

# MP 144350 xlr

## Rechargeable Li-ion cell

3.65 V high energy Li-ion cell with robust performance and cycle life

Saft's MP 144350 xlr cell is ideally suited for applications requiring high energy, long operating life under cycling conditions and offers excellent performance in temperature environments from  $-35^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ .

### Benefits

- Excellent operating lifetime in calendar and cycling with a very stable internal resistance
- High level of safety, compatible in potentially explosive atmospheres
- Long shelf life with extremely low capacity loss under storage
- Easy connection and assembly into batteries
- Smaller environmental footprint than other technologies

### Key features

- High energy density (335 Wh/l and 142 Wh/kg)
- Cycle life more than 800 cycles at 100% DoD at C/2 discharge, C/ charge rate
- Stainless Steel casing
- Hermetically sealed
- Maintenance free
- No memory effect
- Manufactured in EU

### Designed to meet all major quality, safety and environmental standards

- Safety: UL 1642 and IEC62133 Ed.2
- Transport: UN 3480, UN 3481
- Medical: ISO 13485
- Quality: ISO 9001, Saft World Class
- Environment: ISO 14001, RoHS and REACH compliant

### Typical applications

- Industrial equipment
- Medical devices
- Oil & Gas applications
- Internet of Things devices
- Wireless Sensor Networks
- Military equipment



### Electrical characteristics

Typical capacity (at C/5 rate, $+25^{\circ}\text{C}$ , 2.5V cut-off) <sup>(1)</sup>	2.6 Ah
Nominal voltage	3.65 V
Nominal energy	9.4 Wh
Recommended maximum discharge current <sup>(2)</sup>	Continuous 5.0 A (~2C rate) Pulses 10.0 A (~4C rate)

### Physical characteristics (sleeved cell)

Thickness <sup>(3)</sup>	14.5 mm
Width	42.9 mm
Height (including terminals)	50.1 mm
Typical weight	~66 g
Volume (including terminals)	0.028 l

### Operating conditions

Typical cut-off voltage	2.5 V
Charging method	Constant current / Constant voltage
Charging voltage	$4.2 \pm 0.05$ V
Maximum continuous charge current <sup>(4)</sup>	2.6 A (1C rate)
Operating temperatures <sup>(4)</sup>	Charge $-30^{\circ}\text{C}$ to $+60^{\circ}\text{C}$ Discharge $-35^{\circ}\text{C}$ to $+60^{\circ}\text{C}$
Storage & transportation temperatures <sup>(4)</sup>	Recommended $+10^{\circ}\text{C}$ to $+30^{\circ}\text{C}$ Allowable $-40^{\circ}\text{C}$ to $+60^{\circ}\text{C}$

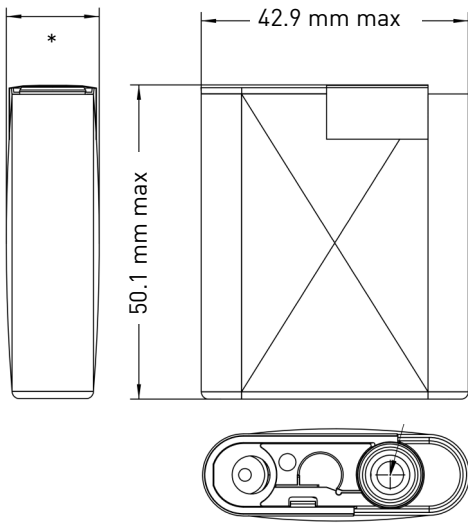
<sup>(1)</sup> Can vary depending on temperature and discharge rate

<sup>(2)</sup> Can vary depending on temperatures. Consult Saft

<sup>(3)</sup> At beginning of life, 100% State-of-Charge. Can increase with temperature and during battery life.

<sup>(4)</sup> For optimised operation below  $0^{\circ}\text{C}$  consult Saft





### Cell dimensions\*

During the lifetime of the cell, in different applications some dimensions may alter slightly. Please consult with Saft for further details.

### Battery assembly

Individual lithium-ion cells need to be mechanically and electrically integrated into battery systems to operate properly. The battery system includes electronic devices for performance, thermal and safety management specific to each application. Please contact Saft with your specific application requirements.

