

## VRLA SEALED GEL Battery (12v 20Ah)

### SM12-20 HT

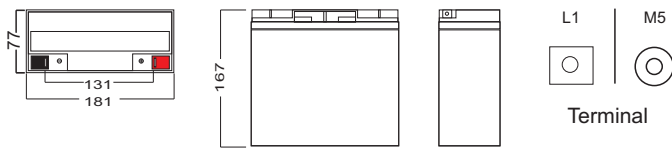


#### General Features

- High corrosion resistant performance: Pb-Ca multi-alloy grid
- High energy density and power density
- Optimized capability of instant high-current discharging
- Excellent charge acceptance ability
- Excellent deep cycle discharge capability
- Strong high and low temperature performance
- Precision sealing technology



Dimension: 181(L)×77(W)×167(H) ×167(TH) Unit: mm



#### Applications

- UPS/EPS
- Power systems
- Telecommunications system
- Emergency lighting, Auto control system
- Solar/wind generating storage cyclic
- Other general purpose

#### Specification

Nominal Voltage	12V
Nominal Capacity	20.0Ah
Design life	5 years
Terminal	L1/M5
Approx. Weight	Approx5.4KG
Container Material	ABS
Rated Capacity	20.0Ah → 20Hour Rate (1.00A to 10.5V)
	15.5Ah → 3Hour Rate (5.18A to 10.5V)
	13.2Ah → 1Hour Rate (13.2A to 9.60V)
Internal resistance	Full charged at 25°C: 17.0 mΩ
Max. Discharge Current	300A(5S)
Operating Temperature	Discharge: -20 ~50°C(-4~ 122°F)
	Charge: -20 ~50 °C(-4~ 122°F)
	Storage: -20 ~50°C(-4~ 122°F)
Charge current:	Max. 5.00A ; Recom.2.00A
Charge Method (25 °C)	Float Charge: 13.5-13.8V,recom.13.5V(-18mV/ °C)
	Equalize charge:13.8-14.1V,recom.14.1V(-24mV/ °C)
	Cycle charge:14.4-15.0V,recom.14.4V(-30mV/ °C)
Self discharge	3% of capacity declined per month at 25°C

#### Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

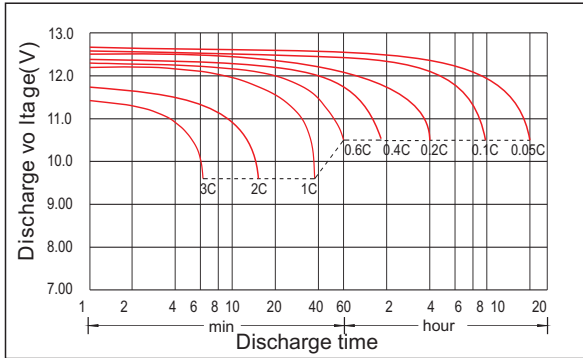
FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	79.2	51.8	38.6	25.3	13.2	7.56	5.52	4.42	3.76	2.48	1.98	1.06
1.65V	78.6	49.6	35.4	24.0	12.4	7.26	5.36	4.28	3.68	2.44	1.96	1.04
1.70V	64.4	46.6	33.0	23.3	12.0	7.12	5.26	4.06	3.64	2.40	1.92	1.02
1.75V	59.8	44.4	30.8	22.7	11.6	6.94	5.18	4.00	3.48	2.34	1.88	1.00
1.80V	55.0	41.8	28.6	22.0	11.2	6.76	4.90	3.92	3.34	2.28	1.84	0.960

#### Constant Power Discharge Characteristics Unit: W/cell(25°C, 77°F)

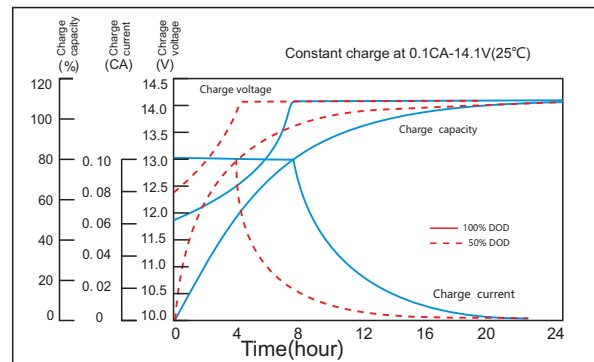
FV/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	149	93.3	70.7	42.7	24.2	14.2	10.4	8.37	7.10	4.68	3.84	2.10
1.65V	137	88.3	66.3	42.4	22.8	13.6	10.1	8.10	6.97	4.61	3.76	2.04
1.70V	125	85.7	63.3	42.3	22.1	13.4	10.0	7.70	6.77	4.56	3.73	2.03
1.75V	114	83.0	61.0	41.9	21.4	13.1	9.83	7.60	6.63	4.38	3.65	1.98
1.80V	102	80.3	58.3	41.6	21.1	13.0	9.57	7.53	6.47	4.23	3.57	1.97

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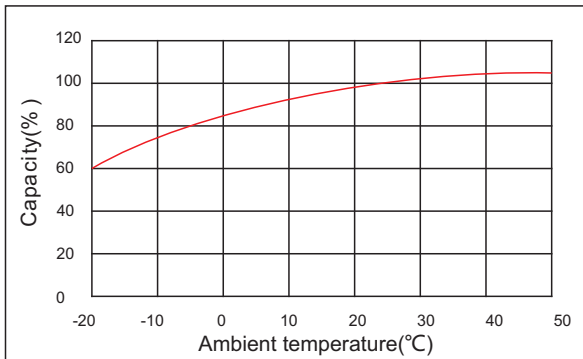
Discharge characteristic



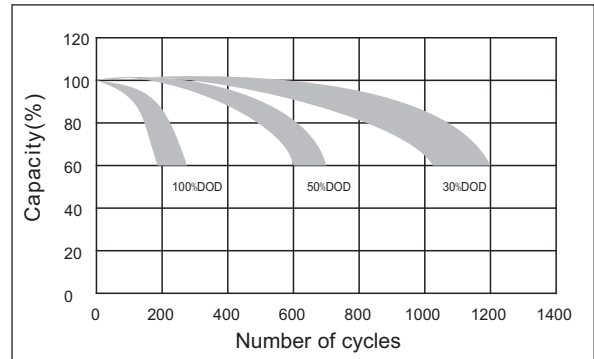
Charging characteristic



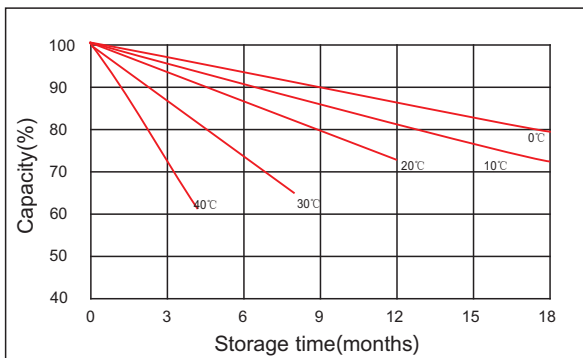
The effect of temperature on capacity



The effect of discharge depth on cycle life



Curves of self-discharge



The effect of temperature on float life

