VHR 12SCG80 (12V80Ah)

Superior Cycle Gel Battery

VHR series is Superior Cycle VRLA Gel battery. By combining the newly developed nano gel electrolyte and high cyclic paste, SCG series delivers high cycle life, excellent high&low temperature performance, it is highly suited for renewable energy systems, outdoor telecom and other harsh environment require high cycle applications.

12 V voltage	80Ah capacity	GEL tech	12 years design life

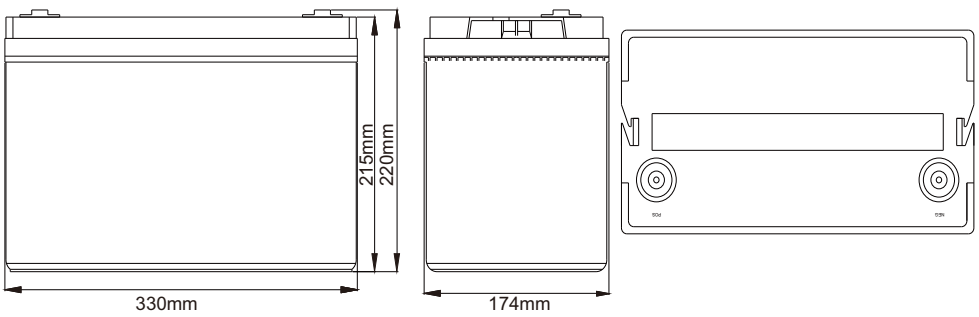
TECHNICAL SPECIFICATIONS

Nominal Voltage (V)	12 (6 cells per unit)
Designed Floating Life (25℃)	12 Years
Nominal Capacity (25℃)	80 Ah @ 10HR-rate (to 1.80Vpc)
Dimension (mm)	L330mm x W174mm x H220mm
Approx. Weight	25.5 kg (56.2 lbs)
Terminal Type	F-M8 or cable (torque:10~12N.m for F-M8)
Internal Resistance	Approx. 0.006 Ohm (fully charged @ 20°C)
Max. Charge Current	20A
Max. Discharge Current (5S)	700 A
Short Circuit Current	2000 A
Self Discharge	Approx. 2.5% per month @ 20°C
Ambient Temperature	Discharge: -40~60°C Charge: -20~55°C Storage: -25~45°C
Float Charge Voltage	13.5-13.62V/block @25℃ (-3mV/ cell/℃)
Equalize and cycle Use Charge Voltage	14.1-14.4V/block @25℃
Container Material	ABS (UL94-V0 optional)

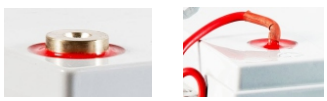
Complied standards

- IEC 60896-21/22
- GB/T19638
- IEC61427
- JIS C8704
- BS6290 part 4

BATTERY DIMENSIONS



TERMINAL(optional)



Screw F-M8 or Cable

BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (25°C)									
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.70V	82.9	51.4	30.5	22.1	17.7	14.7	10.0	8.27	4.36
1.75V	80.0	50.4	29.9	21.8	17.5	14.5	9.88	8.16	4.28
1.80V	76.5	48.7	29.3	21.4	17.0	14.2	9.65	8.00	4.20
1.85V	72.2	46.6	28.1	20.7	16.6	13.9	9.44	7.79	4.10

Constant Power Discharge Characteristics: W/cell (25°C)									
F.V/Time	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.70V	155	97.1	58.0	42.4	33.9	28.4	19.5	16.2	8.60
1.75V	151	95.9	57.5	42.0	33.8	28.3	19.4	16.1	8.49
1.80V	146	93.6	56.7	41.6	33.3	27.9	19.1	15.9	8.39
1.85V	139	90.4	55.0	40.6	32.7	27.4	18.8	15.6	8.24

PARAMETERS FOR SOLAR & WIND APPLICATIONS

Long time discharge capacity for Solar & Wind applications

Capacity	C_{24} (Ah)	C_{48} (Ah)	C_{72} (Ah)	C_{100} (Ah)	C_{120} (Ah)
VHR12SCG80	85.6	90.4	92.8	96.8	100
Final Voltage	1.85V				

Solar & Wind applications parameters settings

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

VHR 12V 80AH (12V80Ah)

