



PRODUCT SPECIFICATION

Scope –

This product specification defines the specification & cautions of the rechargeable lithium ion battery to be supplied to the Customer by Robu.in

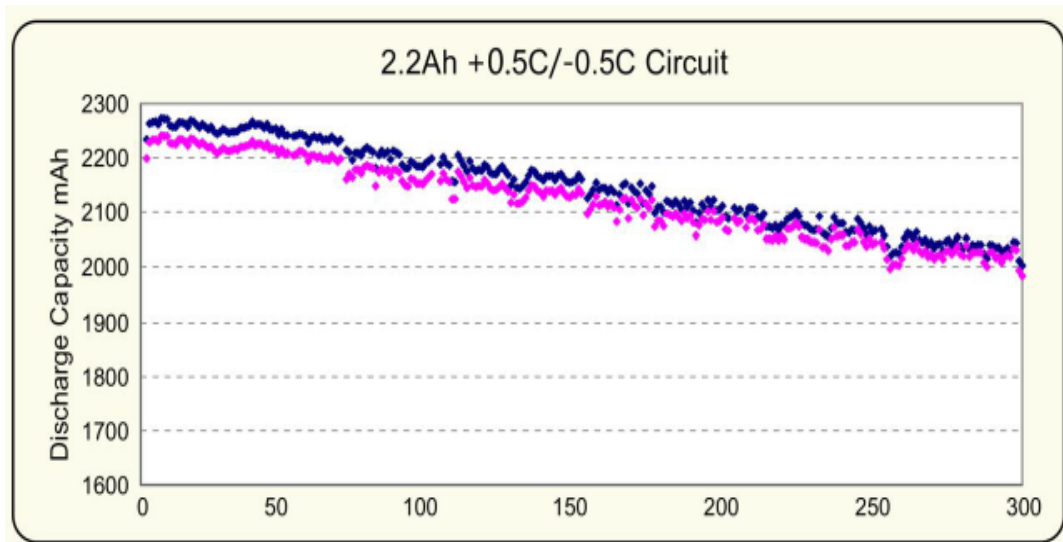
Product Classification - Cylindrical rechargeable lithium Ion Battery

Model Name – Orange ICR18650-22F



Technical Specifications: -

Item	Specifications
Model	: ICR18650-22F
Nominal capacity	: 2200mah
Nominal voltage	: 3.7v
Nominal Energy	: 8.14wh
Energy density	: 470wh/L 177wh/kg
Max Charging Voltage	: 4.20v
Discharge cut off voltage	: 2.75v
Standard charging Current	: 0.5C (1100ma)
Standard Discharge Current	: 0.5C (1100ma)
Maximum charging current	: 1C
Maximum Discharge current	: 2C
Internal resistance	: $\leq 55m\Omega$
Weight	: $\leq 46g$
Dimension	: Height: 65mm Diameter: 18mm
Cycle life / 80%	: ≥ 300
Charging temperature	: 0 - 45°C
Discharging Temperature	: 20 - 60°C
Compatible F series Applications	: 1) Power Bank 2) Laptop 3) Solar streetlight 4) Energy Storage 5) Camera



Discharge Capacity vs Cycle Life Graph for 2 Sample Batteries

Caution

Warning for using the lithium ion rechargeable battery. Mishandling of the battery may cause heat, fire and

deterioration in performance. Be sure to observe the following.

1- Cautions for Use and Handling

- When using the application equipped with the battery, refer to the user's manual before usage.
- Please read the specific charger manual before charging.
- Charge time should not be longer than specified in the manual.
- when the cell is not charged after long exposure to the charger, discontinue charging
- Battery must be charged at operating temperature range 0 ~ 45°C.
- Battery must be discharged at operating temperature range -20 ~ 60°C.
- Please check the positive (+) and negative (-) direction before packing.
- When a lead plate or wire is connected to the cell for packing, check out insulation not to short-circuit.
- Battery must be stored separately.
- Battery must be stored in a dry area with low temperature for long-term storage.

- Do not place the battery in direct sunlight or heat.
- Do not use the battery in high static energy environment where the protection device can be damaged.
- When rust or smell is detected on first use, please return the product to the seller immediately.
- The battery must be away from children or pets.
- When cell life span shortens after long usage, please exchange to new cells.
- Do insulate between the metal plate and cell or other components not to make an electrical short.
- The cells should be handled and used in Pack/System manufacturing companies only.

2- Prohibitions

- Do not use different charger. Do not use cigarette jacks (in cars) for charging.
- Do not charge with constant current more than maximum charge current.
- Do not disassemble or reconstruct the battery.
- Do not throw or cause impact.
- Do not pierce a hole in the battery with sharp things. (such as nail, knife, pencil, drill)
- Do not use with other batteries or cells.
- Do not solder on battery directly.
- Do not press the battery with overload in manufacturing process, especially ultrasonic welding.
- Do not use old and new cells together for packing.
- Do not expose the battery to high heat. (such as fire)
- Do not put the battery into a microwaves' or high pressure container.
- Do not use the battery reversed.
- Do not connect positive(+) and negative(-) with conductive materials (such as metal, wire)
- Do not allow the battery to be immersed in or wetted with water or sea-water.
- Do not give immoderate heat and force to battery cell during a welding process of metal plates on it.

Exclusion of Liability

The warranty shall not cover defects caused by normal wear and tear, inadequate maintenance, handling, storage faulty repair, modification to the battery or pack, failure to observe the product specification provided herein or improper use of installation, including but not limited.

To, the following:

- Incorrect installation of battery into pack or maintenance
- Use of battery or pack in inappropriate environment
- Improper, inadequate, or incorrect charge, discharge or production circuit other than stipulated herein
- Incorrect use or inappropriate use
- Insufficient ventilation
- Ignoring applicable safety warnings and instructions
- Altering of attempted repairs by unauthorized personnel
- In case of force majeure (Ex. Lightening, Storm, Flood, fire, Earthquake, Etc.)

There are no warranties – Implied or express – Other than those stipulated herein shall not be liable for

Any consequential or indirect damages arising of in connection with the product specification, battery or pack.