

STARMAX

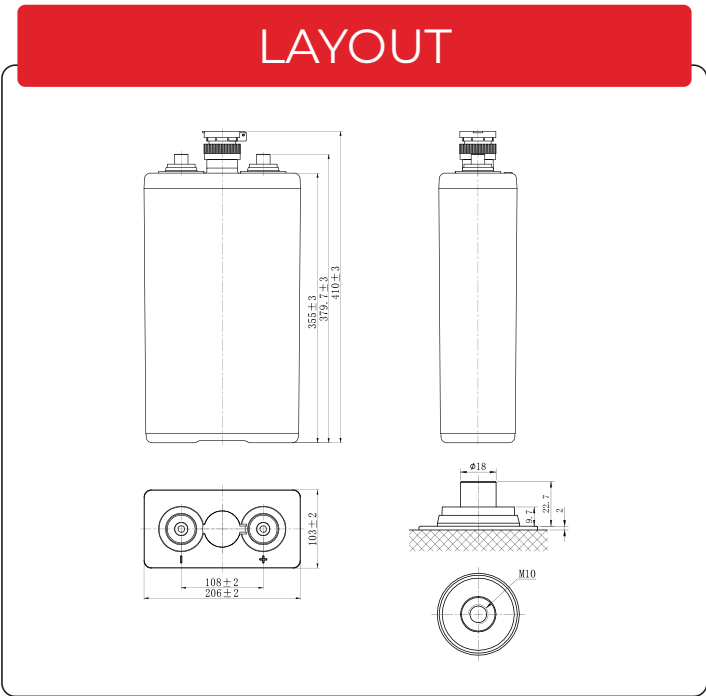
OPzS FLOODED TUBULAR BATTERIES

OPzS100-2



www.starmaxbatteries.com

OPzS100-2 (2V 100Ah)



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	100.0Ah
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 8.1kg (17.86lbs) With Electrolyte 13.2 kg (29.11lbs)	
Terminal	M10	
Container material	SAN transparent container	
Rated capacity (25°C)	100.0 Ah	(10hr,10.0A,1.80V/cell)
	89.0 Ah	(5hr,17.8A,1.75V/cell)
	77.1 Ah	(3hr,25.7A,1.75V/cell)
	57.1 Ah	(1hr,57.1A,1.60V/cell)
Max. discharge current	800A (5s)	
Internal resistance (25°C)	Approx 1.5mΩ	
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	