### Battery-level features

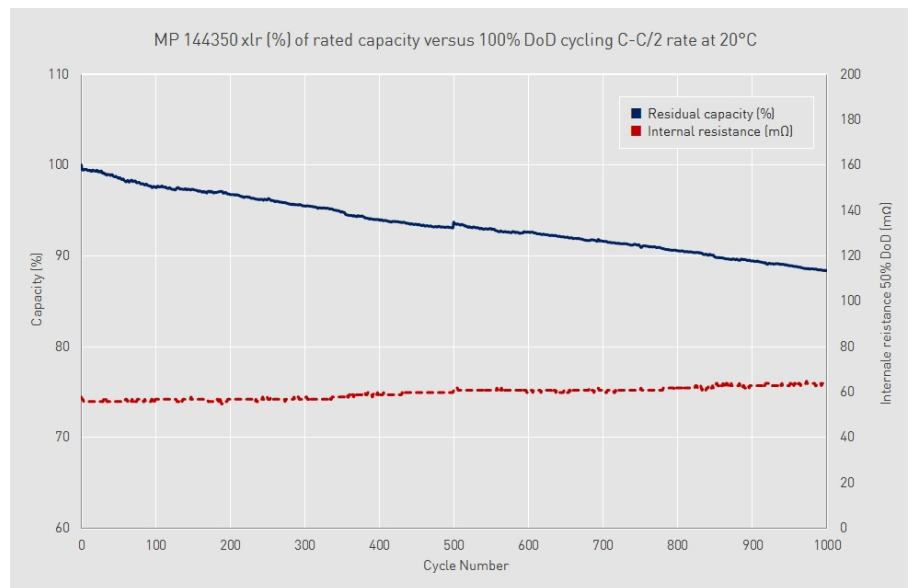
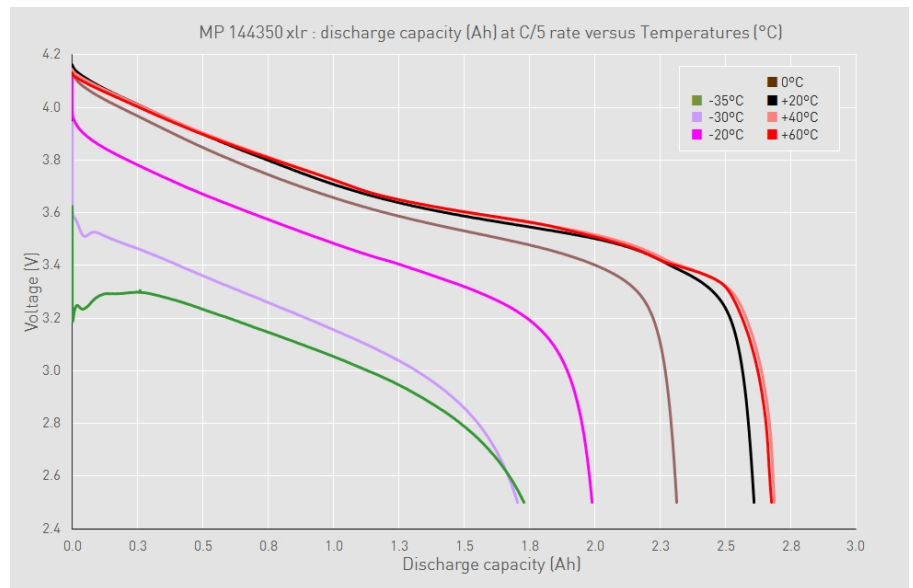
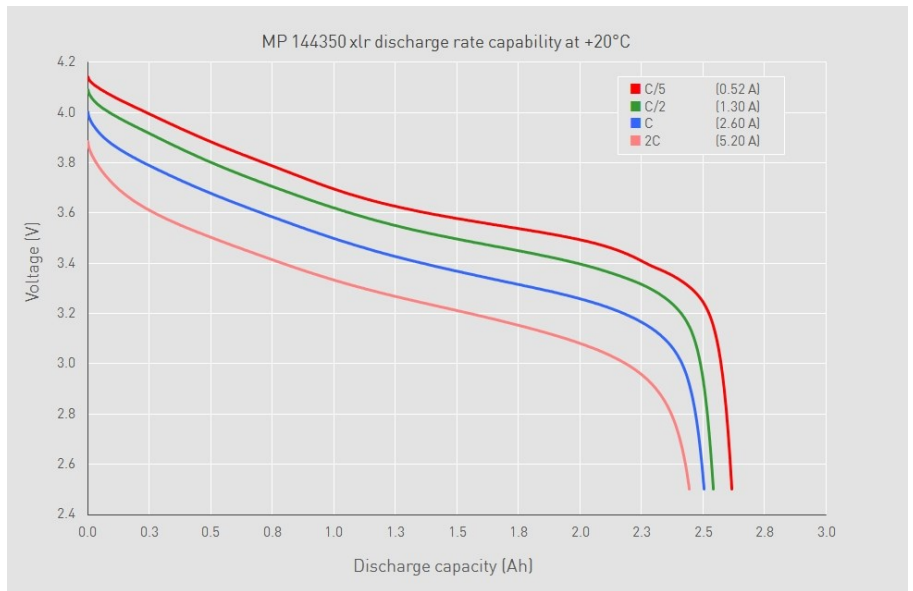
- Saft provides complete battery system designs
- Integrating several levels of redundant safety features to prevent abuse conditions such as over-charge, over-discharge, and short circuits
- Incorporating electronics for performance and efficiency in charging, floating, discharging as well as cell balancing and temperature monitoring
- Battery protection controller at system level for larger batteries
- Communication for State-of-Charge and State-of-Health

### Storage

- The storage area should be clean, cool (preferably not exceeding +30°C), dry and ventilated

### Warning

- Do not crush, short-circuit, incinerate, dismantle, immerse in any liquid, heat above +60°C
- Observe charging conditions
- Refer to our Li-ion Battery User manual for further information on the use and handling of Saft products.



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