# FLIR E4 (incl. Wi-Fi)

## P/N: 63906-0604



**Document identity**

Publ. No.: 63906-0604
Commit: 81084
Language:
Modified: 2021-11-22
Formatted: 2021-12-02

**Website**

http://www.flir.com

**Customer support**

http://support.flir.com




| General description |
|---|
| The FLIR Ex series cameras are point-and-shoot infrared cameras that give you access to the infrared world. A FLIR Ex series camera is an affordable replacement for an infrared thermometer, providing a thermal image with temperature information in every pixel. The new MSX and visual formats make the cameras incomparably easy to use.<br>The FLIR Ex series cameras are user-friendly, compact, and rugged, for use in harsh environments. The wide field of view makes them the perfect choice for building applications. |
| Benefits: |
| • Easy to use: The FLIR Ex series cameras are fully automatic and focus-free with an intuitive interface for simple measurements in thermal, visual, or MSX mode.<br>• Compact and rugged: The FLIR Ex series cameras' low weight of 0.575 kg and the accessory belt pouch make them easy to bring along at all times. Their rugged design can withstand a 2 m drop test, and ensures reliability, even in harsh environments.<br>• Ground breaking affordability: The FLIR Ex series cameras are the most affordable infrared cameras on the market. |

| Imaging and optical data | |
|---|---|
| IR resolution | 80 × 60 pixels |
| Thermal sensitivity/NETD | <0.15°C (0.27°F) / <150 mK |
| Field of view (FOV) | 45° × 34° |
| Minimum focus distance | 0.5 m (1.6 ft.) |
| Spatial resolution (IFOV) | 10.3 mrad |
| F-number | 1.5 |
| Image frequency | 9 Hz |
| Focus | Focus free |

| Detector data | |
|---|---|
| Detector type | Focal plane array (FPA), uncooled microbolometer |
| Spectral range | 7.5–13 µm |

| Image presentation | |
|---|---|
| Display | 3.0 in. 320 × 240 color LCD |
| Image adjustment | Automatic adjust/lock image |

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| **Image presentation modes** | |
|---|---|
| Image modes | Thermal MSX, Thermal, Picture-in-Picture, Thermal blending, Digital camera. |
| Multi Spectral Dynamic Imaging (MSX) | IR image with enhanced detail presentation |
| Picture-in-Picture | IR area on visual image |

| **Measurement** | |
|---|---|
| Camera temperature range | –20 to 250°C (–4 to 482°F) |
| Object temperature range and accuracy (for ambient temp. 10 to 35°C (50 to 95°F) and object temp. above 0°C (32°F)) | • 0 to 100°C (32 to 212°F): ±2°C (±3.6°F)<br>• 100 to 250°C (212 to 482°F): ±2% |

| **Measurement analysis** | |
|---|---|
| Spotmeter | Center spot |
| Area | Box with max./min. |
| Isotherm | Above alarm, Below alarm |
| Emissivity correction | Variable from 0.1 to 1.0 |
| Emissivity table | Emissivity table of predefined materials |
| Reflected apparent temperature correction | Automatic, based on input of reflected temperature |

| **Set-up** | |
|---|---|
| Color palettes | Black and white, iron and rainbow |
| Set-up commands | Local adaptation of units, language, date and time formats |

| **Storage of images** | |
|---|---|
| File formats | Standard JPEG, 14-bit measurement data included |

| **Digital camera** | |
|---|---|
| Digital camera, resolution | 640 × 480 |
| Digital camera, FOV | 55° × 43° |

| **Data communication interfaces** | |
|---|---|
| Interfaces | USB Micro: Data transfer to and from PC and Mac device |
| Wi-Fi | Peer-to-peer (ad hoc) or infrastructure (network) |

| **Radio** | |
|---|---|
| Wi-Fi | • Standard: 802.11 b/g/n<br>• Frequency range:<br>  ◦ 2400–2480 MHz<br>  ◦ 5150–5260 MHz<br>• Max. output power: 15 dBm |

| **Power system** | |
|---|---|
| Battery type | Rechargeable Li ion battery |
| Battery voltage | 3.6 V |
| Battery operating time | Approx. 4 hours at +25°C (+77°F) ambient temperature and typical use |
| Charging system | Battery is charged inside the camera or in specific charger. |