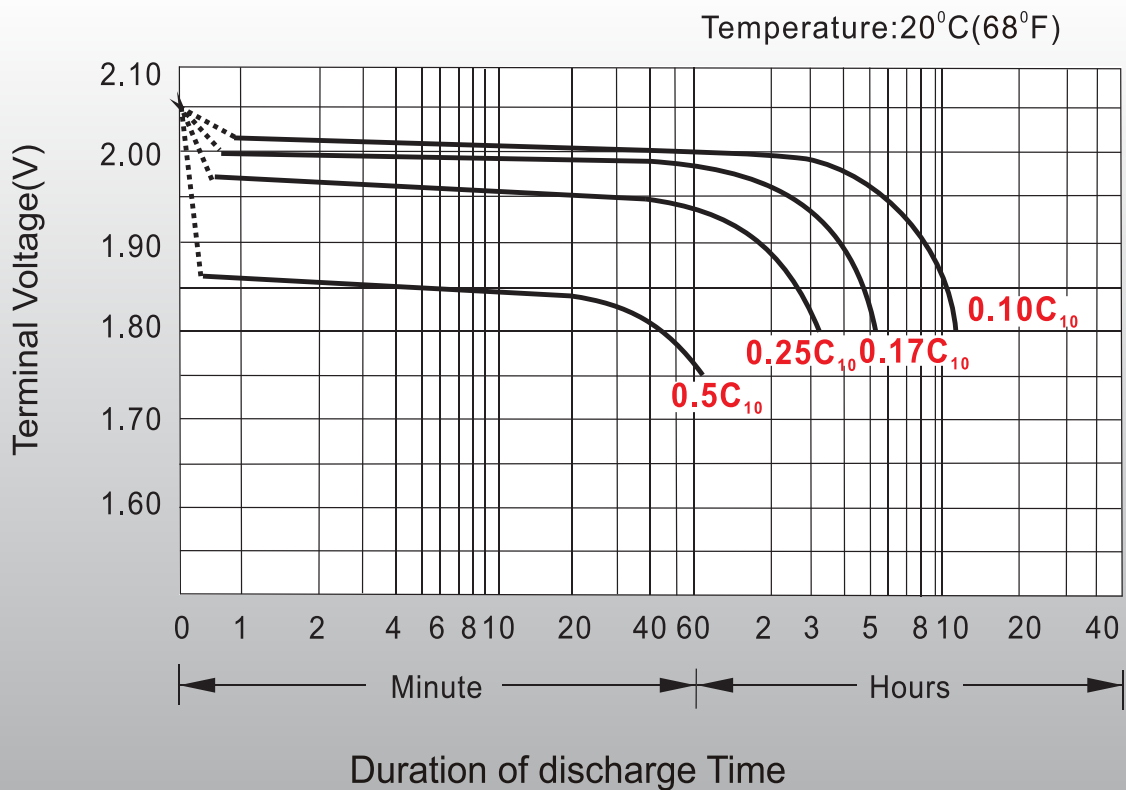
Constant Current Discharge (Amperes) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	39.7	29.0	22.3	18.5	16.0	14.0	11.4	9.57	5.26	4.41	1.58	1.19	1.02
1.80V/cell	46.4	32.0	24.4	20.0	17.0	14.9	12.0	10.0	5.47	4.59	1.65	1.23	1.06
1.75V/cell	50.4	34.0	25.7	20.9	17.8	15.5	12.4	10.2	5.57	4.67	1.68	1.26	1.08
1.70V/cell	53.1	35.5	26.5	21.5	18.2	15.8	12.6	10.4	5.67	/	/	/	/
1.65V/cell	55.2	36.4	27.3	22.0	18.6	16.1	12.8	10.6	5.75	/	/	/	/
1.60V/cell	57.1	37.2	27.8	22.4	18.9	16.4	12.9	10.7	5.80	/	/	/	/

