

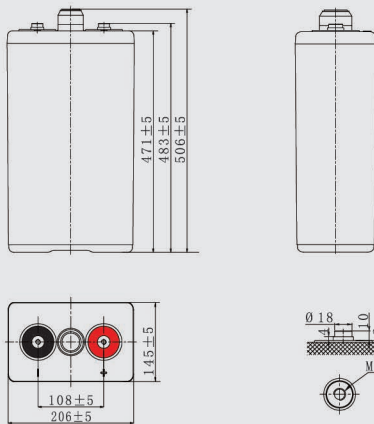
Sohigh BAT-420AH-OPzV

Solar OPzV Battery

Sohigh Solar
High Technology. High Quality



Dimensions (mm)



Solar & Wind applications parameters settings

Over voltage disconnect	2.45±0.01V/cell @ 20~25°C
Regulation/equalize voltage	2.40±0.01V/cell @ 20~25°C
Array reconnection voltage	2.25±0.005V/cell @ 20~25°C
Float voltage setting	2.27±0.005V/cell @ 20~25°C
Low voltage alarm voltage	1.95±0.005V/cell @ 20~25°C
Low voltage disconnect	1.90±0.005V/cell @ 20~25°C
Load reconnect voltage	2.09±0.01V/cell @ 20~25°C
Temp. compensate coefficient	-5mV/cell/°C

Specifications

Rated Voltage	2V	
Nominal Capacity	420Ah	(C ₁₀ , 1.80V/cell)
Dimension	Length	145±5mm(5.71 in.)
	Width	206±5mm(8.11 in.)
	Container Height	471±5mm(18.54 in.)
	Total Height	506±5mm(19.92 in.)
Terminal	M8	
Container Material	ABS	
Rated Capacity (25°C)	546.0 Ah	(100hr,5.46A,1.80V/cell)
	420.0 Ah	(10hr,42.0A,1.80V/cell)
	365.5 Ah	(5hr,73.1A,1.75V/cell)
	324.0 Ah	(3hr,108.0A,1.75V/cell)
	235.0 Ah	(1hr,235.0A,1.65V/cell)
Max. Discharge Current (5s)	3360A	
Internal Resistance(25°C)	Approx.0.80mΩ	
Operating Temp.Range	Discharge	-20°C~55°C (-4°F~131°F)
	Charge	0°C~40°C (32°F~104°F)
	Storage	-20°C~50°C (-4°F~122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max.Charging Current(25°C)	105.0A	
Charge voltage(25°C)	Float	2.25V
	Temp. Coefficient	-3mV/cell/°C
	Cycle(Equalization)	2.35~2.40V
Effect of temp. to Capacity	40°C (104°F)	106%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	≤ 3% per month at 25°C	

Solar OPzV Battery

2V Voltage	420AH Capacity	Tubular Gel	20+ Years Design Life

Constant Current Discharge (Amperes) at 25°C (77°F)

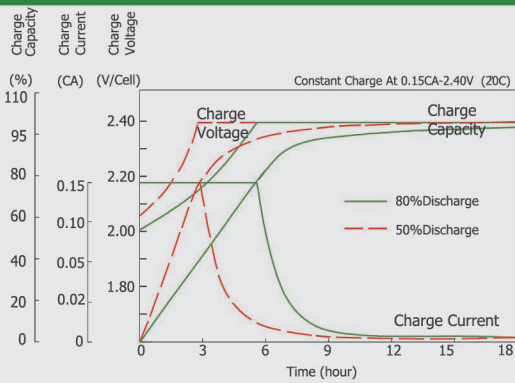
F.V/Time	1h	2h	3h	5h	8h	10h	24h	48h	72h	100h	120h
1.85V/cell	187.7	126.9	97.4	66.7	46.7	39.4	18.7	9.77	7.03	5.33	4.59
1.80V/cell	210.4	139.0	106.0	71.8	50.0	42.0	19.3	10.2	7.29	5.46	4.73
1.75V/cell	218.8	143.9	108.4	73.3	50.8	42.7	19.5	10.4	7.48	5.57	4.80
1.70V/cell	228.4	147.5	110.6	74.3	51.5	43.2	19.8	10.6	7.55	5.65	4.86
1.67V/cell	234.3	149.9	112.6	75.5	52.2	43.6	20.0	10.7	7.61	5.75	4.92
1.60V/cell	237.9	152.3	113.9	76.3	52.5	43.9	20.1	10.8	7.67	5.81	4.98

Constant Power Discharge (Watts/cell) at 25°C (77°F)

