

STARMAX

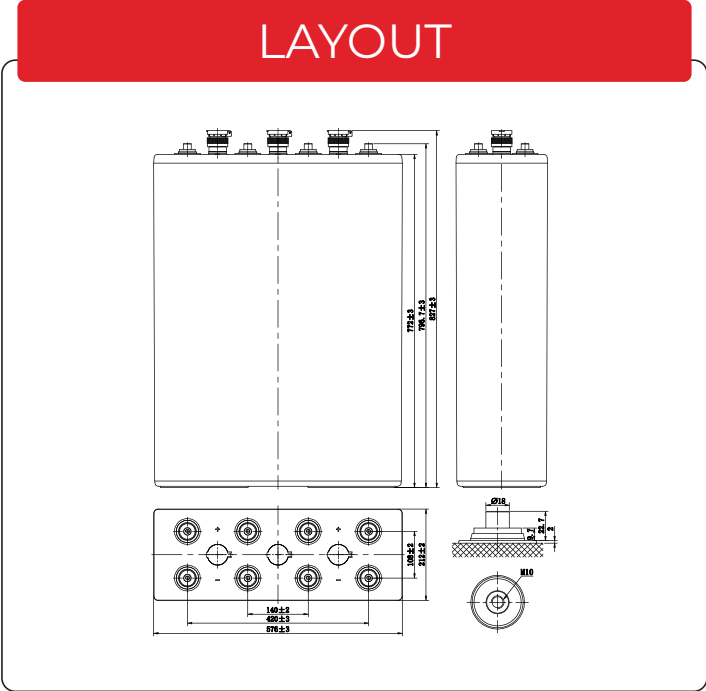
OPzS FLOODED TUBULAR BATTERIES

OPzS3000-2



www.starmaxbatteries.com

OPzS3000-2 (2V 3000Ah)



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	3000.0Ah
Dimensions	Length	576±2mm (22.68 inches)
	Width	212±3mm (8.35 inches)
	Container height	772±3mm (30.39 inches)
	Total height	827±3mm (32.56 inches)
Approx. weight	Without Electrolyte 164.8kg (362.56lbs) With Electrolyte 224.8 kg (494.56lbs)	
Terminal	M10	
Container material	SAN transparent container	
Rated capacity (25°C)	3000.0 Ah	(10hr,300.0A,1.80V/cell)
	2664.5 Ah	(5hr,532.9A,1.75V/cell)
	2313.0 Ah	(3hr,771.0A,1.75V/cell)
	1713.0 Ah	(1hr,1713.0A,1.60V/cell)
Max. discharge current	24000A (5s)	
Internal resistance (25°C)	Approx 0.38mΩ	
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	