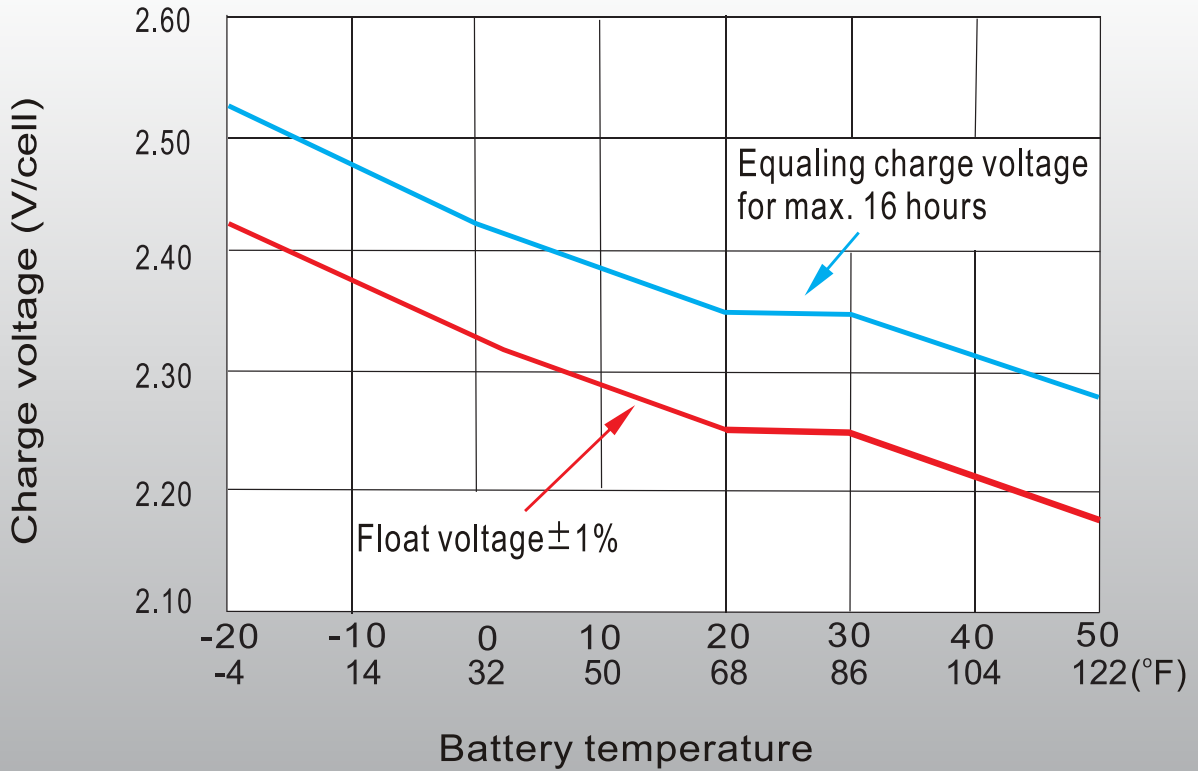
Constant Power Discharge (Watts/Cell) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	74.3	54.7	42.3	35.2	30.5	26.9	22.0	18.6	10.2	8.55	3.05	2.28	1.95
1.80V/cell	85.6	59.6	45.8	37.6	32.3	28.4	23.0	19.2	10.6	8.89	3.17	2.37	2.03
1.75V/cell	91.8	62.9	47.8	39.1	33.5	29.3	23.5	19.6	10.7	8.97	3.20	2.40	2.05
1.70V/cell	95.8	65.2	49.1	40.1	34.2	29.9	23.8	19.8	10.8	/	/	/	/
1.65V/cell	98.8	66.4	50.3	40.9	34.9	30.4	24.2	20.1	10.9	/	/	/	/
1.60V/cell	101.4	67.6	50.9	41.3	35.2	30.6	24.3	20.2	11.0	/	/	/	/

