

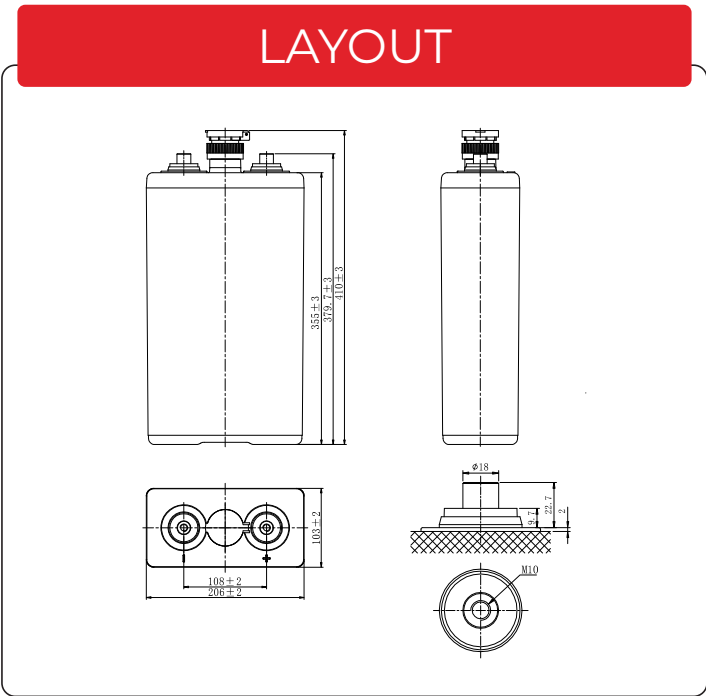
STARMAX

OPzS FLOODED TUBULAR BATTERIES

OPzS200-2



OPzS200-2 (2V 200Ah)



General Features

- ✓ 20 years design life(20°C)
- ✓ Lower self discharge
- ✓ Higher thermal capacity, no thermal runaway will occur
- ✓ Superior deep cycle performance
- ✓ Wide operation temperature range

Applications

- ✓ Telecommunications
- ✓ Buoy lighting
- ✓ Standby power
- ✓ Railway signalling
- ✓ Emergency lighting systems
- ✓ Alternative power (solar, wind)
- ✓ Maritime standby power on ships and ashore

Standards

- ✓ ACC. to IEC60896, DIN 40736
- ✓ Manufactured by Starmax ISO 45001, ISO 9001 and ISO 14001 certified production facilities



SPECIFICATIONS

Rated Voltage	2V	
Nominal Capacity	C ₁₀ ,1.80V/cell	200.0Ah
Dimensions	Length	103±2mm (4.06 inches)
	Width	206±2mm (8.11 inches)
	Container height	355±3mm (13.98 inches)
	Total height	410±3mm (16.14 inches)
Approx. weight	Without Electrolyte 12.9kg (28.44lbs) With Electrolyte 17.4 kg (38.37lbs)	
Terminal	M10	
Container material	SAN transparent container	
Rated capacity (25°C)	200.0 Ah	(10hr,20.0A,1.80V/cell)
	177.5 Ah	(5hr,35.5A,1.75V/cell)
	154.2 Ah	(3hr,51.4A,1.75V/cell)
	114.2 Ah	(1hr,114.2A,1.60V/cell)
Max. discharge current	1600A (5s)	
Internal resistance (25°C)	Approx 1.20mΩ	
Operating temp. range	Discharge	-15~55°C (5~131°F)
	Charge	0~45°C (32~113°F)
	Storage	-15~45°C (5~113°F)
Nominal operating temp. range	25±5°C (77±9°F)	
Cycle Use	Initial Charging Current less than 0.15CA.Voltage 2.40V~2.45V at 20°C(68°F)Temp. Coefficient -5mV/°C	
Standby Use	Initial Charging Current less than 0.15CA. Voltage 2.23V~2.25V at 20°C(68°F)Temp. Coefficient -3mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	20°C (68°F)	100%
	0°C (32°F)	86%
Self discharge	≤4% per month at 20°C	