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| **Power system** | |
|---|---|
| Charging time | 2.5 hours to 90% capacity in camera. 2 hours in charger. |
| Power management | Automatic shut-down |
| AC operation | AC adapter, 90–260 VAC input, 5 VDC output to camera |

| **Environmental data** | |
|---|---|
| Operating temperature range | –15°C to +50°C (+5°F to +122°F) |
| Storage temperature range | –40°C to +70°C (–40°F to +158°F) |
| Humidity (operating and storage) | IEC 60068-2-30/24 h 95% relative humidity |
| EMC | • EN 61000-6-2 (Immunity)<br>• EN 61000-6-3 (Emission)<br>• FCC 47 CFR Part 15 Class B (Emission)<br>• RCM |
| Radio spectrum | • ETSI EN 300 328<br>• ETSI EN 301 893<br>• FCC 47 CFR Part 15 C, E<br>• RSS-247 Issue 2 |
| Hazardous substances | • WEEE 2012/19/EU<br>• RoHs 2011/65/EU |
| Encapsulation | IP 54 (IEC 60529) |
| Shock | 25 g (IEC 60068-2-27) |
| Vibration | 2 g (IEC 60068-2-6) |
| Drop | 2 m (6.6 ft.) |
| Safety | Camera:<br>• IEC/EN 60950-1, IEC/EN 62368-1<br>Power supply:<br>• IEC/EN 62368-1<br>• CSA/UL/KC/SAA/PSE 60950-1 |
| Declaration of conformity | See: https://support.flir.com/resources/DoC |

| **Physical data** | |
|---|---|
| Camera weight, incl. battery | 0.575 kg (1.27 lb.) |
| Camera size (L × W × H) | 244 × 95 × 140 mm (9.6 × 3.7 × 5.5 in.) |
| Color | Black and gray |

| **Shipping information** | |
|---|---|
| Packaging, type | Cardboard box |
| List of contents | • Infrared camera<br>• Hard transport case<br>• Battery (inside camera)<br>• USB cable<br>• Power supply/charger with EU, UK, US and Australian plugs<br>• FLIR Thermal Studio Starter<br>• Printed documentation |
| Packaging, weight | 2.9 kg (6.4 lb.) |
| Packaging, size | 385 × 165 × 315 mm (15.2 × 6.5 × 12.4 in.) |
| EAN-13 | 4743254002869 |
| UPC-12 | 845188014117 |
| Country of origin | Estonia |

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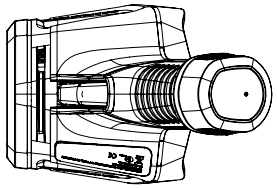
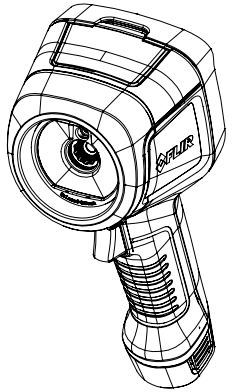
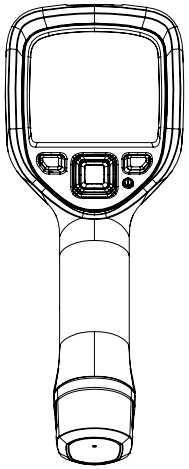
**Supplies & accessories:**

