

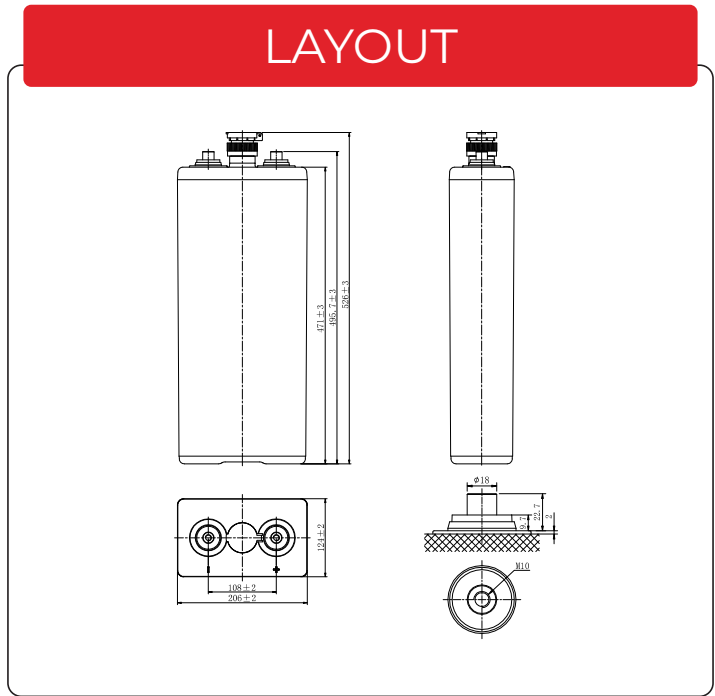
STARMAX

OPzS FLOODED TUBULAR BATTERIES

OPzS350-2



OPzS350-2 (2V 350Ah)



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	350.0Ah
Dimensions	Length	124±2mm (4.88 inches)
	Width	206±2mm (8.11 inches)
	Container height	471±3mm (13.98 inches)
	Total height	526±3mm (16.14 inches)
Approx. weight	Without Electrolyte 21.3kg (46.9lbs) With Electrolyte 28.3 kg (62.4lbs)	
Terminal	M10	
Container material	SAN transparent container	
Rated capacity (25°C)	350.0 Ah	(10hr,35.0A,1.80V/cell)
	311.0 Ah	(5hr,62.2A,1.75V/cell)
	270.0 Ah	(3hr,90.0A,1.75V/cell)
	199.9 Ah	(1hr,199.9A,1.60V/cell)
Max. discharge current	2800A (5s)	
Internal resistance (25°C)	Approx 0.90mΩ	
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	

