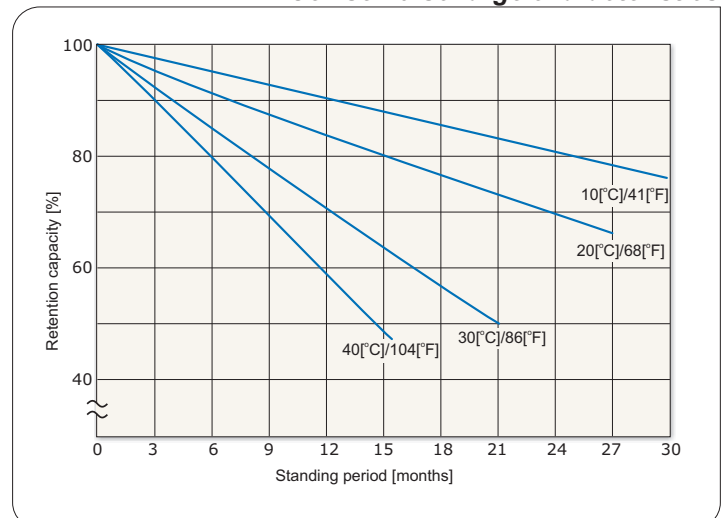
## Relationship between charging voltage and temperature



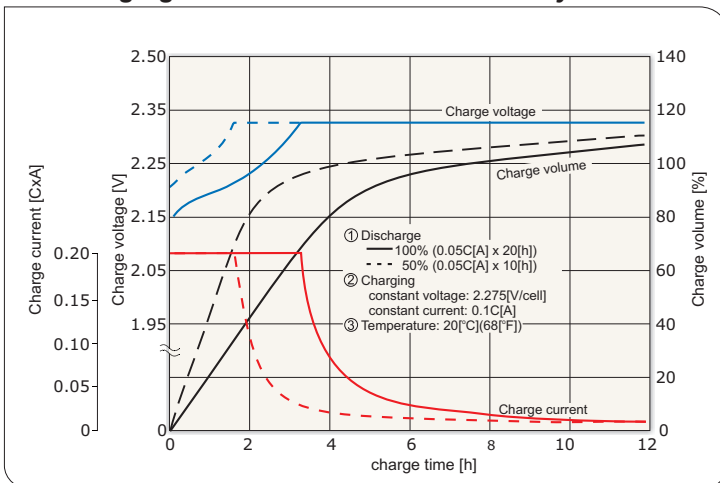
## Cell life in cyclic use



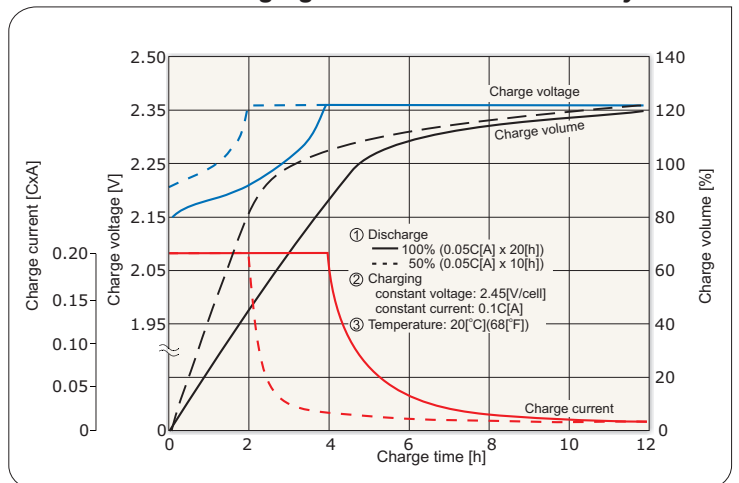
## Cell self discharge characteristics



## Cell charging characteristics for the standby use



## Cell charging characteristics for the cycle use



## Battery discharge current and final discharge voltage

Discharge current [A]	$0.2C > I$	$0.2C \leq I < 0.5C$	$0.5C \leq I < 1.0C$	$1.0C \leq I$
Final discharge voltage [V/cell]	1.90	1.85	1.80	1.75

\*) C - Capacity