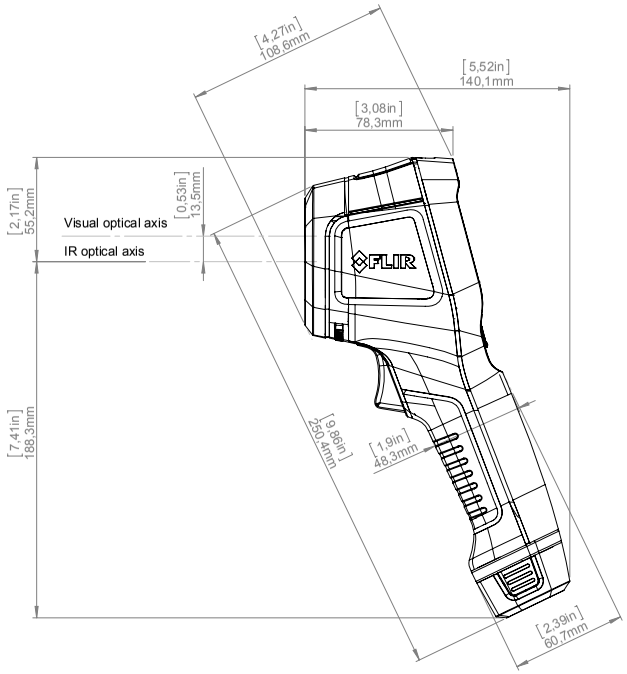
- T198528; Hard transport case FLIR Ex series
- T198531; Battery charger incl power supply
- T198532; Car charger
- T198534; Power supply USB-micro
- T198529; Pouch FLIR Ex and ix series
- T198533; USB cable Std A <-> Micro B
- T199362ACC; Battery Li-ion 3.6 V, 2.6 Ah, 9.4 Wh
- T911689ACC; Pouch for FLIR E-series
- T911093; Tool belt
- T300083; FLIR Thermal Studio Pro, Perpetual license
- T300341; FLIR Thermal Studio Standard, 1 Year Subscription
- T300258; FLIR Thermal Studio Standard, Perpetual license
- T198583; FLIR Tools+ (download card incl. license key)
- T199233; FLIR Atlas SDK for .NET
- T199234; FLIR Atlas SDK for MATLAB

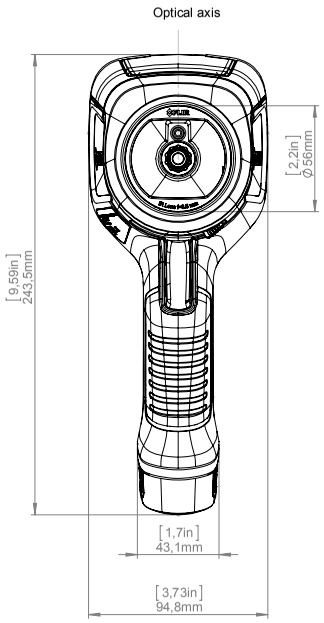
# Camera with built-in IR lens f=6,5 mm (45°)

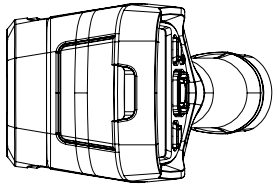








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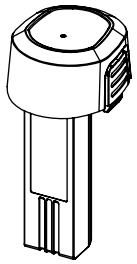
| Modified | Check | Drawn by |
|---|---|---|
| 2013-03-25 | CAHA | R&D Thermography |

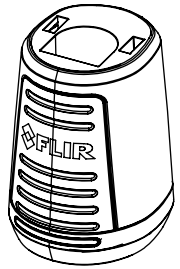
Denomination

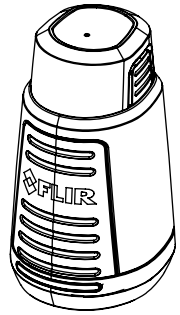
Basic dimensions FLIR Ex

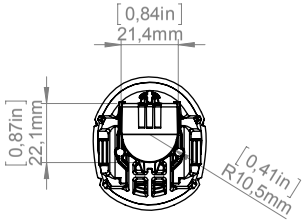
| Size | Sheet |
|---|---|
| A2 | 1(2) |
| Scale 1:2 | |
| Drawing No. T127831 | Size A |

