

# VSE AA

## High Energy Series

ARTS Energy's VSE Ni-Cd series have been designed to meet the fast charge and increased capacity needs of light and compact equipment.

Foam electrode technology has especially been developed for the VSE series. The result is an "ultra-high energy" battery, fully recommended for the whole range of professional appliances.

To meet customers' requirements, ARTS Energy provides custom-designed and standardized battery packs.

For your battery design and system needs, please contact ARTS Energy's engineers.

### Applications

- Professional appliances
- Radio control models
- Home appliances
- Hand held terminals

### Main advantages

- Cycling application
- Quick and fast charge
- Super high energy series giving a higher operating time
- Good storage retention

### Technology

- Foam positive electrode
- Plastic bonded negative electrode

### Temperature range in discharge

- 20°C to + 60°C

### Storage

Recommended: + 5°C to + 25°C  
Relative humidity: 65 ± 5 %



Electrical characteristics			
Nominal voltage (V)	1.2		
Typical capacity (mAh)*	980		
IEC minimum capacity (mAh)*	940		
IEC designation	KRMR 15/49		
Impedance at 1000 Hz (mΩ)	16		
<small>* Charge 16 h at C/10, discharge at C/5.</small>			
Dimensions			
Diameter (mm)	13.9 ± 0.1		
Height (mm)	48.9 ± 0.3		
Top projection (mm)	0.8 ± 0.2		
Top flat area diameter (mm)	4 ± 0.2		
Weight (g)	22		
<small>Dimensions are given for bare cells.</small>			
Charge conditions Rate	Time (h)	Temp. (°C)	Charge current (mA)
Fast	~1	+ 10 to + 40	940
Standard	16	0 to + 50	94
Trickle*			23 to 47
<small>End of charge cut-off is requested: -dV or dT°C/dt.</small>		<small>* Trickle charge follows fast charge.</small>	
Maximum discharge current			
Continuous (A) at + 20°C	2.9		
Peak (A) at + 20°C*	41		
<small>* Peak duration: 0.3 second - final discharge voltage 0.65 volt/cell.</small>			

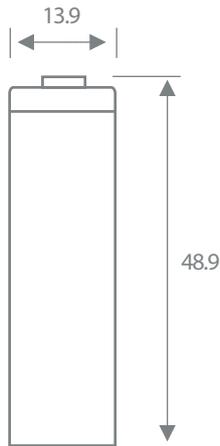


Advanced Rechargeable Technology and Solutions



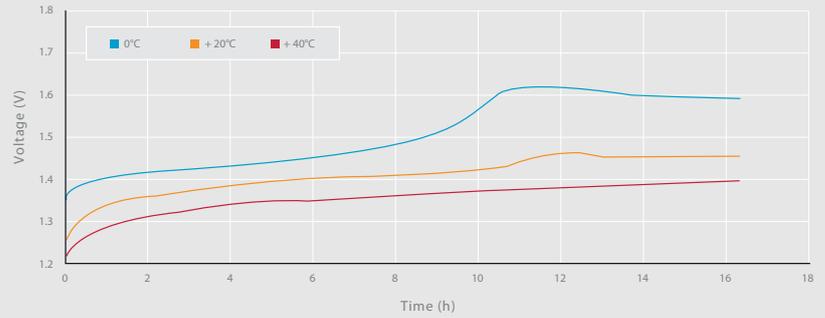
## Typical performances

For graphs shown, C is the IEC<sub>5</sub> capacity.

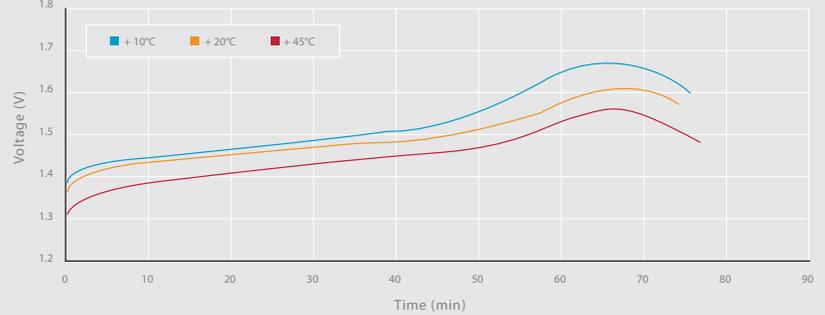


Dimensions are in mm.

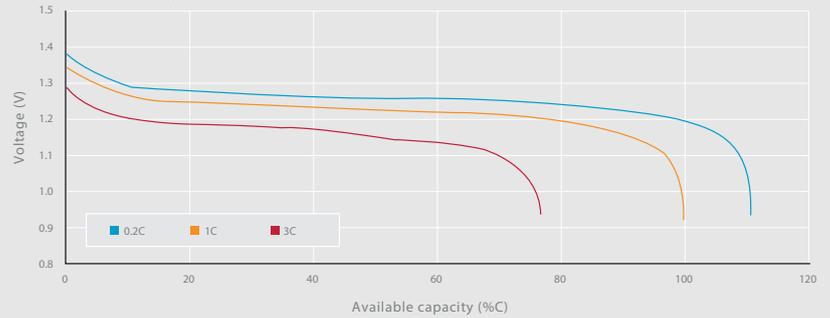
Voltage in slow charge (current 0.1C)



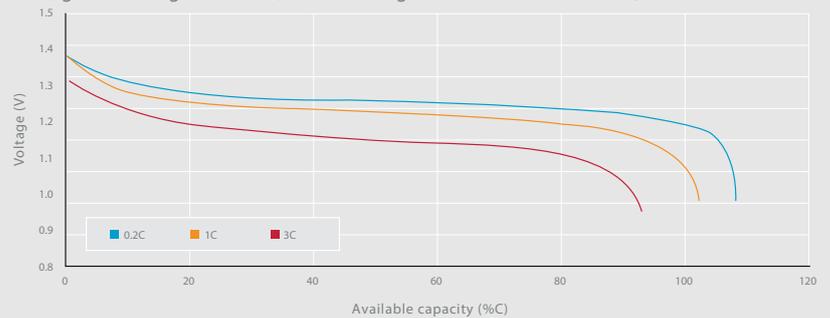
Voltage in fast charge (current C)



Voltage in discharge at +20°C (after slow charge 0.1C x 16 hours at +20°C)



Voltage in discharge at +20°C (after fast charge 0.1C x 1.2 hours at +20°C)



Data are given for single cells. Please consult ARTS Energy for utilization of cell outside this specification.

Data in this document are subject to change without notice and become contractual only after written confirmation by ARTS Energy.



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