

IoT 4s2p 18650

Designed to be a Fit & Forget battery solution

Safts' 4s2p ITR 18650-26E IoT battery is compatible with commercial applications requiring safety, reliability, long operating life under cycling conditions, offering excellent performance for industrial and commercial IoT applications.



Benefits

Excellent operating lifetime and cycling with a very stable internal resistance. Standard form factor enabling easy interconnection.

Key features

- High energy density (244 Wh/l, and 142 Wh/kg).
- Cycle life > than 1600 cycles at 100% DoD at C/2 discharge, C/ charge.
- Maintenance free.
- No memory effect.
- **Designed and Manufactured in the United Kingdom.**

Designed for today's safety and environmental standards.

- Safety: UL 1642 and IEC 62133-2
- Transport: UN 3480, UN 3481.
- Medical: ISO 13485.
- Quality: ISO 9001, Saft World Class.
- Environment: ISO 14001, RoHS and REACH compliant.

Typical applications

- Internet of Things devices.
- Industrial Internet of Things
- Wireless Sensor Networks.
- Tracking appliances.

Electrical characteristics

Typical capacity (at C/5 rate, +25°C, 2.5V cut-off) ⁽ⁱ⁾		5.2 Ah
Nominal voltage		14.4 V
Nominal energy		74.88 Wh
Recommended maximum discharge current ⁽ⁱⁱ⁾	Continuous	15.6 A
	Pulse	26.0 A

Physical characteristics (sleeved cell)

Length		155 mm
Thickness		25 mm
Height (including terminals)		73 mm
Typical weight		440 g
Volume (including terminals)		0.283 l
IEC battery designation		4INP25/155/73/2
Saft battery designation		4s2p ITR 18650-26E
Saft part number		0097-386-019

Operating conditions

Typical cut-off voltage		11.0 V
Charging method		Constant current/Constant voltage
Charging voltage		16.8 V
Maximum continuous charge current ^(iv)		5.2 A
Operating temperatures	Charge	0°C to +45°C
	Discharge	-20°C to +60°C
Storage & transportation temperatures	Recommended	+10°C to +30°C
	Allowable	-20°C to +60°C

[i] Can vary depending on temperature and discharge rate

[ii] Can vary depending on temperatures—limited by electronic protection circuit. Consult Saft (reserved)

[iv] For optimised charging below 0°C and above +60°C, consult Saft

Provenance

The cells used in the battery are a product of the Tianneng Saft Energy joint venture.

Battery level features

Saft provides complete battery system designs. Built-in protection devices at battery level ensures safe operation and user safety in case of abusive or extreme conditions. These conditions include, but are not limited to;

- Exposure to excessive heat.
- Sustained exposure to direct sunlight.
- External short circuit.
- Over-charge (resettable).
- Over-discharge (resettable).
- Mechanical damage.
- Communication (I²C) for State-of-Charge and State-of-Health.

Technical note

Battery lifetime event data is available via the SMBUS port in accordance with the BQ4050 data sheet. In operation, cell voltage, Thermistor (on board) and current in discharge/charge is continually monitored as control inputs. A sense resistor on the negative side provides a low level signal to the BQ4050 which is an analogue of current flowing. Mosfet charge and discharge switches are controlled by the BQ4050 with automatic reset. Sleep and wake-up are automatic. Short circuit capability utilized by using AOLD thresholds on the BQ4050. The battery incorporates passive balancing.

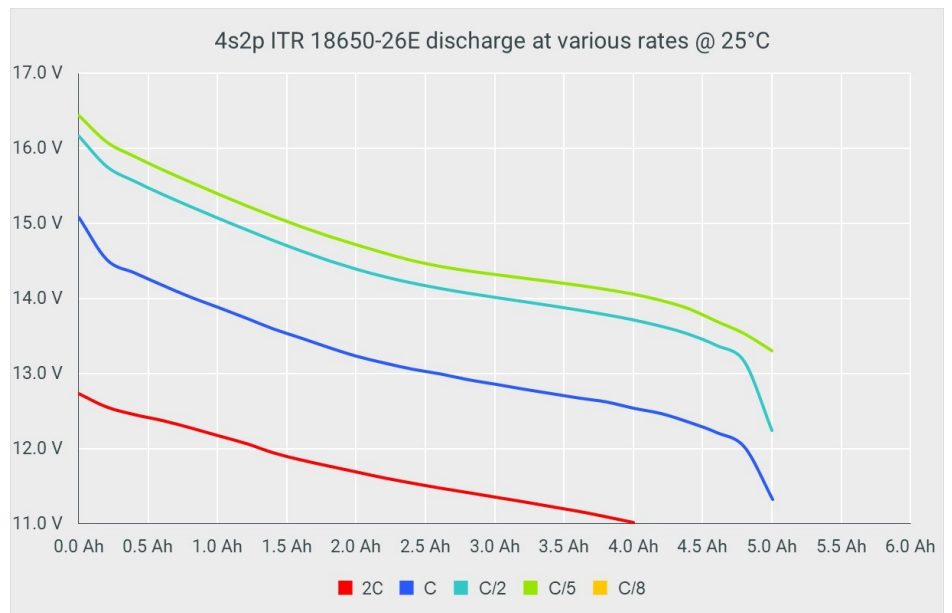
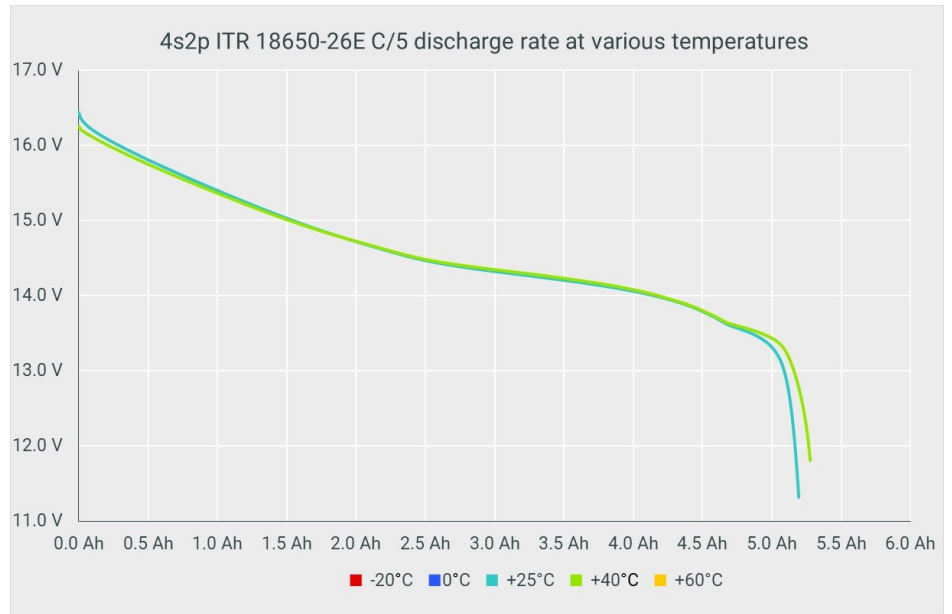
Transport and storage

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

Never store in direct sunlight.

Warning

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



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