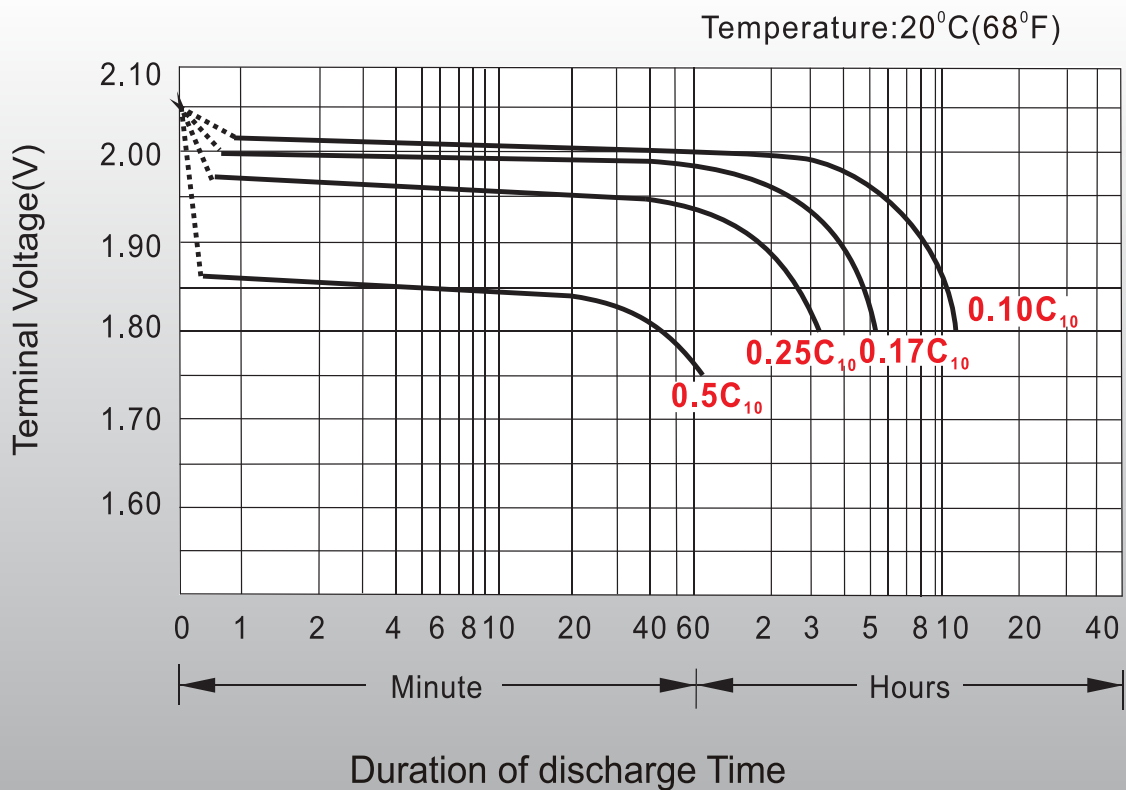
Constant Current Discharge (Amperes) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	139.0	101.5	78.2	64.7	55.9	49.1	40.0	33.5	18.4	15.4	5.54	4.15	3.56
1.80V/cell	162.4	111.8	85.4	69.9	59.6	52.1	42.1	35.0	19.1	16.0	5.75	4.31	3.70
1.75V/cell	176.4	119.0	90.0	73.1	62.2	54.1	43.2	35.8	19.5	16.4	5.87	4.40	3.77
1.70V/cell	185.9	124.3	92.9	75.3	63.9	55.4	44.0	36.4	19.8	/	/	/	/
1.65V/cell	193.2	127.2	95.7	77.1	65.3	56.5	44.8	37.0	20.1	/	/	/	/
1.60V/cell	199.9	130.2	97.3	78.2	66.2	57.3	45.3	37.4	20.3	/	/	/	/

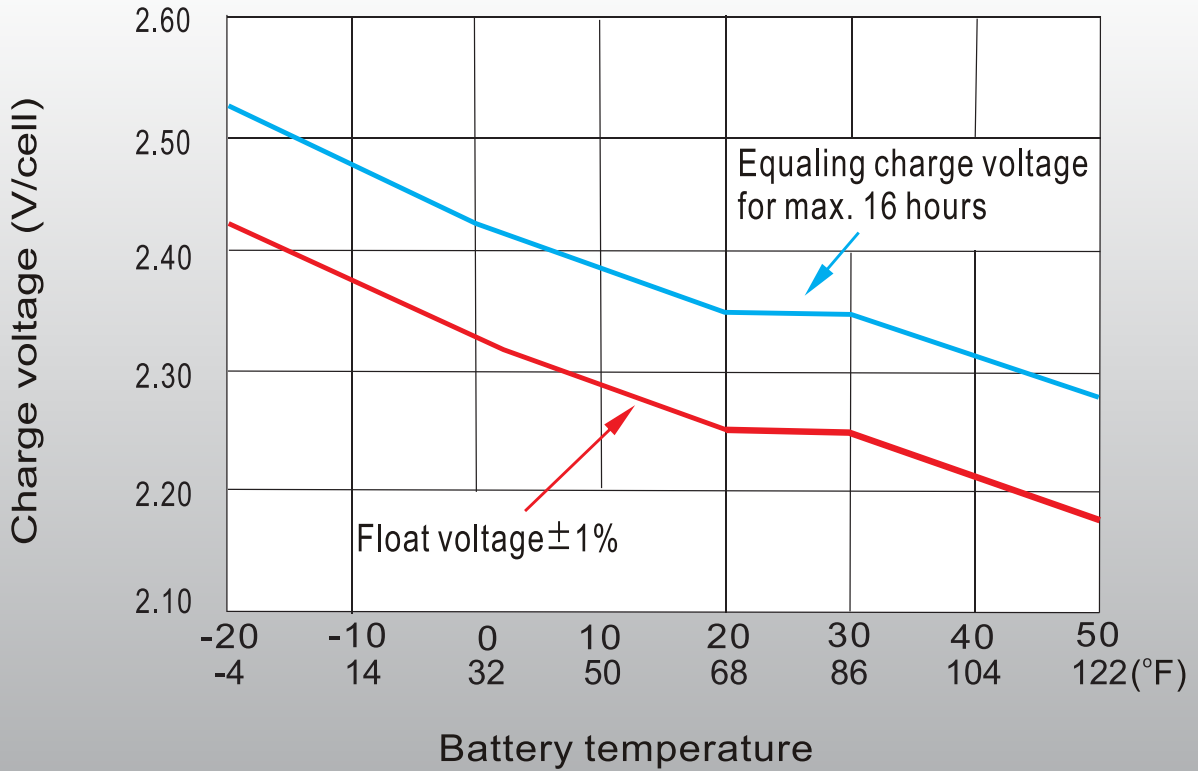
Constant Power Discharge (Watts/Cell) at 20°C (68°F)