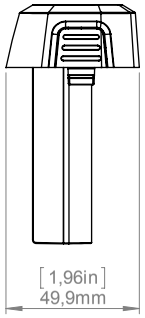
# Charger and Power pack

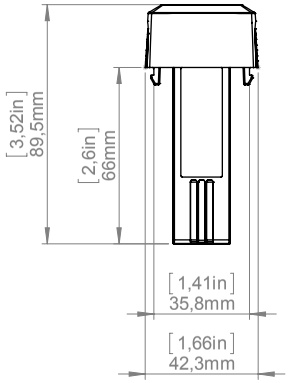


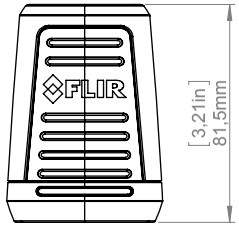


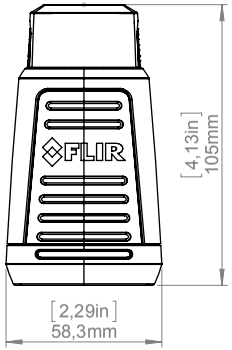



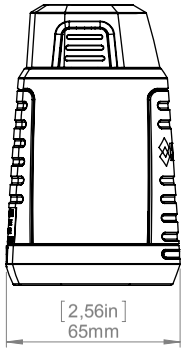



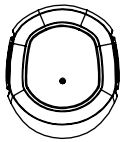



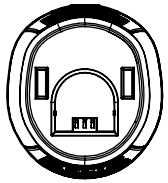



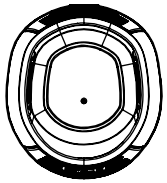







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| | | | |
|---|---|---|---|
| Modified 2013-03-25 | Check CAHA | Drawn by R&D Thermography | FLIR |
| Denomination: Basic dimensions FLIR Ex | | Size A3 | |
| | | Scale 1:2 | Sheet 2(2) |
| | | Drawing No. T127831 | Size A |

# Safety Data Sheet

**SDS No.: 2019081401**

**Updated Date: 2019/Aug**

## 1. Product and Company Identification

Important Note: As a solid, manufactured article, exposure to hazardous ingredients is not expected with normal use. This battery is an article pursuant to 29 CFR 1910.1200 and, as such, is not subject to the OSHA Hazard Communication Standard requirement. The information contained in this Safety Data Sheet contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Commercial product name
365-8107(T300109)

Use of the substance/preparation
Lithium-Ion battery (INR18650-29E)

Manufacturer
Celltech (Zhongshan) Ltd.

Address
4th Floor, Building 3 / No. 6 Jiusha Road / Torch Development District / Zhongshan / China

Company/undertaking identification
Emergency Contact (CHEMTREC)
+86-760-87365930
Further Information

Battery-System: Lithium-Ion (Li-ion)

Nominal Voltage: 3.65V

Rated Capacity: 2.75Ah

Wh rating: 10.0375Wh

Remark:

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. Celltech (Zhongshan) Ltd. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

## 2. Hazards Identification

Route(s) of Entry
There is no hazard when the measures for handling and storage are followed.

Signs and Symptoms of Exposure

In case of cell damage, possible release of dangerous substances and a flammable gas mixture.

OSHA Hazard Communication: This material is not considered hazardous by the OSHA Hazard Communication Standard 29CFR 1910.1200.

Carcinogenicity (NTP): Not listed
Carcinogenicity (IARC): Not listed
Carcinogenicity (OSHA): Not listed

Special hazards for human health and environment
There is no hazard when the measures for handling and storage are followed.
In case of cell damage, possible release of dangerous substances and a flammable gas mixture.

Explication of special hazards for human health and environment
Not classified as dangerous according to directive 1999/45/EEC
There is no hazard when the measures for handling and storage are followed.
In case of cell damage, possible release of dangerous substances and a flammable gas mixture.

## 3. Composition/information on ingredients

Hazardous components

| | Chemical Name | CAS No. | *Mass range in cell (g/g %) |
|---|---|---|---|
| Electrolyte | Contains Electrolyte salt and solvents. | | 5-20 |
| Electrolyte salt | Lithium hexafluorophosphate | 21324-40-3 | 0.05-5 |
| Electrolyte solvent | Includes one or more of the following:<br>Ethelyne Carbonate<br>Propylene Carbonate<br>Diethyl Carbonate | 96-49-1<br>108-32-7<br>105-58-8 | 5-20 |
| PVDF | Polyvinylidenfluoride | 24937-79-9 | <1 |
| Copper | Cu | 7440-50-8 | 3-15 |
| Aluminium | Al | 7429-90-5 | 2-10 |
| Cathode | Lithium cobalt oxide | 12190-79-3 | 20-50 |
| Anode | Graphite | 7782-42-5 | 10-30 |
| Steel, Nickel, and inert components | | Various | Balance |

Further Information
For information purposes:
(*) Main ingredients: Lithium hexafluorophosphate, organic carbonates

Because of the cell structure the dangerous ingredients will not be available if used properly. During charge process a lithium graphite intercalation phase is formed.

