

NP-L7S

Rechargeable Battery Pack

Instruction Manual

Thank you for purchasing the NP-L7S rechargeable Lithium-ion battery pack. Prior to using the NP-L7S we strongly recommend that you read this Instruction Manual on how to best use the NP-L7S and keep this manual for future reference. If you have any additional questions, please contact the appropriate IDX office listed at the end of this manual.

Features

- Light weight, compact, high performance Lithium-ion battery pack.
- Three-step LED power indicator shows the battery capacity status.

Specifications

- | | |
|--|-------------------------------------|
| • Cell chemistry : Lithium-ion | Temperature protection, (non-reset) |
| • Maximum Voltage : DC 16.8V | • Ambient temperature : |
| • Nominal Voltage : DC 14.8V | To charge : 0°C ~ 40°C |
| • Capacity : 4.8Ah | (10°C ~ 30°C recommended) |
| • Maximum discharge current : 4.8A (53W) | To discharge : -20°C ~ 60°C |
| • End Voltage : 11.0V | To store : -20°C ~ 50°C |
| • Battery protection circuit : Over-charge, over-discharge, and over-current | (-0°C ~ 20°C recommended) |
| • Battery protection element : | • Dimensions : 185(W)×72(H)×25(D)mm |
| | • Weight : approx. 460g |

Charging NP-L7S

- IDX chargers with Lithium-ion (Li-ion) charging ability should be used to charge NP-L7S. Refer to instruction manual of the IDX charger for description of the charging procedure.
- Approximate charge time may vary depending on chargers.
- NP-L7S batteries can be recharged in any charge condition.
- NP-L7S can be charged in ambient temperature range of 0°C ~ 40°C. For optimum charger performance 10°C ~ 30°C is recommended.
- If the temperature of the NP-L7S battery is below 0°C, the battery will not fully charge even if designated charge time is passed. The battery must be charged within the designated temperature range.

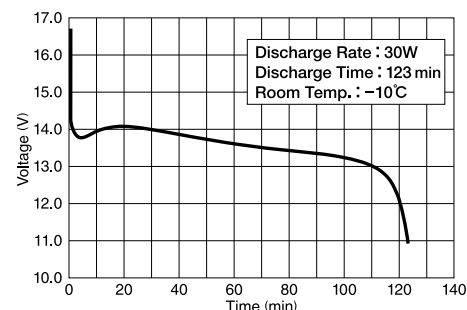
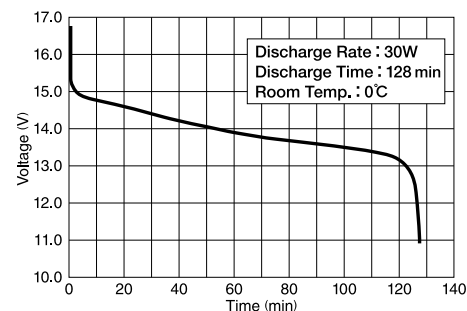
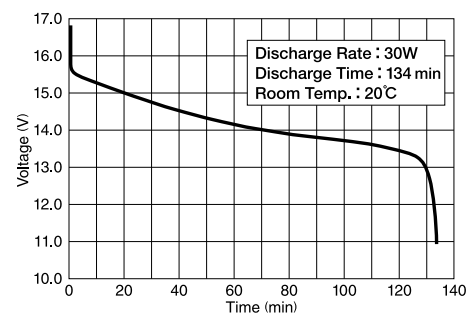
Storing NP-L7S

- Storage temperature range is -20°C ~ 50°C, for prolonged battery life 0°C ~ 20°C is recommended.
- To store the battery for a short period the battery should be stored in discharged condition.
- To store the battery for a long period (longer than 6 months), the battery should be charged up to 20% of capacity and left in this condition. This should be repeated every five months.
- After storage, while Li-ion is better than other battery chemistries, some self-discharge will occur. Before re-use it is advisable to re-charge the battery fully.

