

# High Temperature Series

## Nickel-Cadmium

### VT F



The VT F is designed to accept a permanent charge (C/20) for a minimum of 4 years in high temperature environments (up to + 40°C) such as security lighting devices.

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
- Professional 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)*     | 7500       |
| IEC minimum capacity (mAh)* | 7000       |
| IEC designation             | KRMT 33/91 |
| Impedance at 1000 Hz (m Ω)  | 5          |

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

#### Dimensions

|                             |              |
|-----------------------------|--------------|
| Diameter (mm)               | 32.15 ± 0.10 |
| Height (mm)                 | 91.1 ± 0.8   |
| Top projection (mm)         | 3.1 ± 0.4    |
| Top flat area diameter (mm) | 5.6          |
| Weight (g)                  | 210          |

Dimensions are given for bare cells.

#### Charge conditions

| Rate      | Time (h) | Temp. (°C)   | Charge current (mA) |
|-----------|----------|--------------|---------------------|
| Standard  | 16       | + 15 to + 40 | 700                 |
| Permanent |          | + 15 to + 40 | 350                 |
| Trickle*  |          |              | 175 to 235          |

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 | 20  |
| Peak (A) at + 20°C*      | 150 |

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

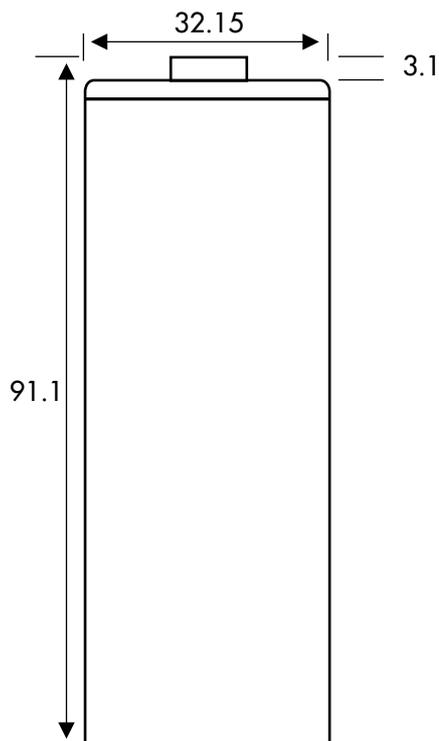


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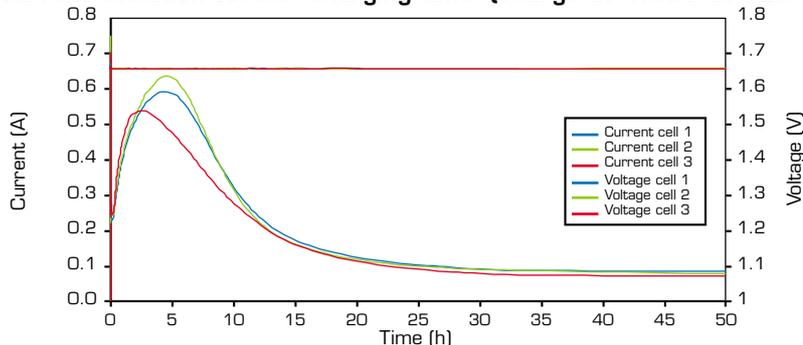
**Typical performances**

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

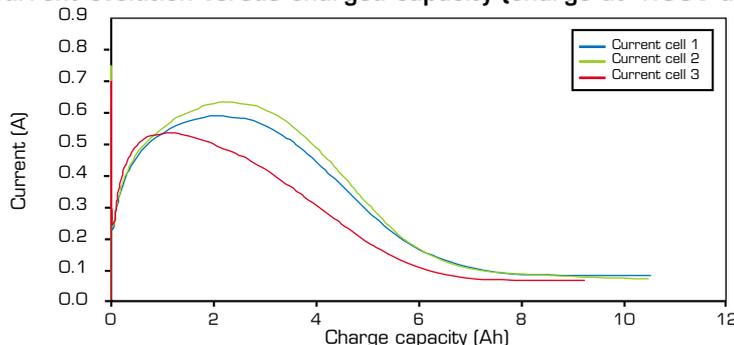
Dimensions are in mm.



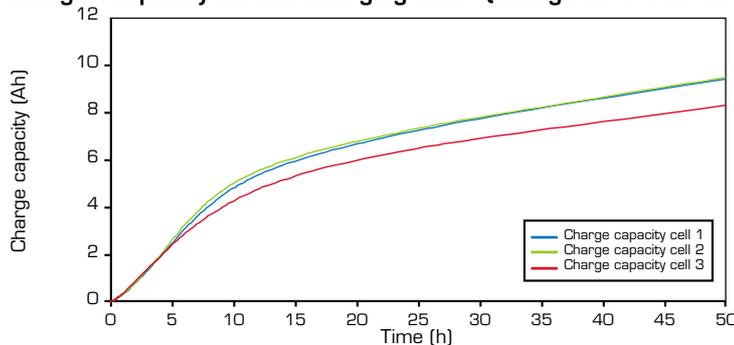
**Current evolution versus charging time (charge at 1.65V at - 20°C)**



**Current evolution versus charged capacity (charge at 1.65V at - 20°C)**



**Charged capacity versus charging time (charge at 1.65V at - 20°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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