Mercury content: Hg < 0.1mg/kg

Cadmium content: Cd < 1mg/kg

Lead content: Pb< 10mg/kg

**4. First Aid Measures**

General information
The following first aid measures are required only in case of exposure to interior battery components after damage of the external battery casing.
Undamaged, closed cells do not represent a danger to the health.

After inhalation
Ensure of fresh air. Consult a physician.

After contact with skin
In case of contact with skin wash off immediately with plenty of water.
Consult a physician.

After contact with eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical treatment by eye specialist.

After ingestion
Drink plenty of water.
Call a physician immediately.

**5. Fire Fighting Measures**

Suitable extinguishing media
Cold water and dry powder in large amount are applicable.
Use metal fire extinction powder or dry sand if only few cells are involved.

Special hazards arising from the chemical
May form hydrofluoric acid if electrolyte comes into contact with water.
In case of fire, the formation of the following flue gases cannot be excluded: Hydrogen fluoride (HF), Carbon monoxide and carbon dioxide.

Protective equipment and precautions for firefighters
Wear self-contained breathing apparatus and protective suit. Additional information
If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) can explode/vent. Cell is not flammable but internal organic material will burn if the cell is incinerated.

**6. Accidental Release Measures**

Personal precautions
Use personal protective clothing.
Avoid contact with skin, eyes and clothing. Avoid breathing fume and gas.

Environmental precautions
Do not discharge into the drains/surface waters/groundwater. Methods for cleaning up/taking up
Take up mechanically and send for disposal.

**7. Handling and Storage**

Handling

Advice on safe handling
Avoid short circuiting the cell. Avoid mechanical damage of the cell. Do not open or disassemble. Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage rooms and vessels
Storage at room temperature (approx. 20°C) at humidity approx. 60% of the nominal capacity.
Keep in closed original container.

**8. Exposure controls/personal protection Exposure limit values Exposure limits**

| Ingredient | Risk Codes | Safety Description | Hazard | Exposure Controls/Personal Protection |
|---|---|---|---|---|
| Lithium Cobalt oxide | R22;R43; R50/53 | S24; S37; S60; S61 | Xn(Harmful) (Dangerous for the environment) | 0.1 mg/m3 (TWA) |
| Manganese (VI) oxide | R20/22 | S25 | Xn(Harmful) | Airborne Exposure Limits:<br>- OSHA Permissible Exposure Limit (PEL):<br>5 mg/m3 Ceiling for manganese compounds as Mn<br>- ACGIH Threshold Limit Value (TLV):<br>0.2 mg/m3 (TWA) for manganese, elemental and inorganic compounds as Mn |
| Nickel oxide | R43,R49 R53, R36/37/38 | S45,S53,S61 | T(Toxic) | Airborne Exposure Limits:<br>For Nickel, Metal and Insoluble Compounds, as Ni:<br>- OSHA Permissible Exposure Limits (PEL) -<br>1 mg/m3 (TWA).<br>For Nickel, Elemental / Metal:<br>- ACGIH Threshold Limit Value (TLV) -<br>1.5 mg/m3 (TWA), A5 - Not suspected as a human carcinogen.<br>For Nickel, Insoluble Compounds, as Ni:<br>- ACGIH Threshold Limit Value (TLV) -<br>0.2 mg/m3 (TWA), A1 - Confirmed human carcinogen |
| Carbon | R36/37 R20, R10 | S22; S24/25 | F (Highly Flammable)<br>Xn (Harmful)<br>Xi(Irritant) | Airborne Exposure Limits:<br>- OSHA Permissible Exposure Limits (PELs):<br>activated carbon (graphite, synthetic):<br>Total particulate = 15 mg/m3 |
| Aluminium foil | R17,R15 R36/38 R10,R67, R65,R62 R51/53, R48/20, R38.R11 | S7/8,S43,S26,S62, S61, S36/37, S33, S29, S16, S9 | F(Highly Flammable)<br>Xn(Harmful)<br>Xi(Irritant) | Airborne Exposure Limits:<br>-OSHA Permissible Exposure Limit (PEL):<br>15 mg/m3 (TWA) total dust and 5 mg/m3(TWA)<br>Repairable fraction for Aluminum metal as Al<br>-ACGIH Threshold Limit Value (TLV):<br>10 mg/m3 (TWA) Aluminum metal dusts |
| Copper foil | R11 R36 R37 R38 | S5, S26, S16, S61, S36/37 | F(Highly Flammable)<br>N(Dangerous for the environment)<br>Xn(Harmful)<br>Xi(Irritant) | Copper Dust and Mists, as Cu:<br>- OSHA Permissible Exposure Limit (PEL) -<br>1 mg/m3 (TWA)<br>- ACGIH Threshold Limit Value (TLV) -<br>1 mg/m3 (TWA)<br>Copper Fume:<br>- OSHA Permissible Exposure Limit (PEL)<br>0.1 mg/m3 (TWA)<br>- ACGIH Threshold Limit Value (TLV) -<br>0.2 mg/m3 (TWA) |
| Polyvinylide ne fluoride(PVdF) | | S22;S24/25 | | |