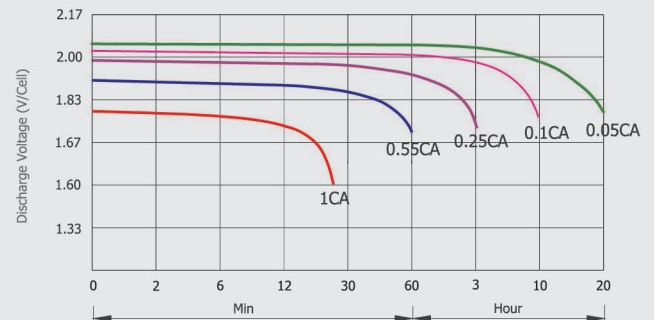
F.V/Time	1h	2h	3h	5h	8h	10h	24h	48h	72h	100h	120h
1.85V/cell	362.3	246.6	190.1	130.9	92.6	78.2	37.4	19.6	14.1	10.7	9.25
1.80V/cell	405.3	269.6	205.7	140.5	99.0	83.4	38.6	20.3	14.6	11.0	9.50
1.75V/cell	418.4	275.6	209.3	142.9	100.4	84.6	38.8	20.7	15.0	11.2	9.63
1.70V/cell	432.8	281.7	212.9	145.3	101.5	85.4	39.4	21.1	15.1	11.3	9.75
1.67V/cell	441.2	286.5	216.5	146.5	102.5	86.2	39.7	21.3	15.2	11.5	9.87
1.60V/cell	445.9	288.9	217.7	147.7	103.0	86.6	40.0	21.5	15.3	11.6	9.96

NOTICE:Manual measurement, product specifications and dimensions may have errors, subject to actual receipt.

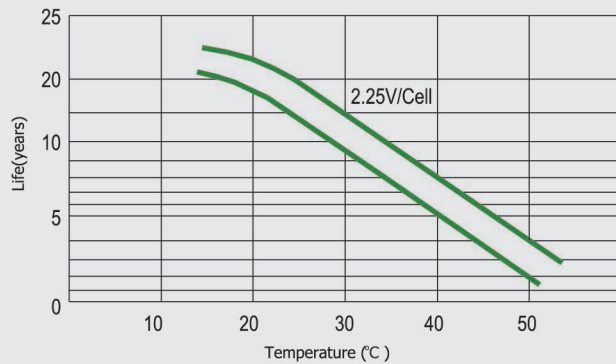
Discharge Characteristics



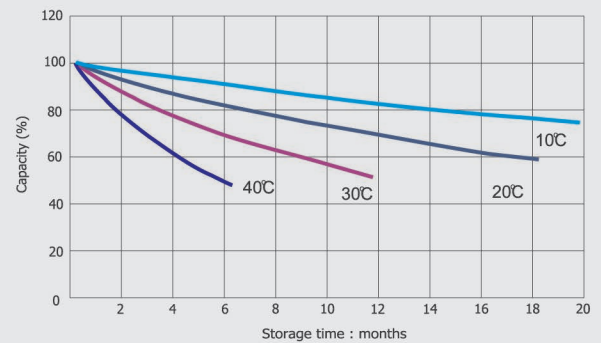
Charging Characteristics



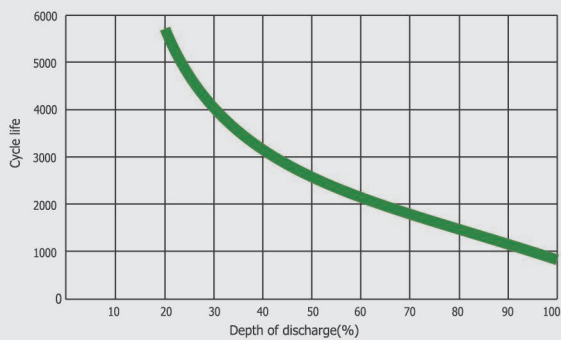
Temperature vs Float Life



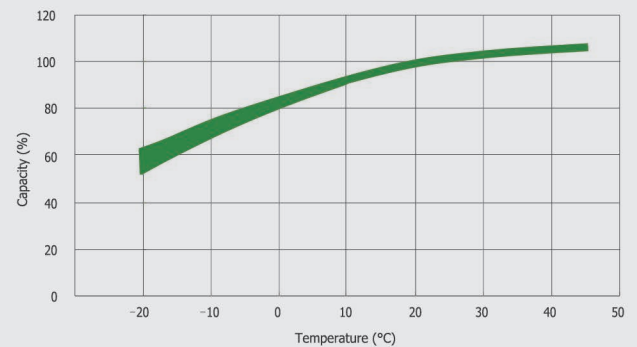
Self Discharge Characteristics



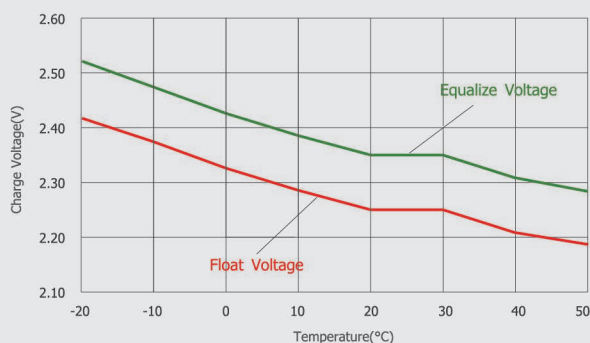
Cycle Life vs Depth of Discharge



Capacity vs Temperature



Charge Voltage Capacity vs Temperature



Charge Capacity vs Time

