

SOLRA SERIES VRLA BATTERY

The Solar series is designed for frequent cyclic charge and discharge applications under extreme environments. By combining the newly developed Nano Gel electrolyte with high density paste, the Solar series offers high recharge efficiency at very low charge current. The acid stratification is highly reduced by adding Nano Gel. This series is suit for energy storage for renewable energies such as PV, wind turbine power systems and CATV.



TECHNICAL SPECIFICATIONS

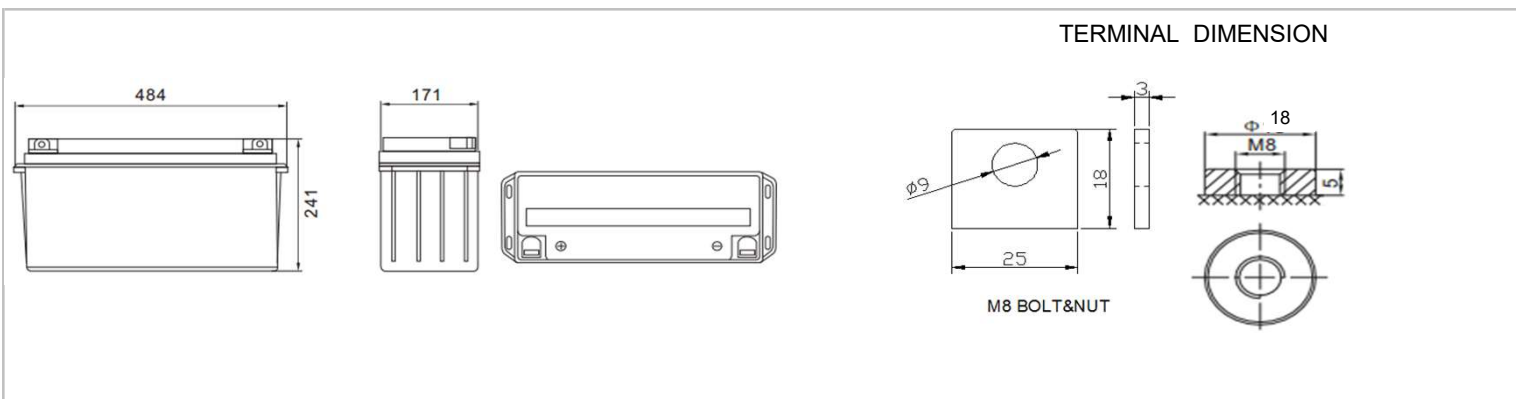
Nominal Voltage (V)	12
Nominal Capacity(25°C)	150Ah @ 10HR-rate (to 1.80Vpc)
Dimension(mm)	L484×W171×H241×TH241
Approx.Weight	42.5kg
Internal Resistance	Approx.4.6mΩ
Max.Charge Current	37.5A
Max.Discharge Current (5S)	1500A
Short Circuit Current	2775A
Self Discharge	Approx. 2.5% per month @ 20°C
Ambient Temperature	Discharge:-25~60°C Charge: -25~50°C Storage: -25~45°C
Float Charge Voltage	13.50~13.80V@25°C(-3mv/Cell/°C)
Equalize and cycle Use Charge Voltage	14.10~14.40V @25 C
Designed Floating Life (25 C)	10Years
Container Material	ABS(UL94-V0 Optional)



Complied standards

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

BATTERY DIMENSIONS



BATTERY DISCHARGE TABLE

Constant Current Discharge Characteristics: Amps (25°C)								
F.V/Time	30min	1h	3h	4h	5h	8h	10h	20h
9.60V	157.4	94.4	41.7	32.6	27.5	19.4	16.1	8.5
10.20V	154.2	90.4	40.4	31.6	26.9	19.1	15.8	8.4
10.50V	151.1	87.8	39.4	31.0	26.6	18.7	15.6	8.3
10.80V	142.0	83.4	37.8	29.7	25.7	18.2	15.0	8.1
11.10V	126.0	74.7	34.5	27.5	23.8	17.0	13.8	7.7

Constant Power Discharge Characteristics: Watts (25°C)								
F.V/Time	30min	1h	3h	4h	5h	8h	10h	20h
9.60V	1717.6	1067.9	476.7	373.9	316.4	224.0	186.1	98.7
10.20V	1704.5	1027.0	464.5	364.9	311.4	221.3	183.9	98.1
10.50V	1683.3	1001.9	454.4	358.5	308.5	218.6	182.0	97.0
10.80V	1598.2	955.1	437.4	345.9	299.3	212.7	176.0	95.2
11.10V	1434.9	860.5	401.7	321.4	279.0	200.3	162.3	91.3