Full text of each relevant R phrase can be found in heading 16.

Additional advice on limit values
During normal charging and discharging there is no release of product.

Occupational exposure controls
No specific precautions necessary.

Protective and hygiene measures
When using do not eat, drink or smoke. Wash hands before breaks and after work.

Respiratory protection
No specific precautions necessary.

Hand protection
No specific precautions necessary.

Eye protection
No specific precautions necessary.

Skin protection
No specific precautions necessary.

## 9. Physical and Chemical Properties

Appearance

| | |
|---|---|
| Form: | Solid |
| Color: | Various |
| Odor: | Odourless |

Important health, safety and environmental information

| Test method | |
|---|---|
| PH Value: | n.a. |
| Flash point: | n.a |
| Lower explosion limits: | n.a. |
| Vapour pressure: | n.a. |
| Density: | n.a. |
| Water solubility: | Insoluble |
| Ignition temperature: | n.a. |

## 10. Stability and Reactivity USA, EU

Stability
Stable

Conditions to avoid
Keep away from open flames, hot surfaces and sources of ignition. Do not puncture, crush or incinerate.

Materials to avoid
No materials to be especially mentioned.

Hazardous decomposition products
In case of open cells, there is the possibility of hydrofluoric acid and carbon monoxide release.

Possibility of Hazardous Reactions
Will not occur

Additional information
No decomposition if stored and applied as directed.

**11. Toxicological Information**

Empirical data on effects on humans
If appropriately handled and if in accordance with the general hygienic rules, no damages to health have become known.

**12. Ecological Information**

Further information
Ecological injuries are not known or expected under normal use. Do not flush into surface water or sanitary sewer system.

**13. Disposal Considerations**

Advice on disposal

For recycling consult manufacturer.

Contaminated packaging
Disposal in accordance with local regulations.

**14. Transport Information**

The rechargeable Lithium-Ion battery pack as stated in Appendix are made in compliance to the requirements stated in the latest edition of the IATA Dangerous Goods Regulations Packing Instruction 965 section IB such that they can be transported as dangerous goods. However, if those lithium-ion battery packs are pack with or contained in an equipment, then it is the responsibility of the shipper to ensure that the consignment are packed in compliance to the 60th edition of the IATA Dangerous Goods Regulations section II of Packing Instruction 966 or 967 in order for that consignment to be declared as Non Dangerous Goods.

With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions (2019-2020 Edition),
- The International Air Transport Association (IATA) Dangerous Goods Regulations (60th Edition, 2019)
- The International Maritime Dangerous Goods (IMDG) Code (2016 Edition, IMDG 37-14 Edition, Special Provision 188),
- US Hazardous Materials Regulations 49 CFR (Code of Federal Regulations)
  Sections 173.185 Lithium batteries and cells,
- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria
  38.3 Lithium batteries, 6th revised edition
- UN No. 3480

Our products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1 - T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Testes and Criteria that can be treated as **"Dangerous Goods"**.