Discharging NP-L7S

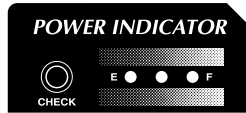
- When using the battery with video or lighting equipment, power consumption of the equipment must be 53W or below. For the protection of the battery, a load of 53W or over may activate the internal protection circuit and stop supply of power.
- The battery can be used in ambient temperature of -20°C ~ 60°C. It must be noted however that, while Li-ion performs better in lower temperatures than other battery chemistries, the operating time will still be shorter in lower temperature conditions. It will also vary with the power consumption of the equipment connected and condition of the battery. If temperature of the battery itself is below -20°C, discharge may stop.
- The voltage range of the NP-L7S during discharge is 13V ~ 15V and stable. At the end of discharge and below 13V the voltage drops sharply. For optimum use therefore, it is recommended to set the camera battery alarm voltage at approx 13V in the video camera menu. Refer to the specific camera manual for its recommended alarm setting.

Typical discharge graph at ambient temperature



Battery capacity display LEDs

- The battery charge status can be confirmed using the three level LED indication. (●●●lit : full or near full charge), (●lit : charge needed).
- At the press of a button the 3 LED display immediately shows the range of the battery voltage.



Battery Protection Circuitry

- **Over-charge protection** : If during charge the battery voltage exceeds a preset level, charging is automatically stopped to prevent the battery from being over-charged. The charger will show charging fault, though the batteries LEDs will continue to show the battery charge capacity. If this happens contact IDX or your supplier.
- **Over-discharge protection** : When the battery voltage drops to 9.2V, discharge is prohibited, preventing the battery from over-discharge and the LED indicators will not operate. The over-discharge protection circuit and LED operation is reset when the battery is next charged.
- **Over-current protection** : When exposed to a high discharge current, large in-rush current or an external short circuit, the protection function is activated preventing battery discharge and the LED indicators will not operate. The over-current protection is automatically reset by disconnecting the battery from the equipment in use.
- **Thermal protection** : If the batteries internal cell temperature exceeds specification, the thermal fuse activates. In such cases the battery cannot be reset. If this happens contact IDX or your supplier.

Terminals

T : Thermistor terminal **-** : Negative terminal **S** : Battery voltage terminal (remote sensing)

+A : Positive charging terminal

+B : Positive discharge terminal



Caution

- Do not subject the pack to extreme impact, pressure or place objects across the terminals that would cause a short.
- Do not throw the pack in a fire or attempt to burn it.
- Do not immerse in water. Keep the battery pack dry and away from excessively dry or humid environments.
- Do not attempt to open or break apart the battery pack.

NP-L7S Air Transport Compliance (ICAO)

IDX NP-L7S LITHIUM ION BATTERY PACKS are suitable for transport by air as non-hazardous articles under the regulations of the International Air Transport Association (IATA), the International Civil Aviation Organisation (ICAO) and the United Nations (UN).

IDX confirms that NP-L7S LITHIUM ION BATTERY PACKS contain:

1. An aggregate equivalent lithium content of less than 8g and that.
2. Each cell is of a type proved to meet the requirements of each test of the UN Manual of Tests and Criteria Part III, subsection 38.3.

ICAO & IATA Regulations for Air Transportation as Non-Hazardous articles. (IATA DGR Res 618 / Atch "A" / 44th Edition)

[A] Section 4.4 Special Provisions for Transport (Provision A45)
Lithium cells and batteries offered for transport are not subject to the provisions of these Regulations if they meet the following:

- (b) For a Lithium-ion battery, the aggregate lithium-equivalent content is not more than 8g.
- (c) Each cell or battery is of a type proved to meet the requirements of each test of the UN Manual of Tests and Criteria Part III, subsection 38.3.
- (d) Batteries are separated and packed so as to prevent short circuit.
- (e) No more than 12 Lithium-ion battery packs are transported in one single package.

[B] Section 2.3.5.10 Goods acceptable as Carry-on

There are limitations on Lithium-ion battery packs, which can be taken on aircraft as carry-on. These limitations apply only to battery packs with an aggregate equivalent lithium content of more than 8g. All IDX Lithium-ion Battery Packs contain an aggregate equivalent lithium content of less than 8g. Therefore IDX NP-L7S Lithium-ion Battery Packs are not subject to these limitations and, when individually protected against short circuit, may be carried as carry-on subject to no quantity limitation.



Li-ion



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