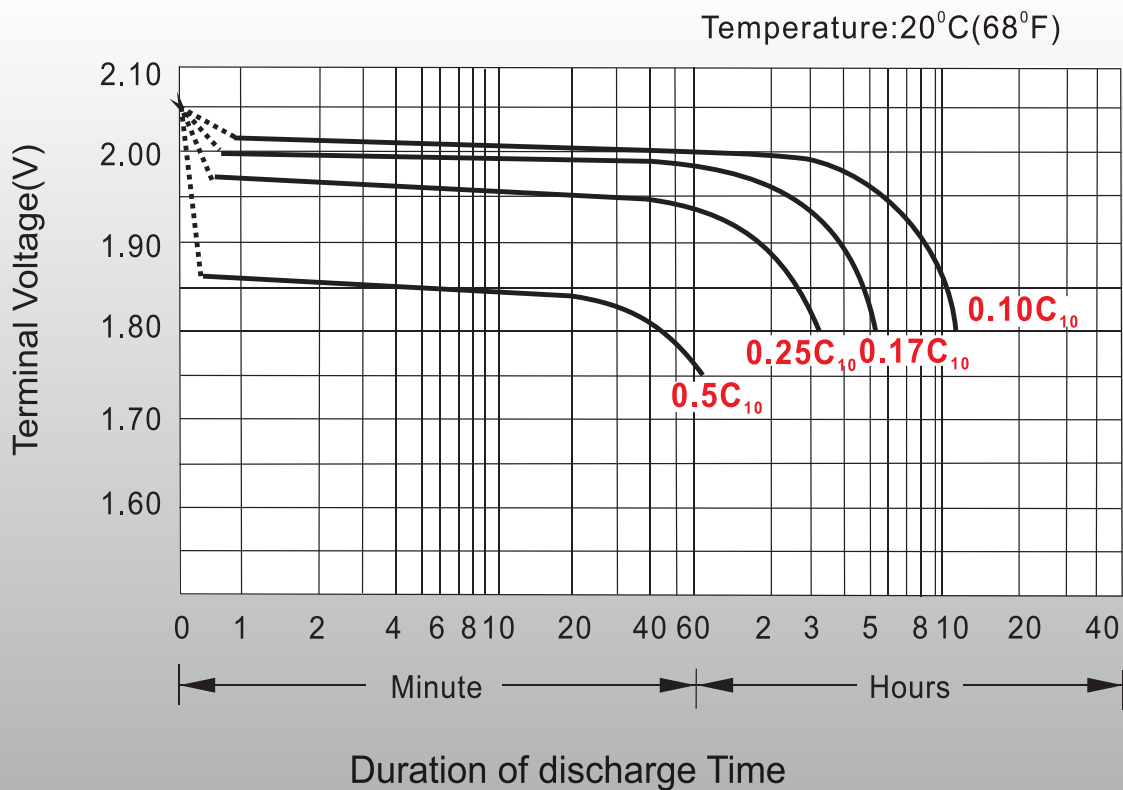
Constant Current Discharge (Amperes) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	1191.0	870.0	670.0	554.7	478.8	420.5	342.7	287.2	157.7	132.3	47.5	35.6	30.5
1.80V/cell	1392.0	958.5	732.0	599.6	510.9	446.5	360.5	300.0	164.0	137.5	49.4	37.0	31.7
1.75V/cell	1512.0	1020.0	771.0	626.3	532.9	463.5	370.7	306.7	167.1	140.1	50.3	37.7	32.3
1.70V/cell	1593.0	1065.0	796.0	645.8	547.3	474.9	376.9	311.9	170.0	/	/	/	/
1.65V/cell	1656.0	1090.5	820.0	660.8	559.5	484.1	383.6	317.1	172.4	/	/	/	/
1.60V/cell	1713.0	1116.0	834.0	670.5	567.0	490.8	388.4	320.8	174.0	/	/	/	/