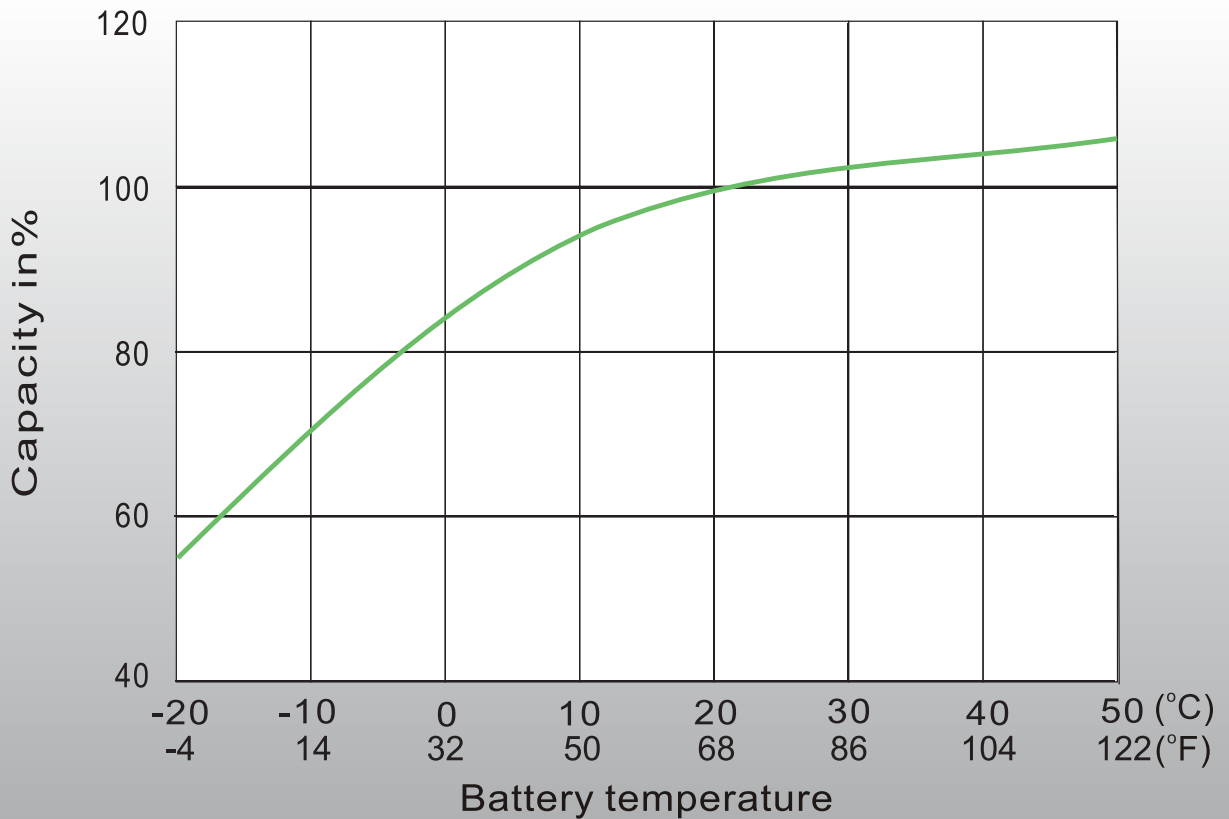
Discharge Characteristics



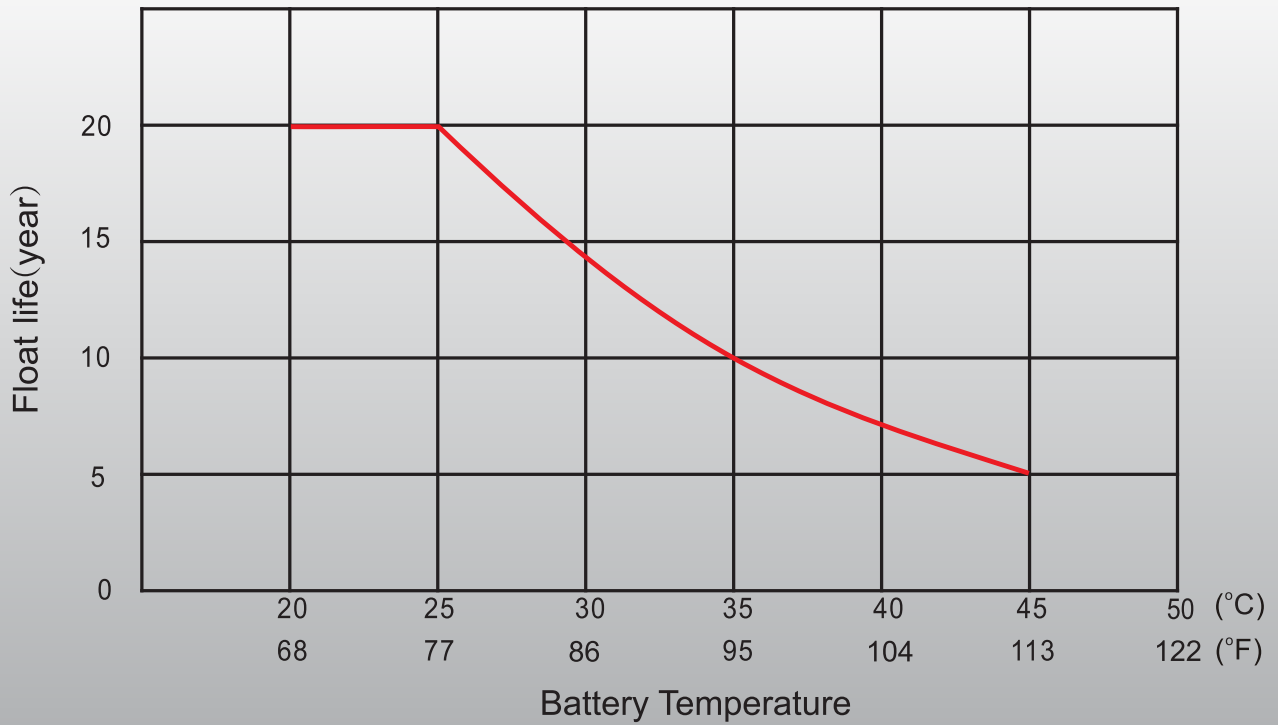
Charge Voltage vs Ambient Temperature Curve



Discharge Capacity vs Ambient Temp. Curve (110A)



Effect of Temp. on Long Term Float Life





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