

# DEEP CYCLE GEL Battery

# VTG2-400

The Valiant VTG series deep cycle Gel battery uses an advanced nano gel electrolyte with Super-C additive and heavy-duty plate design to provide longer service life in deep cycle applications. The VTG series provides optimum and reliable service under extreme temperatures and frequent power failures making it highly suited for outdoor applications such as off-grid solar systems, RV, and telecom/UPS systems.

2V  
Voltage

400Ah  
Capacity

GEL  
Technology

Durable  
Battery



- GENERAL FEATURES**
- Operating range of -40 to +60C
  - Deep discharge recovery, 1600 cycles @ 50%DOD
  - 2-3 year full warranty in most applications
  - Longer life and greater stability in extreme temperatures

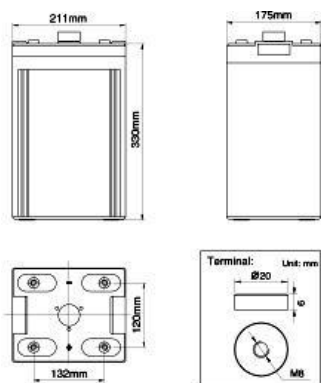
- APPLICATIONS**
- Off-grid solar systems
  - RV
  - UPS /Telecom
  - Floor scrubber
  - Wheel chair, Golf cart

**COMPLIED STANDARDS**



**DIMENSIONS & WEIGHT**

Length(mm/inch)	211/8.31
Width(mm/inch)	175/6.89
Height(mm/inch)	330/13
Total Height(mm/inch)	366/14.4
Weight(kg/lbs)	26.5/58.5



**TECHNICAL SPECIFICATIONS**

Nominal Voltage		2V(Single Cell)
Design Floating Life @25°C		15 Years
Nominal Capacity @25°C (10 hour rate@40.0A,1.8V)		400Ah
Capacity @25°C	20hour rate (21.2A,1.8V)	424Ah
	5 hour rate (71A,1.75V)	355Ah
	1 hour rate (242A,1.6V)	242Ah
Internal Resistance	Full Charged Battery@25°C	≤0.39mΩ
Ambient Temperature	Discharge	-20°C~60°C
	Charge	-10°C~60°C
	Storage	-20°C~60°C
Max.Discharge Current@25°C		800A(5s)
Capacity affected by Temperature (10 hour )	40°C	102%
	25°C	100%
	0°C	90%
	-15°C	70%
Self-Discharge@25°C per Month		3%
Charge (Constant Voltage) @25°C	Standby Use	Initial Charging Current Less than 60A Voltage 2.23-2.27V
	Cycle Use	Initial Charging Current Less than 60A Voltage 2.33-2.37V

**BATTERY DISCHARGE TABEL**

**Discharge Constant Current per Cell (Amperes at 25°C)**

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	1118	722	598	396	295	242	154	110	75	49	44.0	23.3
1.65V	1097	708	588	389	289	238	151	108	73	48	43.2	22.9
1.70V	1077	695	577	382	284	233	148	106	72	47	42.4	22.5
1.75V	1057	682	566	374	279	229	146	104	71	47	41.6	22.0
1.80V	1016	656	544	360	268	220	140	100	68	45	40.0	21.2