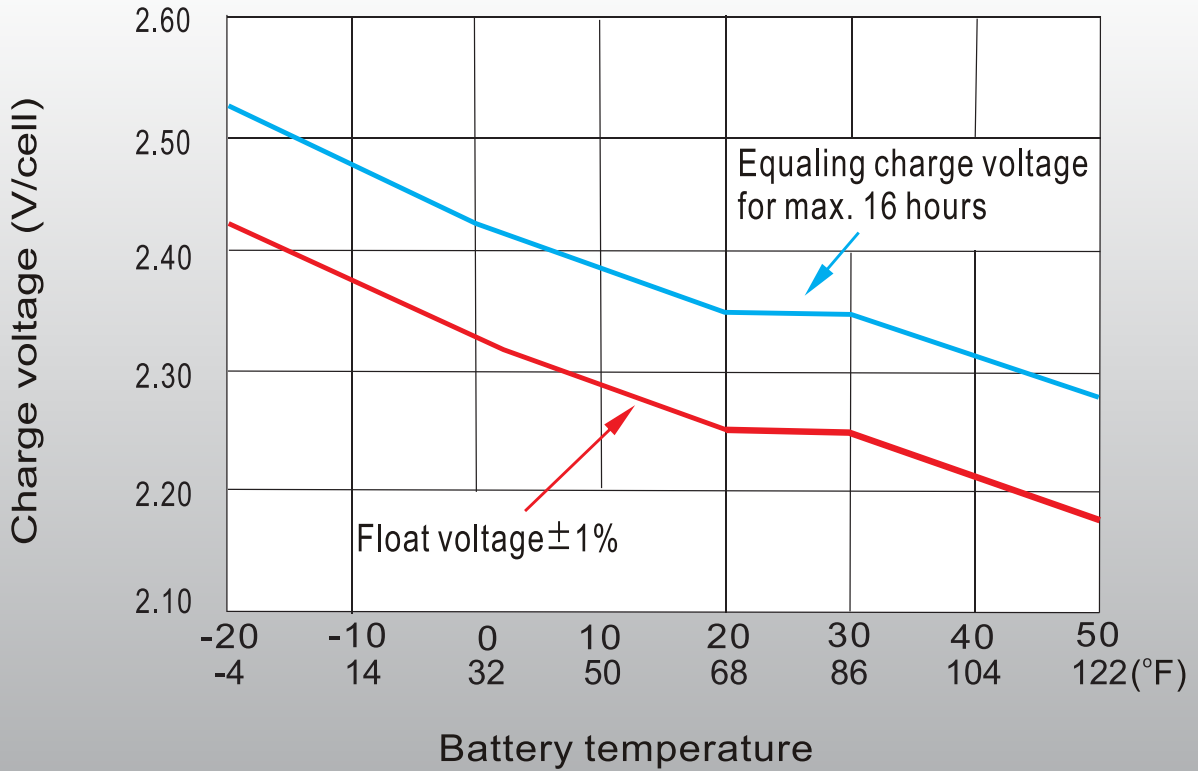
Constant Power Discharge (Watts/Cell) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	2228.6	1640.9	1270.0	1055.7	915.1	807.7	661.0	556.7	307.0	257.3	91.7	68.5	58.6
1.80V/cell	2567.0	1788.0	1372.8	1129.4	968.1	850.9	690.1	576.9	316.6	265.4	94.6	70.7	60.4
1.75V/cell	2753.0	1885.9	1435.0	1172.7	1005.0	878.0	705.7	586.5	321.0	269.1	95.9	71.7	61.3
1.70V/cell	2873.3	1954.8	1472.3	1203.1	1027.5	896.7	715.2	593.7	324.9	/	/	/	/
1.65V/cell	2964.6	1993.0	1509.4	1226.9	1046.1	911.0	725.0	601.7	328.3	/	/	/	/
1.60V/cell	3041.4	2029.4	1527.5	1238.8	1054.8	918.9	730.3	605.8	329.8	/	/	/	/

