

HIGH TEMPERATURE SERIES

Nickel-Cadmium

VT D, VT D 70, VT D U

These cells are specially designed to accept a permanent overcharge in high temperature environment, such as emergency lighting equipment (minimum of 4 years up to +40°C as required by the IEC international standard).

Improved cells, VT D 70, VT D U can withstand a constant temperature of +55°C, with a similar lifetime when permanently charged.

Temperatures up to +60°C are permitted for short duration.

To meet customers requirements, Saft provides custom-designed and standardized battery packs.

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

Applications

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

Main advantages

- Good charge efficiency at high temperature
- High energy retention
- Longer lifetime at high temperature

Technology

- Sintered positive electrode
- Plastic bonded negative electrode

Temperature range in discharge

-20°C to +70°C

Storage

Recommended: +5°C to +25°C

Relative humidity: 65 ± 5%

Data are given for single cell.

Please consult Saft for utilization of cell outside this specification.



Electrical characteristics

	VT D	VT D 70	VT D U
Nominal voltage (V)	1.2	1.2	1.2
IEC typical capacity (mAh) at C/5	4300	4500	4700
IEC minimum capacity (mAh) at C/5	4000	4000	4000
IEC designation	35/62	35/62	35/62
Impedance at 1000 Hz (mΩ)	7	6	6

Dimensions

Diameter (mm)	32.3	32.3	32.3
Height (mm)	60.3	60.3	58.4
Top projection (mm)	3.5	3.5	3.5
Top flat area diameter (mm)	5.6	5.6	5.6
Weight (g)	132	134	136

Dimensions are given for bare cells

Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Permanent		+15 to +55	<200
Standard	16	+10 to +65	400
Trickle		-5 to +65	100

End of charge cut-off is requested: -dV or dT°C/dt

* Trickle charge follows quick or fast charge

The maximum battery temperature recommended during charge is +45°C

Maximum discharge current

Continuous (A) at +20°C	20
Peak (A) at +20°C*	92

* Peak duration: 0.3 second - final discharge voltage 0.65 volt/cell

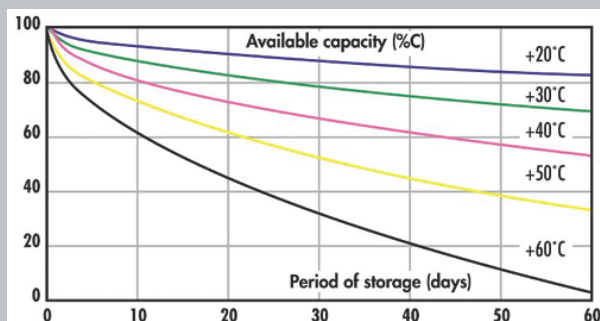


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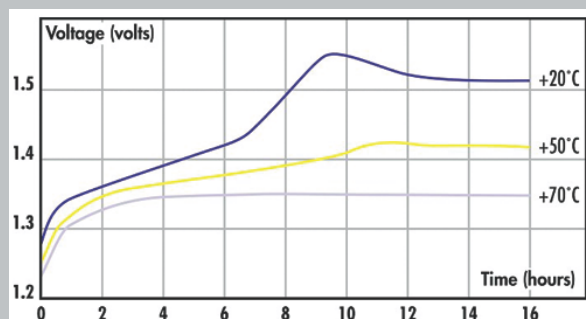
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Voltage in charge at 0.05 C rate

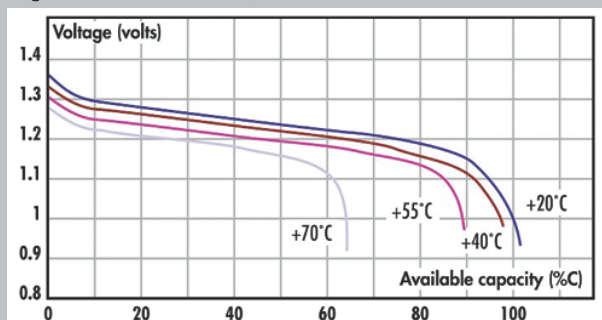


Voltage in normal charge (current 0.1 C)

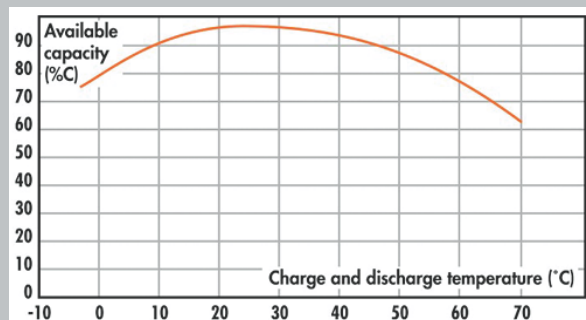


Voltage in discharge at 0.5 C rate

(after charge 0.05 C x 48 hours)



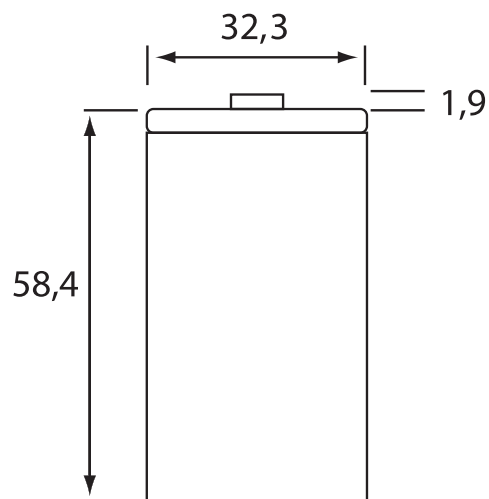
Available capacity (discharge at 0.05 C x 48 hours)



Typical performances

For graphs shown, C is the IEC₅ capacity.

Dimensions are in mm.



SAFT

Rechargeable Battery systems

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DOC. N° 11061-2-0402

Published by the Communication Department

www.saftbatteries.com

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