**Discharge Constant Power per Cell (Watts at 25°C)**

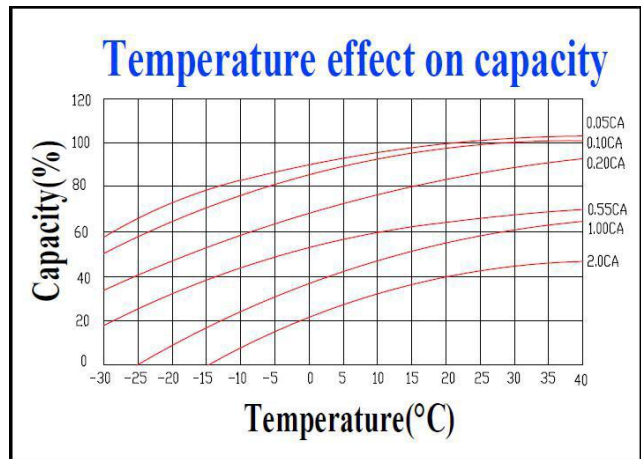
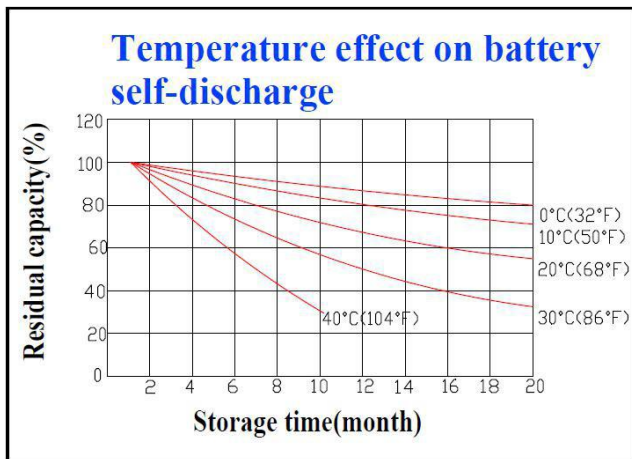
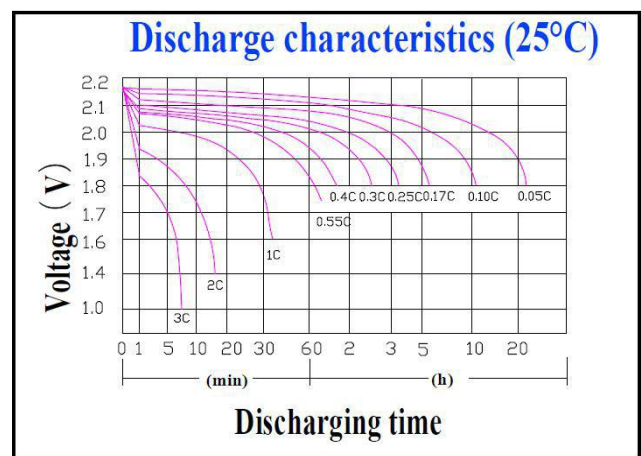
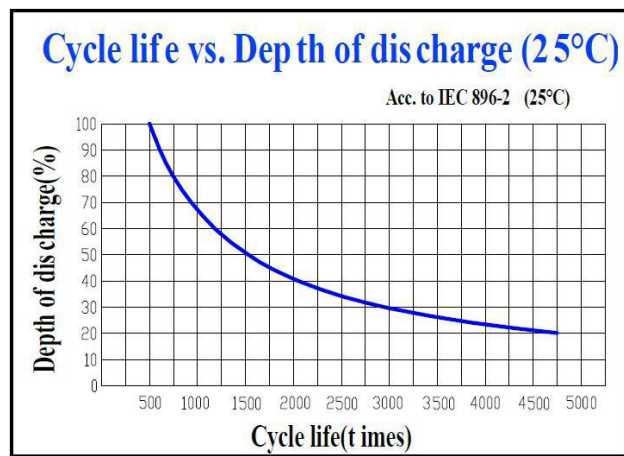
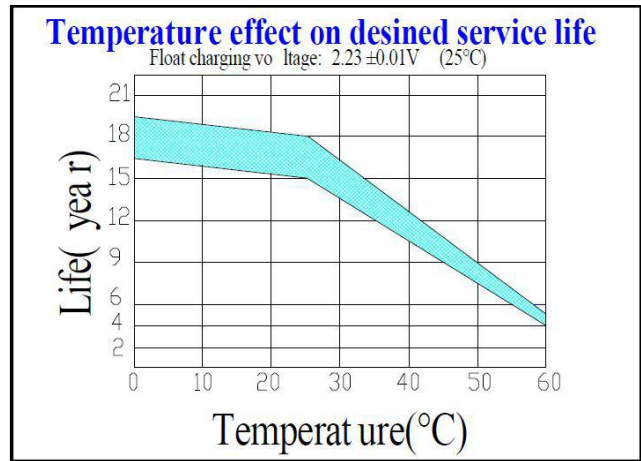
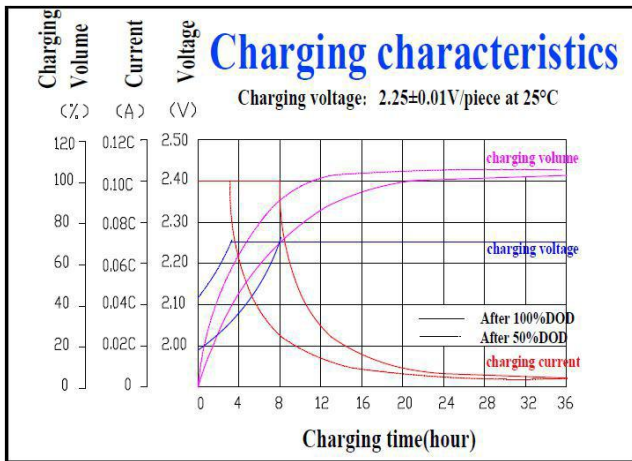
F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	2151	1389	1152	762	567	466	296	212	144	95	84.7	44.9
1.65V	2112	1364	1131	748	557	457	291	208	141	93	83.2	44.1
1.70V	2073	1339	1110	735	547	449	286	204	139	91	81.6	43.3
1.75V	2034	1313	1089	721	537	440	280	200	136	90	80.1	42.4
1.80V	1956	1263	1047	693	516	424	270	193	131	86	77.0	40.8

The above data is based on average values and can typically be achieved within 3 charge/discharge cycles. Battery designs and specifications are subject to change without notice. Contact Valiant for the latest information.

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## PERFORMANCE CHARACTERISTICS



## BATTERY CONSTRUCTION

Component	Positive plate	Negative plate	Container & Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	ABS (UL94-V0)	Flame Si-Rubber and aging resistance	Female Copper Insert M8	Fiberglass	Silicon Gel	Two layers epoxy resin seal