



⊕⊖ **sunbattery**®

# SB12-38/SB12-38V0 (12V38Ah)



## Applications

- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency light
- Railway signal
- Alarm and security system
- Communication power supply
- DC power supply

## Certificates



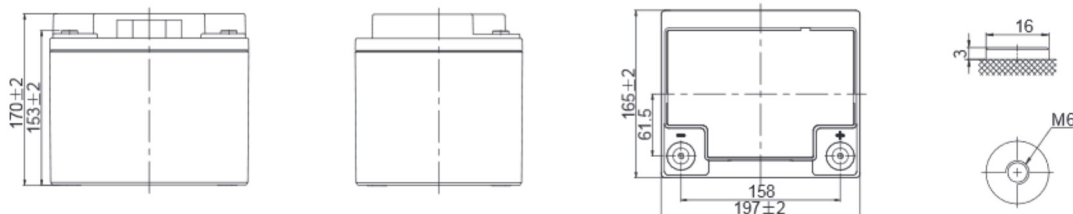
## Specifications

<b>Nominal Voltage</b>	12V	<b>Nominal Oper. Temp. R.</b>	25±3°C
<b>Nominal Capacity</b>	38.0Ah (C <sub>20</sub> , 1.80V/cell)	<b>Cycle Use</b>	Initial Charging Current less than 12.0A. Voltage 14.4V~15.0V at 25°C. Temperature Coefficient -30mV/°C.
<b>Approx. Weight</b>	13.2kg	<b>Standby Use</b>	No limit on Initial Charging Current. Voltage 13.5V~13.8V at 25°C Temp. Coefficient -20mV/°C
<b>Terminal</b>	M6	<b>Capacity affected by Temp.</b>	40°C            103% 25°C            100% 0°C              86%
<b>Container Material</b>	ABS UL94 HB/UL94 V0	<b>Self Discharge</b>	SB batteries may be stored for up to 6 months at 25°C and then a freshening charge is required. For higher temperatures the time interval will be shorter.
<b>Rated Capacity (25°C)</b>	38.0Ah/1.9A, 20hr, 1.80V/cell 36.1Ah/3.61A, 10hr, 1.80V/cell 31.1Ah/6.21A, 5hr, 1.75V/cell 28.2Ah/9.39A, 3hr, 1.75V/cell 22.0Ah/22.0A, 1hr, 1.60V/cell	<b>Life Expectancy</b>	10-12 years according to EUROBAT
<b>Max. Discharge Current</b>	456A (5s)		
<b>Internal Resistance / Impedance (1kHz)</b>	Approx. 10mΩ		
<b>Operating Temp. Range</b>	Discharge:        -15~50°C Charge:            0-40°C Storage:           -15~40°C		

## Dimensions

### ■ M6 Terminal

Unit: mm | Dimensions: 197 Length X 165 Width X 170 Height (170 Height incl. Terminal)





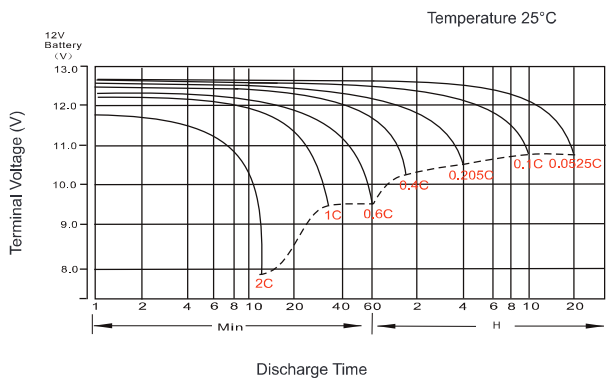
### Constant Current Discharge (Amperes) at 25°C

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	61.8	48.6	41.3	34.6	27.5	20.8	17.0	10.8	8.57	7.00	5.64	4.91	3.99	3.41	1.88
1.80V/cell	82.9	62.1	49.9	40.8	32.4	24.2	19.1	11.8	9.22	7.48	6.06	5.27	4.23	3.61	1.90
1.75V/cell	93.5	68.2	54.5	43.9	33.6	25.1	19.9	12.3	9.39	7.64	6.21	5.42	4.30	3.65	1.92
1.70V/cell	103.0	74.3	58.2	46.2	35.0	26.1	20.6	12.8	9.66	7.84	6.38	5.53	4.36	3.68	1.95
1.65V/cell	113.5	80.2	61.9	49.1	36.9	26.7	21.3	13.1	10.1	8.12	6.55	5.65	4.43	3.76	1.98
1.60V/cell	125.2	87.1	66.2	52.3	39.0	27.9	22.0	13.6	10.4	8.37	6.77	5.77	4.48	3.80	1.99

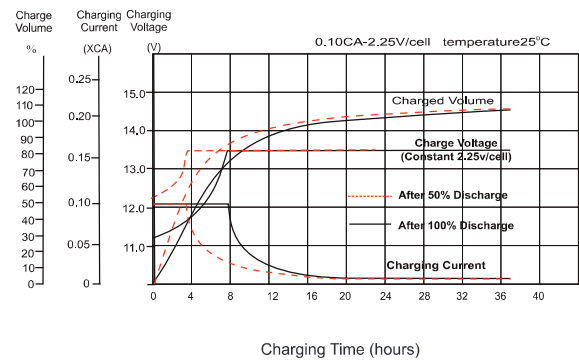
### Constant Power Discharge (Watts/cell) at 25°C

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	113.0	89.7	77.1	65.1	52.3	39.9	32.8	21.1	16.7	13.7	11.1	9.66	7.88	6.75	3.73
1.80V/cell	150.0	113.3	91.9	75.9	60.8	46.1	36.6	22.8	17.9	14.5	11.8	10.3	8.33	7.14	3.76
1.75V/cell	165.5	122.5	99.1	80.8	62.6	47.4	38.1	23.6	18.1	14.8	12.1	10.6	8.45	7.20	3.79
1.70V/cell	177.2	130.5	104.4	84.3	64.8	49.1	39.2	24.5	18.6	15.2	12.4	10.8	8.56	7.26	3.86
1.65V/cell	192.7	139.5	110.1	88.9	67.8	49.9	40.2	25.0	19.3	15.6	12.7	11.0	8.68	7.40	3.91
1.60V/cell	207.6	148.0	115.8	93.7	71.1	51.7	41.4	25.7	19.8	16.1	13.1	11.2	8.74	7.47	3.92

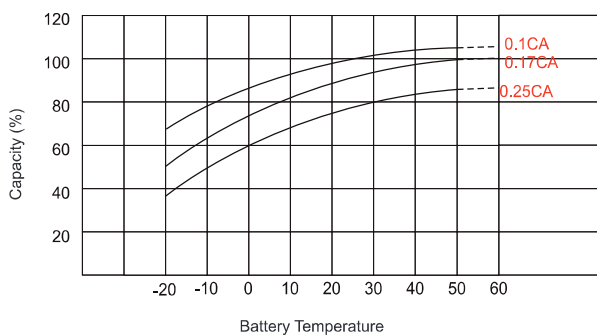
### Discharge Characteristics



### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### Effect of Temperature on Long Term Float Life