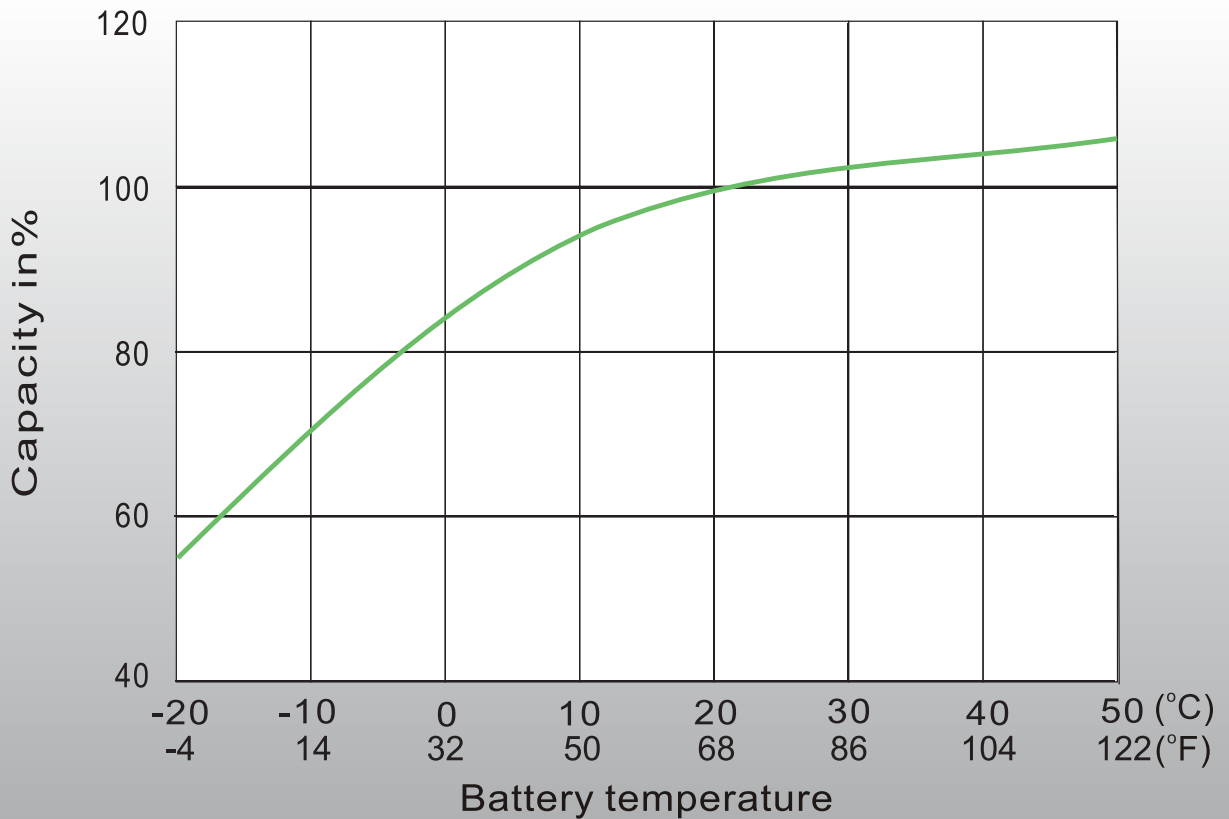
Discharge Characteristics



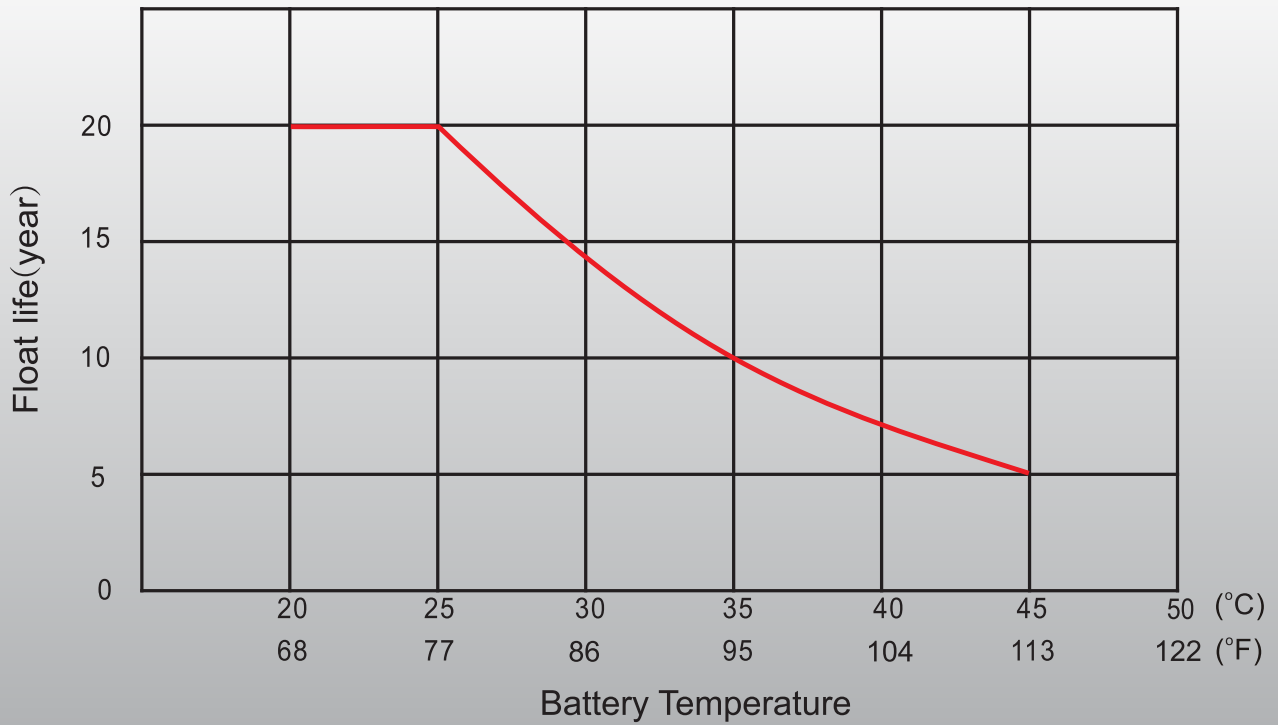
Charge Voltage vs Ambient Temperature Curve



Discharge Capacity vs Ambient Temp. Curve (110A)



Effect of Temp. on Long Term Float Life





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