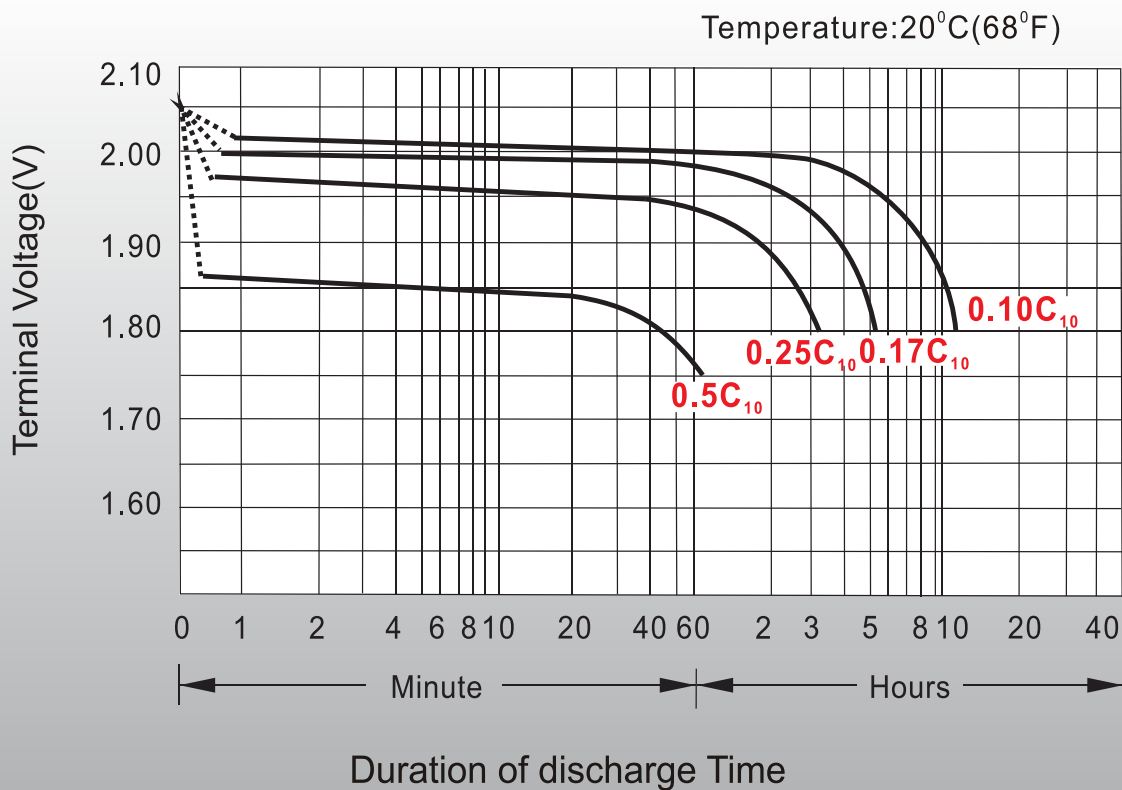
Constant Current Discharge (Amperes) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	79.4	58.0	44.7	37.0	31.9	28.0	22.8	19.1	10.5	8.81	3.16	2.37	2.03
1.80V/cell	92.8	63.9	48.8	40.0	34.1	29.8	24.0	20.0	10.9	9.14	3.28	2.46	2.10
1.75V/cell	100.8	68.0	51.4	41.8	35.5	30.9	24.7	20.4	11.1	9.31	3.34	2.50	2.14
1.70V/cell	106.2	71.0	53.1	43.1	36.5	31.7	25.1	20.8	11.3	/	/	/	/
1.65V/cell	110.4	72.7	54.7	44.1	37.3	32.3	25.6	21.1	11.5	/	/	/	/
1.60V/cell	114.2	74.4	55.6	44.7	37.8	32.7	25.9	21.4	11.6	/	/	/	/