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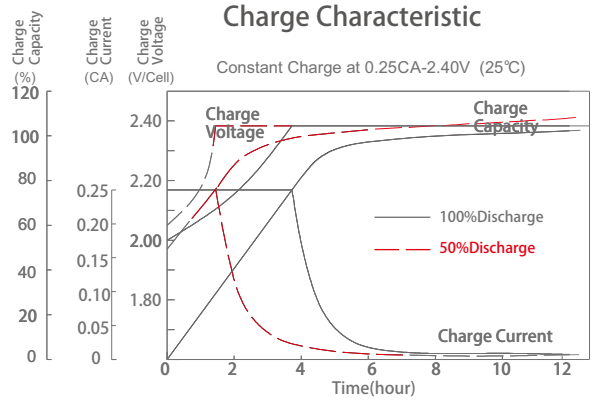
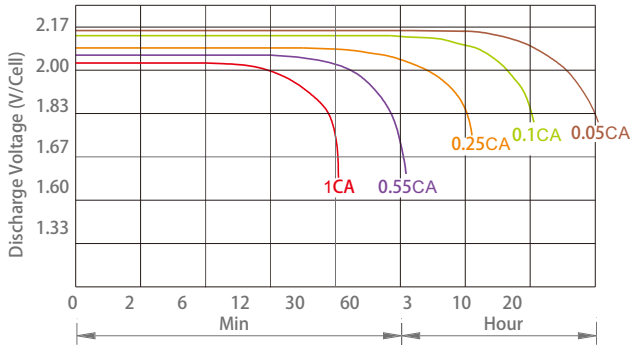
CHARACTERISTICS

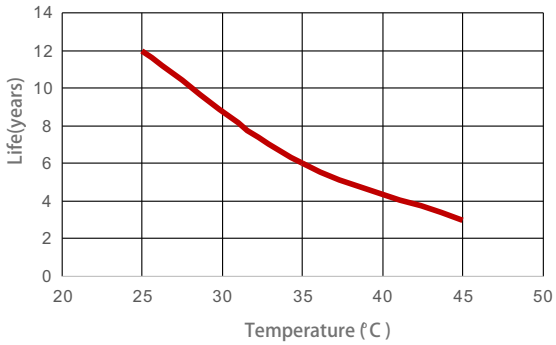
Charge Characteristic



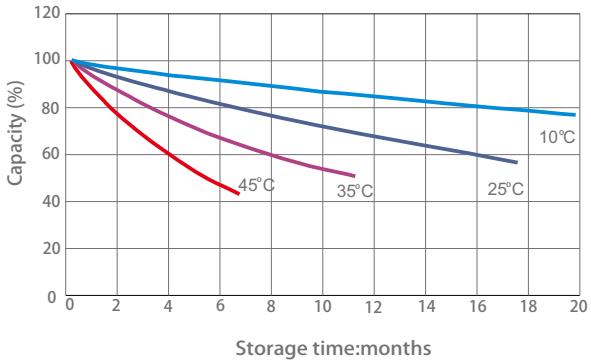
Discharge Characteristic (25°C)



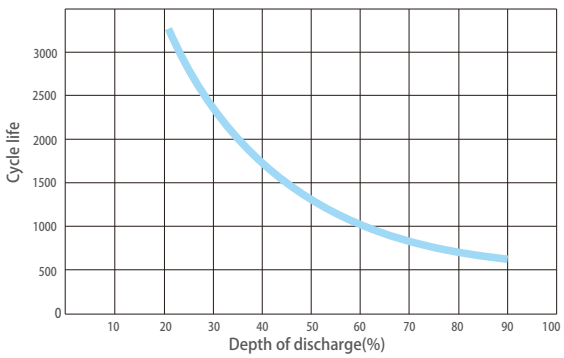
Temperature vs Float Life



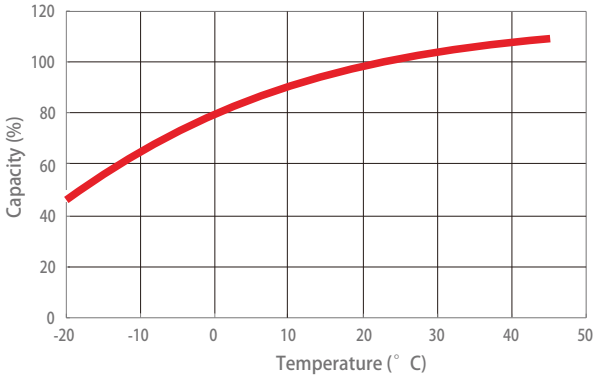
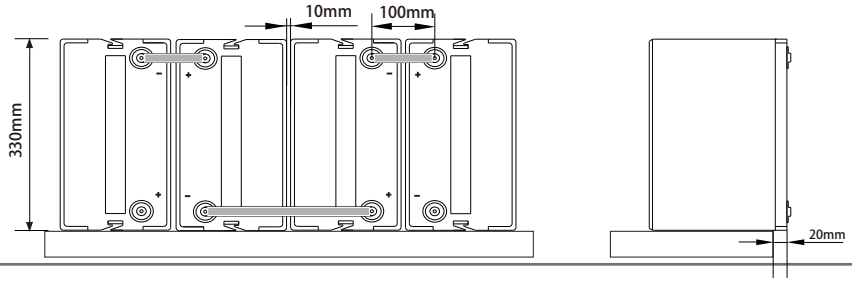
Self discharge characteristics



Depth of Discharge vs Cycle Life (25°C)



Capacity vs Temperature



VHR12V 80AH Horizontal Installation Drawing