

Batteries and Audio

Table of content

Batteries	2
LiPo battery 3,7V / 450 mAh BAT-LIP0450A-10.....	2
LiPo battery 3,7V / 620 mAh BAT-LIP0620A-10.....	2
LiPo battery 3,7V / 800 mAh BAT-LIP0800A-10.....	3
LiPo battery 3,7V / 1350 mAh BAT-LIP01350A-10	3
LiPo battery 3,7V / 1950 mAh BAT-LIPO1950A-10.....	4
NiMh battery 2,4V / 2000mAh BAT-NIMH2000B-10	4
Audio accessories	5
Microphone.....	5
MIC-40/12-O-100	5
Speaker	5
LSP-10/2.8-150-100	5
Danger on LiPO batteries.....	6
Disassemble and Reconstruction	6
Short-circuit	6
Immersion.....	6
Charge nearby heated place.....	6
Charger and Charge Condition.....	6
Penetration	6
Impact.....	7
Soldering.....	7
Reverse Charge and Overdischarge	7
Reversed Polarity Use.....	7
Connect Battery To the Plug	7
Inappropriate Use For unspecified Equipment	7
Leakage	7

Batteries

**LiPo battery 3,7V / 450 mAh
BAT-LIP0450A-10**



Technical data

Cell Type : Lithium Ion Polymer
Nominal Voltage: 3.7V
End Voltage: 2.75V
Cell Outer Dimension: 4.0X29.5X38
mm
Minimum Capacity: 400mAh (0.2C
discharge)
Discharging Current (Max.): 1200mA
Internal Resistance: <170mΩ
Wire: AWG#20 50 mm
Connector: JST XHP-2

Other wire length or connector on
request.

*Further technical details like Pre-charging
Method, Performance Curves, Safety
Instruction and more you will get with full
data sheet of this battery*

**LiPo battery 3,7V / 620 mAh
BAT-LIP0620A-10**



Technical data

Cell Type : Lithium Ion Polymer
Nominal Voltage: 3.7V
End Voltage: 2.75V
Cell Outer Dimension: 5X29.5X
42mm
Minimum Capacity: 620mAh (0.2C
discharge)
Discharging Current (Max.): 1860mA
Internal Resistance: <140mΩ
Wire: AWG#20 50 mm
Connector: JST XHP-2

Other wire length or connector on
request.

*Further technical details like Pre-charging
Method, Performance Curves, Safety
Instruction and more you will get with full
data sheet of this battery*

**LiPo battery 3,7V / 800 mAh
BAT-LIP0800A-10****Technical data**

Cell Type : Lithium Ion Polymer
Nominal Voltage: 3.7V
End Voltage: 2.75V
Cell Outer Dimension: 4X 34,5X 59 mm
Minimum Capacity: 800mAh (0.2C discharge)
Discharging Current (Max.): 2400mA
Internal Resistance: <140mΩ
Wire: AWG#20 UL1571 50 mm
Connector: JST XHP-2
Other wire length or connector on request.

Further technical details like Pre-charging Method, Performance Curves, Safety Instruction and more you will get with full data sheet of this battery

**LiPo battery 3,7V / 1350 mAh
BAT-LIP01350A-10****Technical data**

Cell Type : Lithium Ion Polymer
Nominal Voltage: 3.7V
End Voltage: 2.75V
Cell Outer Dimension: 6X35X60mm
Minimum Capacity: 1350mAh (0.2C discharge)
Discharging Current (Max.): 4050mA
Internal Resistance: <110mΩ
Wire: AWG#20 50mm
Connector: JST XHP-2

Other wire length or connector on request.

Further technical details like Pre-charging Method, Performance Curves, Safety Instruction and more you will get with full data sheet of this battery

**LiPo battery 3,7V / 1950 mAh
BAT-LIPO1950A-10**



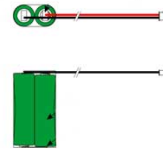
Technical data

Cell Type : Lithium Ion Polymer
Nominal Voltage: 3.7V
End Voltage: 2.75V
Cell Outer Dimension: 4.0X49,5X
84mm
Minimum Capacity: 1950mAh (0.2C
discharge)
Discharging Current (Max.): 3900mA
Internal Resistance: <120mΩ
Wire: AWG#20 50 mm
Connector: JST XHP-2

Other wire length or connector on
request.

