

# High Temperature Series

## Nickel-Cadmium

### VT 1/2 D



The VT 1/2 D cell is designed to accept a permanent charge (C/20) for a minimum of 4 years in high temperature environments (up to + 55°C) such as security lighting installations.

To meet customers' requirements, Saft will provide custom-designed and standardized battery packs.

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

#### Applications

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

#### Main advantages

- Good charge efficiency at high temperatures
- Permanent charge
- Good storage retention

#### 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 %

#### Electrical characteristics

Nominal voltage (V)	1.2
Typical capacity (mAh)*	2500
IEC minimum capacity (mAh)*	2200
IEC designation	KRMT 33/36
Impedance at 1000 Hz (m Ω)	10

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

#### Dimensions

Diameter (mm)	32.15 ± 0.1
Height (mm)	36.2 ± 0.4
Top projection (mm)	1.4 ± 0.4
Top flat area diameter (mm)	5.6
Weight (g)	80

Dimensions are given for bare cells.

#### Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Standard	16	+ 15 to + 55	220
Permanent		+ 15 to + 55	110
Trickle *			55 to 110

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

\* Trickle charge follows full charge.

#### Maximum discharge current

Continuous (A) at + 20°C	7.7
Peak (A) at + 20°C *	65

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

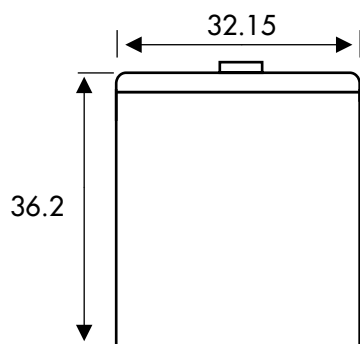


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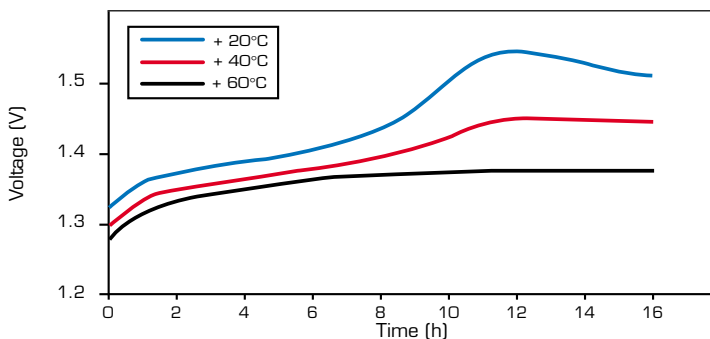
### Typical performances

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

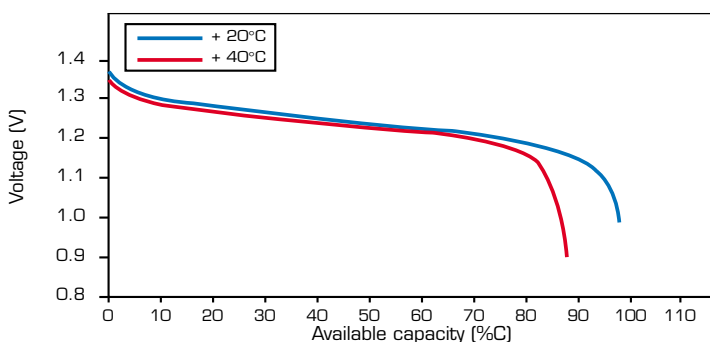
Dimensions are in mm.



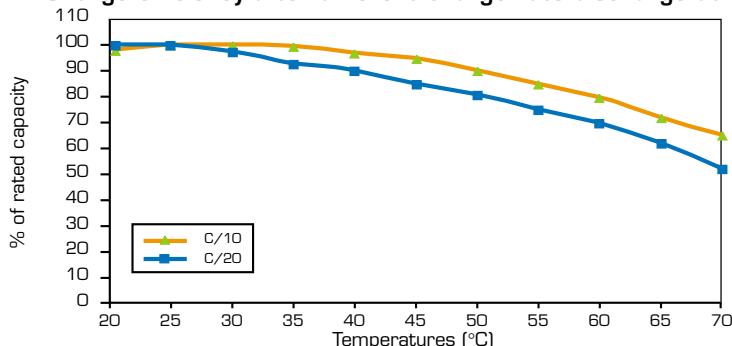
### Voltage in normal charge (current 0.1 C)



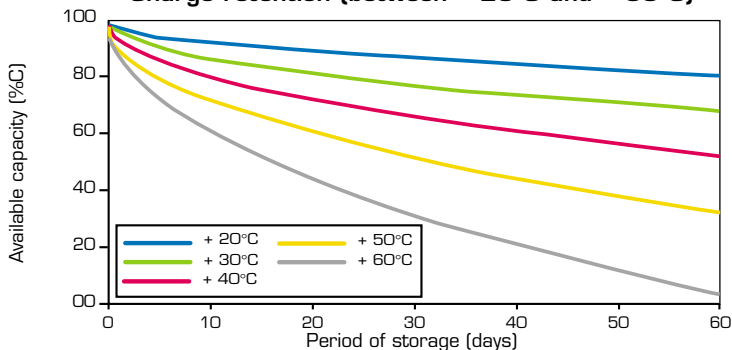
### Voltage in discharge at 0.5 C rate (after charge 0.05 C x 48 hours)



### Charge efficiency after different charge rate discharge at C/2



### Charge retention (between + 20°C and + 60°C)



Data are given for single cells.  
Please consult Saft for utilization  
of cell outside this datasheet.

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

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