F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h	24h	72h	100h	120h
1.85V/cell	260.0	191.4	148.2	123.2	106.8	94.2	77.1	65.0	35.8	30.0	10.7	7.99	6.83
1.80V/cell	299.5	208.6	160.2	131.8	112.9	99.3	80.5	67.3	36.9	30.9	11.0	8.23	7.04
1.75V/cell	321.2	220.0	167.4	136.8	117.2	102.4	82.3	68.4	37.4	31.4	11.2	8.34	7.13
1.70V/cell	335.2	228.1	171.8	140.4	119.9	104.6	83.4	69.3	37.9	/	/	/	/
1.65V/cell	345.9	232.5	176.1	143.1	122.0	106.3	84.6	70.2	38.3	/	/	/	/
1.60V/cell	354.8	236.8	178.2	144.5	123.1	107.2	85.2	70.7	38.5	/	/	/	/

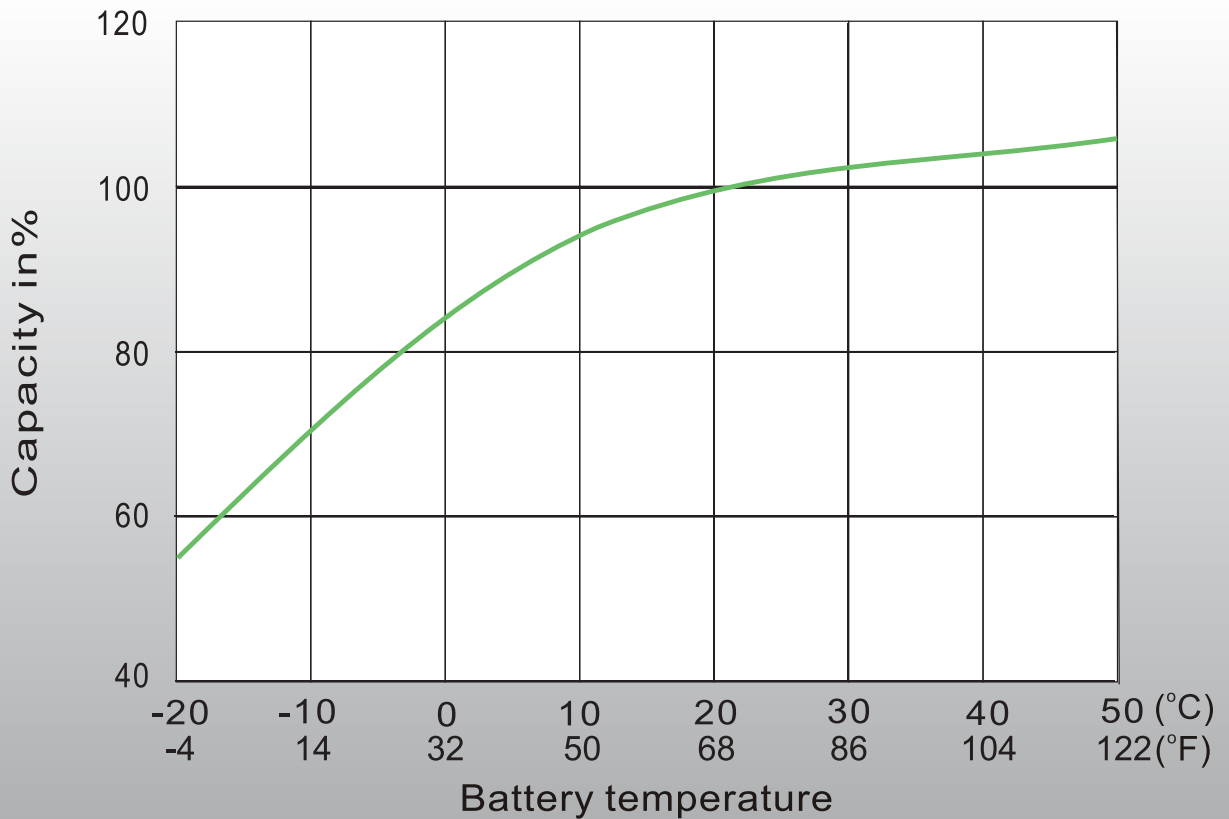
Discharge Characteristics



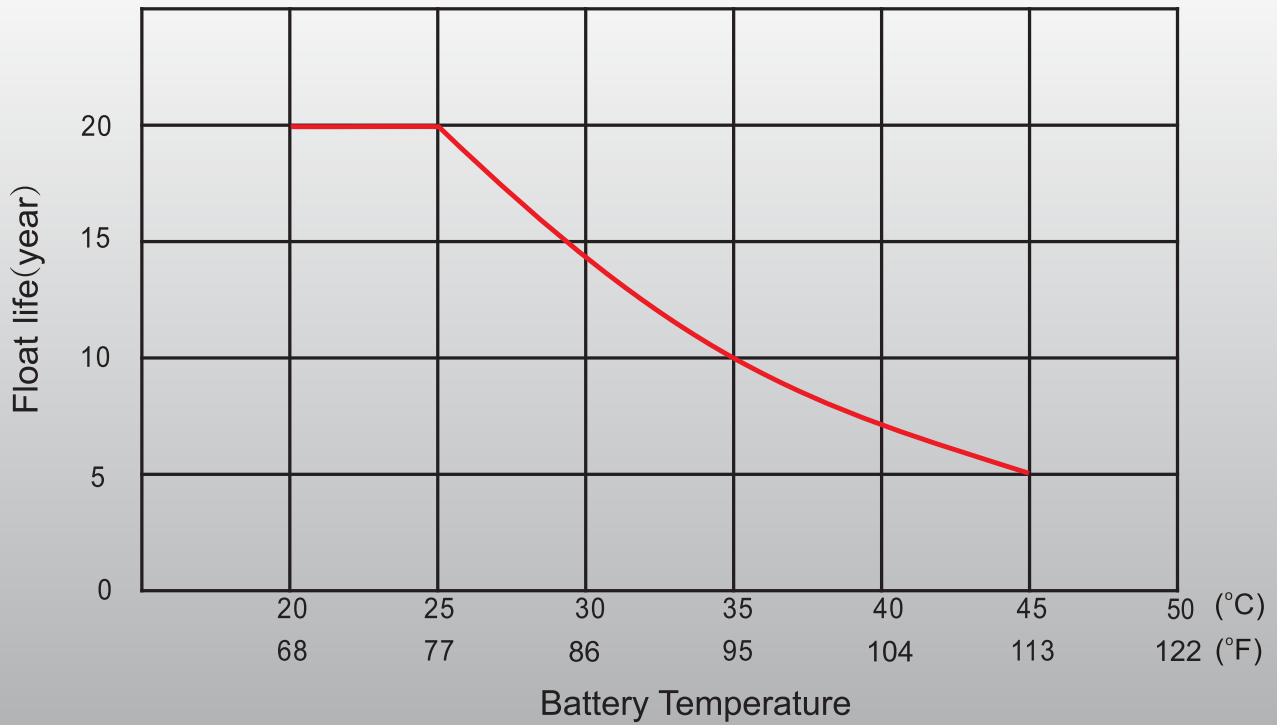
Charge Voltage vs Ambient Temperature Curve



Discharge Capacity vs Ambient Temp. Curve (110A)



Effect of Temp. on Long Term Float Life





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