PARAMETERS FOR SOLAR & WIND APPLICATIONS

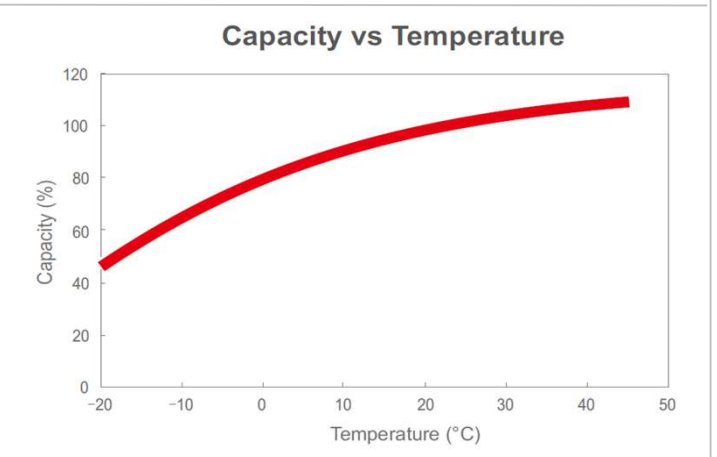
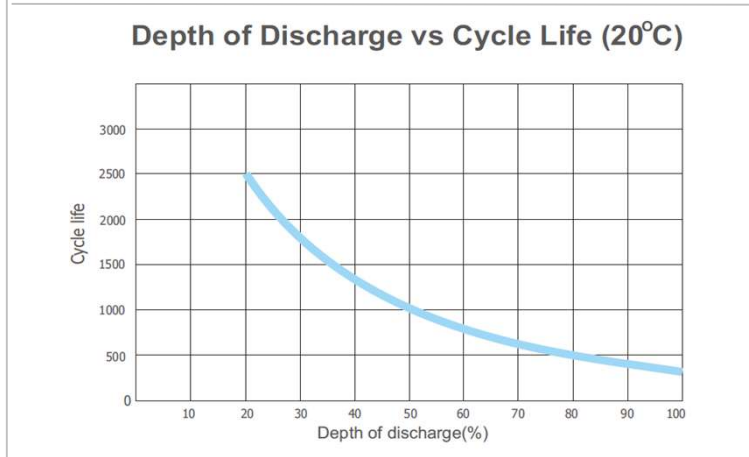
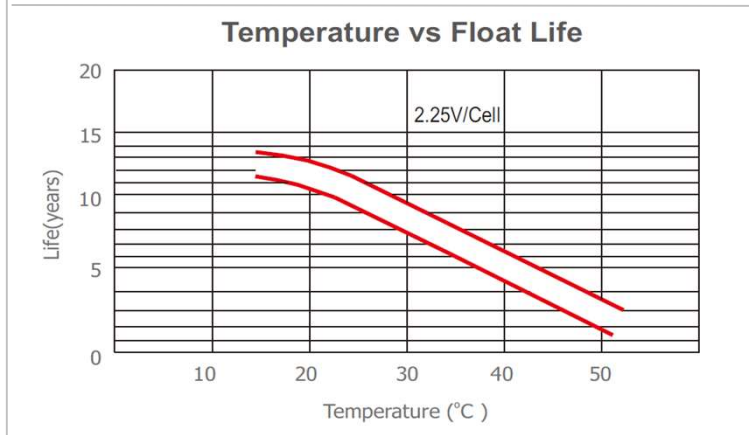
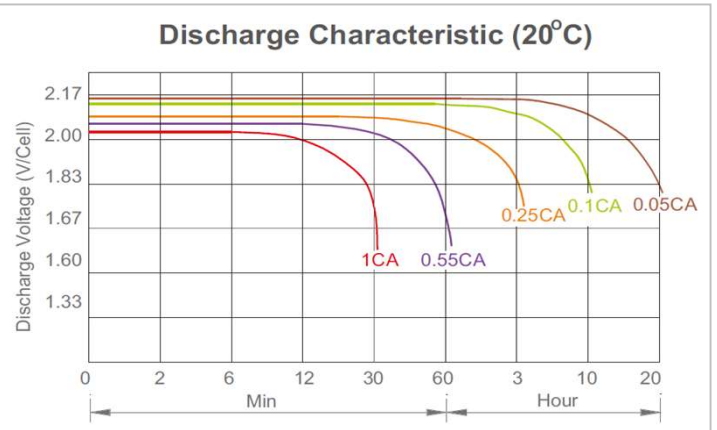
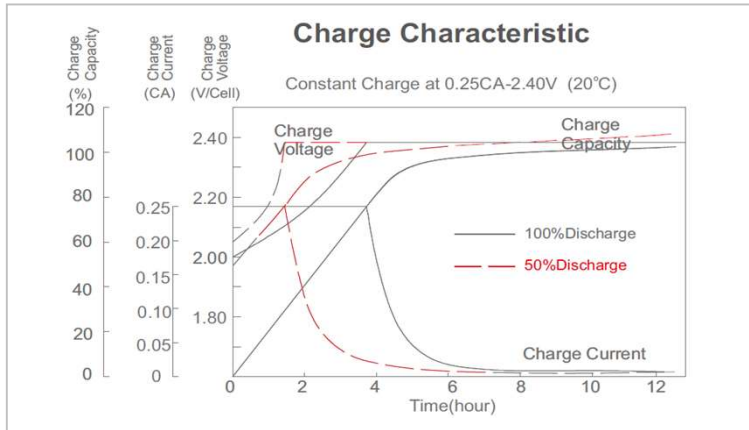
Long time discharge capacity for Solar & Wind applications

Capacity(Ah)	C ₂₄	C ₄₈	C ₇₂	C ₁₀₀	C ₁₂₀
Solar12-150	155.0	165.0	172.5	174.0	177.0
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 reconnection 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 coefficient:	-5mV/cell/°C

CHARACTERISTICS



FINAL VOLTAGE SETTINGS RECOMMENDED ACCORDING TO THE DISCHARGE CURRENT

Discharge Current I (A)	$I \leq 0.08C$	$0.08C \leq I < 0.2C$	$0.2C \leq I < 0.6C$	$0.6C \leq I < 1.0C$	$I \geq 1.0C$
Final of Voltage	$\geq 1.85V_{pc}$	$\geq 1.80V_{pc}$	$\geq 1.75V_{pc}$	$\geq 1.70V_{pc}$	$\geq 1.60V_{pc}$

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