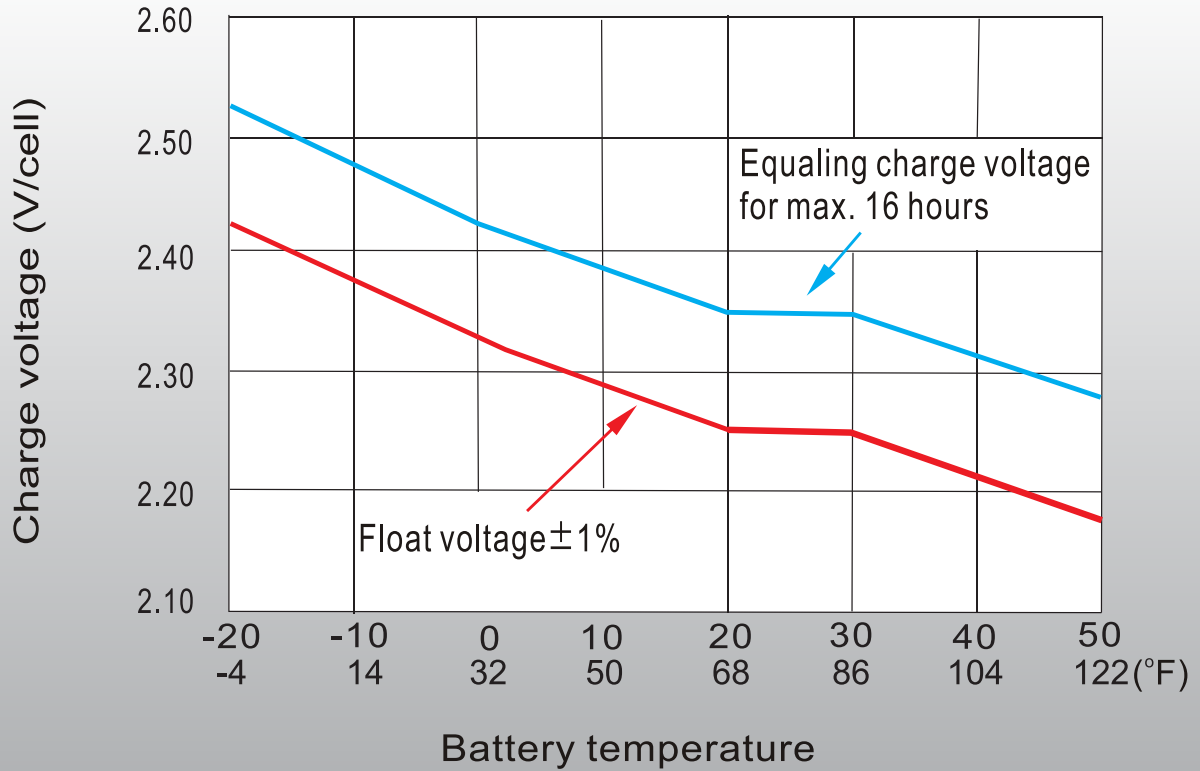
Constant Power Discharge (Watts/Cell) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	148.6	109.4	84.7	70.4	61.0	53.8	44.1	37.1	20.5	17.2	6.12	4.57	3.91
1.80V/cell	171.1	119.2	91.5	75.3	64.5	56.7	46.0	38.5	21.1	17.7	6.30	4.70	4.02
1.75V/cell	183.5	125.7	95.7	78.2	67.0	58.5	47.0	39.1	21.4	17.9	6.39	4.77	4.08
1.70V/cell	191.6	130.3	98.2	80.2	68.5	59.8	47.7	39.6	21.7	/	/	/	/
1.65V/cell	197.6	132.9	100.6	81.8	69.7	60.7	48.3	40.1	21.9	/	/	/	/
1.60V/cell	202.8	135.3	101.8	82.6	70.3	61.3	48.7	40.4	22.0	/	/	/	/