Test results of the UN Recommendation on the Transport of Dangerous Goods

| Manual of Test and Criteria (38.3 Lithium battery) | | Test Results | Remark |
|---|---|---|---|
| No | Test item | | |
| T1 | Altitude Simulation | Pass | |
| T2 | Thermal Test | Pass | |
| T3 | Vibration | Pass | |
| T4 | Shock | Pass | |
| T5 | External Short Circuit | Pass | |
| T6 | Impact | Pass | |
| T7 | Overcharge | Pass | For pack only |
| T8 | Forced Discharge | Pass | For cell only |

The Batteries are protected so as to prevent short circuits including protection against contact with conductive materials Within the same packaging that could lead to a short circuit. The Batteries have been packed according to PI965, Section **IB** of the current 60th edition of the IATA Dangerous Goods Regulations 2019, therefore they can be carried as **Dangerous Goods**.

The outer packaging has been tested to protect the lithium batteries from damage caused by falling from a height of up to 1.2m. The Batteries have been tested to the safety standards of the UN Manual of Tests and Criteria, Part III, Subsection 38.3.

**15. Regulatory Information U.S.** Regulations

National Inventory TSCA
All of the components are listed on the TSCA inventory.

SARA
To the best of our knowledge this product contains no toxic chemicals subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act (SARA/EPCRA) and the requirements of 40 CFR Part 372.

**16. Regulatory information EU**

Labeling
Hazardous components which must be listed on the label
As an article the product does not need to be labeled in accordance with EC directives or respective national laws.

EU regulatory information

1999/13/EC (VOC): 0 %

**17. Other Information**

Hazardous Materials Information Label (HMIS)
Health: 0
Flammability: 0
Physical Hazard: 0

NFPA Hazard Ratings
Health: 0
Flammability: 0
Reactivity: 0
Unique Hazard:

Full text of R-phrases referred to under sections 2 and 3

| | |
|---|---|
| R10 | Flammable. |
| R20/22 | Harmful by inhalation and if swallowed. |
| R22 | Harmful if swallowed. |
| R34 | Causes burns. |
| R40 | Limited evidence of a carcinogenic effect. |
| R43 | May cause sensitization by skin contact. |
| R48/23 | Toxic: danger of serious damage to health by prolonged exposure through inhalation. |
| R49 | May cause cancer by inhalation. |
| R50 | Very toxic to aquatic organisms. |
| R53 | May cause long-term adverse effects in the aquatic environment. |

Further Information
Data of sections 4 to 8, as well as 10 to 12, do not necessarily refer to the use and the regular handling of the product (in this sense consult package leaflet and expert information), but to release of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product
(s) And is based on the present level of our knowledge. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations. "(n.a. = not applicable; n.d. = not determined)"

The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.

# UN38.3 lithium ion battery test summary



1. Test report holder:

Celltech Abatel AB
Kista Science Tower, 17th Floor, Färögatan 33
SE-164 51 Kista (Stockholm), Sweden
Tel: +46 (0) 8 445 78 70
order@celltech.se
www.celltech.se

2. Manufacturer:

Celltech (Zhongshan) Ltd
4th Floor, Building 3, No. 6 Jiusha Road
Torch Development District
528437 Zhongshan, China (PRC)
Tel: +86 760 8610 6022
sales@celltechchina.com
www.celltechchina.com

3. UN38.3 test lab:

South China National Center of Metrology,
Guangdong Institute of Metrology
No. 30, Songbaidong Street, Guangyuan Road
510405 Guangzhou, China (PRC)
Tel: +86 208 6594 172
scm@scm.com.cn
www.scm.com.cn

4. Test report number: DCW201900143

5. Date of test report: 28th December 2018

6. Description of battery:

Li-Ion battery, part number 365-8107/T300109
3.65V, 2.75Ah, 10.04Wh, 1S1P
Black plastic case with gold plated terminals
Cell: INR18650-29E (UN38.3 approved)

7. UN38.3 tests successfully passed:

| | |
|---|---|
| T1 – Altitude simulation | 38.3.4.1 |
| T2 – Thermal test | 38.3.4.2 |
| T3 – Vibration | 38.3.4.3 |
| T4 – Shock | 38.3.4.4 |
| T5 – External short circuit | 38.3.4.5 |
| T6 – Impact | 38.3.4.6 |
| T7 – Overcharge | 38.3.4.7 |
| T8 – Forced discharge | 38.3.4.8 |

8. Assembled battery testing requirements: Not applicable

9. Edition of UN manual of Test and Criteria: 6th Revised Edition

10. Name and title of signatory:

_____

Berth Svensson
Battery projects manager