

ARTS ENERGY

ARTS Energy's ecolife™ high temperature Ni-Cd series are perfectly suited to emergency lighting equipment applications. It has been designed with the aim of ensuring an extended service life of 8 years whilst minimising the environmental impact.

Indeed a comparative assessment of the environmental impacts of several design options has been conducted for the whole life-cycle of the product. Therefore ARTS Energy ecolife™ AA is an ecodesigned product with the lowest scores in all impact categories, as demonstrated by an independent LCA (*) specialist.

ARTS Energy ecolife™ AA is specially designed to accept a permanent charge in high temperature environment such as emergency lighting equipment. ARTS Energy ecolife™ AA delivers an extended life duration of 8 years, compared to the 4 years required by the international standard for luminaires (IEC 60598-2-22).

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

- Emergency lighting
- Professional lighting
- Memory back-up systems
- Security devices

MAIN BENEFITS

- Eco-designed product
- Lower environmental profile
- Good charge efficiency at high temperatures
- Permanent charge
- Good storage retention
- Longer life duration

TECHNOLOGY

- Plastic bonded positive electrode
- Plastic bonded negative electrode



ELECTRICAL CHARACTERISTICS

Nominal voltage (V)	1.2
Typical capacity (mAh)*	1570
IEC minimum capacity (mAh)*	1500
IEC designation	KRMT 13/43
Impedance at 1000 Hz (mΩ)	8

* Charge 16 h at C/10, discharge at C/5.

DIMENSIONS

Diameter (mm)	22.0 + 0.15/-0.05
Height (mm)	41.9 ± 0.3
Top projection (mm)	0.8 ± 0.2
Top flat area diameter (mm)	9.0 min
Weight (g)	45

Dimensions are given for bare cells.

CHARGE CONDITIONS RATE

Time (h)	Temp. (°C)	Current
Standard	+5 to +40	C/10
Permanent	+5 to +40	C/20

DISCHARGE CONDITIONS

Temp. (°C)	Current
+5 to +40	4.5 A max

CYCLING CONDITIONS

ELU applications	1 discharge / month MAX
Back up applications	Consult ARTS Energy

(*) LCA = Life Cycle Assessment: this is a methodology (standardised under ISO) whose purpose is to measure the environmental impact of a finished product throughout its whole life cycle on several compartments such as Primary Energy Consumption, Global Warming Potential, Air Acidification.

NI-Cd

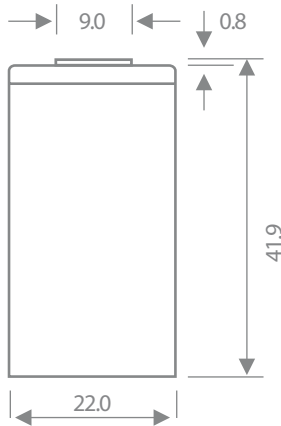
ecolife™ Cs

High Temperature Series

STORAGE

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

TYPICAL DIMENSIONS



Typical dimensions (mm). Without tube.

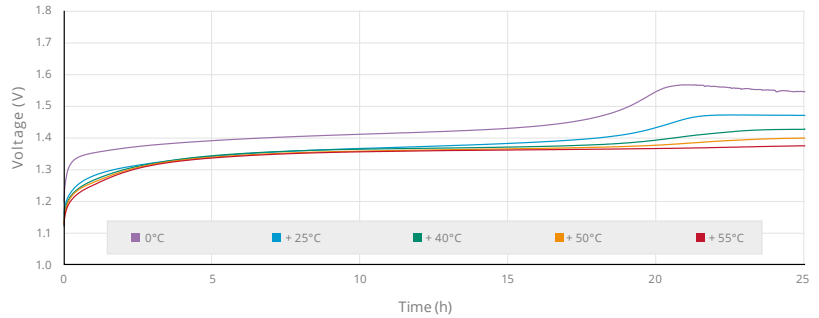
The operation of the battery must strictly be in accordance with ARTS Energy technical recommendations, to obtain the performances stated by ARTS Energy.

Data is given for single cells. Please consult ARTS Energy for utilisation of cells outside specification.

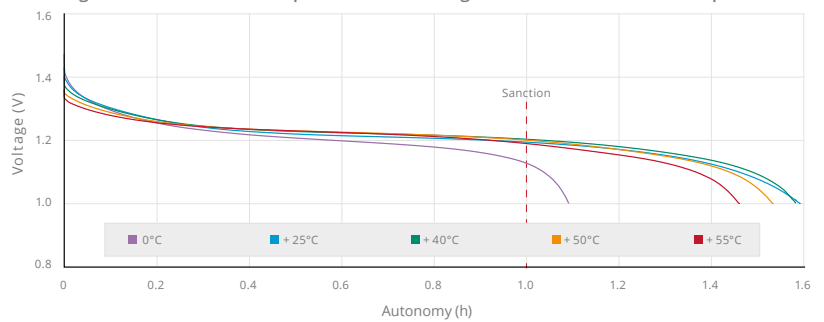
Data in this document is subject to change without notice and become contractual only after written confirmation by ARTS Energy.

For graphs shown, C is the IEC₃ capacity.

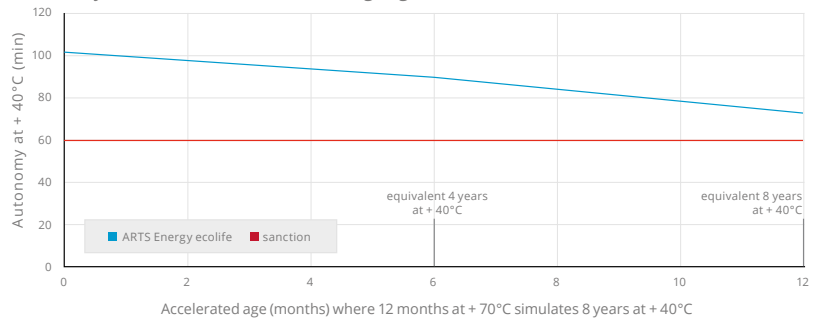
Charge 24h at C/20 at different temperatures



Discharge at 0.6C at different temperatures after charge 24h at C/20 at different temperatures



Autonomy at + 40°C after an accelerated ageing test



Environmental impact calculated by CODDE (EIME V 3.0 - database V 9.0)

Impact Indicators	Unit	per g of ecolife	per ecolife AA
Raw Material Depletion (RMD)	Y-1	8,12E-16	3,65E-14
Energy Depletion (ED)	MJ	0,128	5,76
Water Depletion (WD)	dm3	0,197	8,87
Global Warming Potential (GW)	g ~CO2	4,93	222
Ozone Depletion (OD)	g ~CFC-11	5,27E-07	2,37E-05
Air Toxicity (AT)	m3	3878	1,75E+05
Photochemical Ozone Creation (POC)	g ~C2H4	0,00216	0,097
Air Acidification (AA)	g ~H+	0,00341	0,153
Water Toxicity (WT)	dm3	0,618	27,8
Water Eutrophication (WE)	g ~PO4	0,0087	0,392
Hazardous Waste Production (HWP)	kg	1,22E-05	5,48E-04