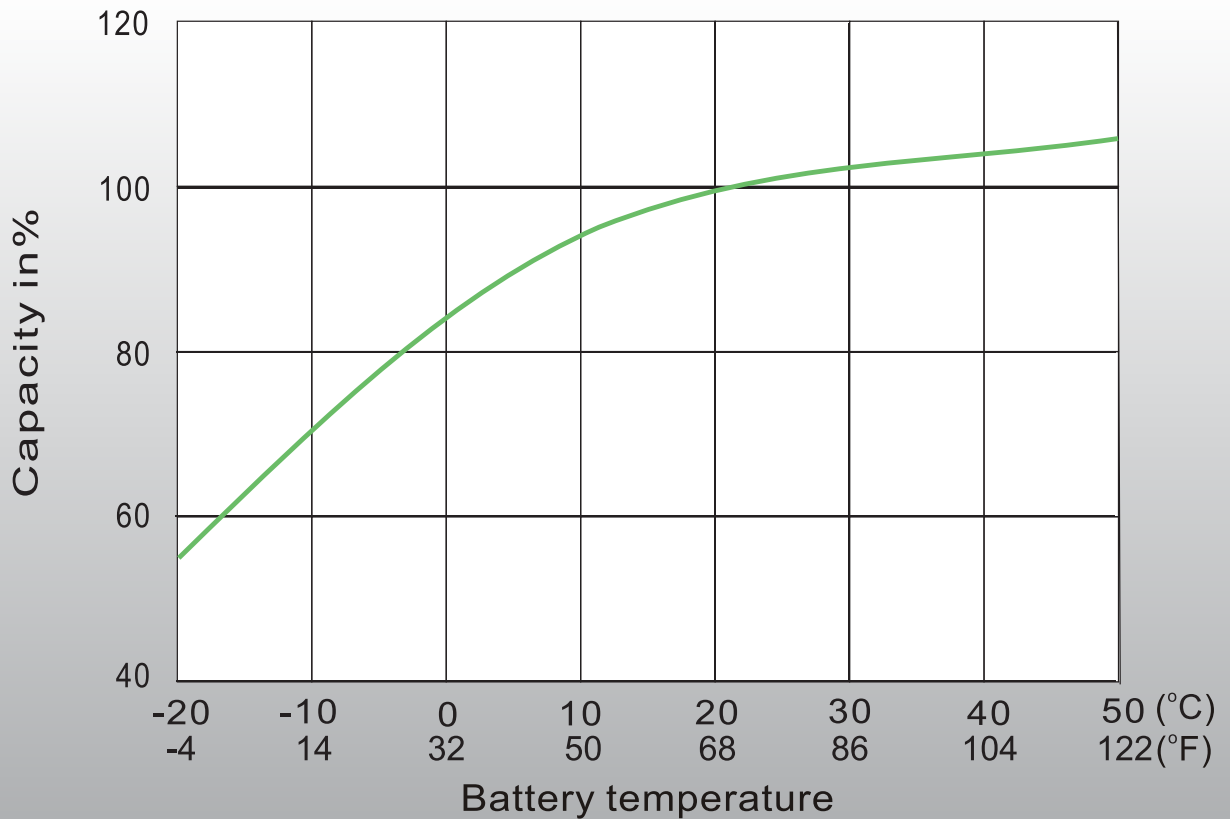
Discharge Characteristics



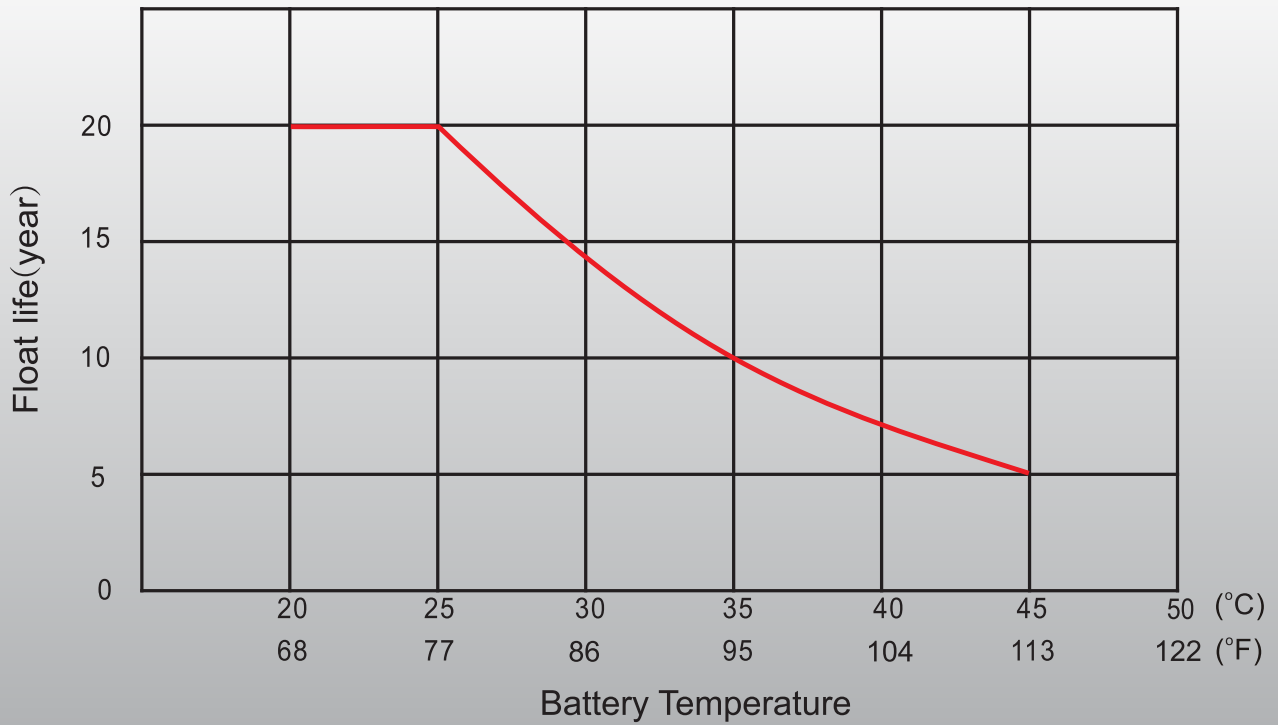
Charge Voltage vs Ambient Temperature Curve



Discharge Capacity vs Ambient Temp. Curve (110A)



Effect of Temp. on Long Term Float Life





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