*Further technical details like Pre-charging
Method, Performance Curves, Safety
Instruction and more you will get with full
data sheet of this battery*

**NiMH battery 2,4V / 2000mAh
BAT-NIMH2000B-10**



Technical data

Cell Type : 2x NimH rechargeable 'A'
Size
Nominal Voltage: 2,4V
End Voltage: 2,0V
Dimension: max52 X 29,5±025X
14,8±0,2(L) mm
Minimum Capacity: 2000mAh
Wire: AWG#20 100 mm
Connector: JST XHP-2

Other wire length or connector on
request.

*Further technical details like Pre-charging
Method, Performance Curves, Safety
Instruction and more you will get with full
data sheet of this battery*

Audio accessories

Microphone **MIC-40/12-O-100**



Technical data

Diameter: $4,0 \pm 0,1$
Height: $1,2 \pm 0,2$
Directivity: Omni directional
Resistance Loading: 2,2 K Ohm
Frequency Range: 100 – 10 kHz
Power Supply: 2,0 V

Further technical details you will get with full data sheet of this microphone

Speaker **LSP-10/2.8-150-100**



Technical data

Impedance: 150 Ohm
Frequency Range: 300 -4000 Hz
Input Power: 179 mV
Diameter: $10 \pm 0,1$

Further technical details you will get with full data sheet of this microphone

Danger on LiPO batteries

Disassemble and Reconstruction

“Do not disassemble or reconstruct battery”

The battery has safety function and protection circuit to avoid the danger. If they have serious damage, it will cause the generating, smoke, rupture or flaming.

Short-circuit

“Do not short-circuit battery”

Do not connect the + and – terminals with metals (such as wire). Do not carry or store the battery with metal objects (such as wire, chain, necklet or hairpins). If the battery is short-circuited, excessive large current will flow and then the generating, smoke, rupture or flaming will occur. And also, it causes generating of metals.

Use nearby Heated Place

“Do not use or leave battery nearby fire, stove or heated place (more than 80°C)”

In case that separator made of polymer is melted by high temperature, the internal short-circuit occurs in individual cells and then it causes the generating, smoke, rupture or flaming. In addition, do not use the battery under the heated place (more than 80°C) for same reason.

Immersion

“Do not immerse the battery in water or sea water, or get it wet”

If the protection circuit included in the battery is broken, the battery will be charged at extreme current or voltage and the abnormal chemical reaction occurs in it. And then it causes the generating, smoke, rupture or flaming.

Charge nearby heated place

“Do not charge battery nearby the fire or under the blazing sun”

If the protection circuit to avoid the danger works under high temperature or it is broken, the battery will be charged at abnormal current (or voltage) and abnormal chemical reaction will occur. It causes the generating, smoke, rupture or flaming.

Charger and Charge Condition

“Do use the specified charger and observe charging requirement”

If the battery is charged with unspecified condition (under high temperature over the regulated value, excessive high voltage or current over regulated value, or remodelled charger). There are cases that it will be overcharged or the abnormal chemical reaction will occur in cells. It causes the generating, smoke, rupture or flaming.

Penetration

“Do not drive a nail into the battery. Strike it by hammer, or tread it”

As the battery might be broken or deformed and then it will be short-circuited, It causes the generating, smoke, rupture, or flaming.

Impact

“Do not give battery impact or fling it”

If the protection circuit assembled in the battery is broken, the battery will be charged at abnormal voltage or current and abnormal chemical reaction will occur. It causes the generating, smoke, rupture or flaming.

Soldering

“Do not make the direct soldering on battery”

It causes the generating, smoke or flaming.

Reverse Charge and Overdischarge

“Do not make the direct soldering on battery”

On charging, the battery is reverse-charged and abnormal chemical reaction occurs. And also, there may be case that unexpected large current flows on discharging. These cause the generating, smoke, rupture or flaming.

Reversed Polarity Use

“Do not reverse-charge or reverse-connect”

The battery has polarity. If the battery is connected to opposite polarity with charger, it will generating, smoke, rupture or flaming.

Connect Battery To the Plug

“Do not connect battery to the plug socket or car-cigarette-plug”

Added high voltage to the battery, the excessive current will flow in it and then it will cause the generating, smoke, rupture or flaming.

Inappropriate Use For unspecified Equipment

“Do not use battery for unspecified equipment”

If the battery is used for unspecified equipment, it will deteriorate its performance and cycle-life. At worst, abnormal current will flow or battery may generate, smoke, rupture or flame.

Leakage

“Do not touch a leaked battery directly”

In case the leaked electrolyte gets into eyes, wash them with fresh water as soon as possible without rubbing eyes. And then, see a doctor immediately. If leave damaged eyes undone, it will cause eye-trouble.