

Portable rechargeable mobile
USB chargers and solar chargers
for smart phones & other battery
powered equipment supported
by USB charging.

Short Form Catalogue



www.powersolvemobile.com

Introduction to Powersolve and our range of mobile power products

Powersolve Electronics Ltd. has been in business as a specialist in power supplies and power conversion technology since 1987. During this time we have supplied millions of power conversion products such as AC-DC power supplies, DC-DC converters, DC-AC inverters, Battery Chargers, Batteries, Uninterruptible Power Supplies and many other products. We are supplying major customers in the electronics industry, communications, datacoms, telecoms, industrial, oil and gas and in fact most types of industry where there is the need for power and power conversion products. In particular we have a lot of experience in lithium batteries and lithium battery chargers for the communication industry particularly in encrypted radio systems where we have supplied many tens of thousands of intelligent battery chargers used in radio communication equipment for the emergency services.

We have now added a new range of commercial mobile power bank products for charging devices that use USB chargers such as mobile phones, GPS, MP3 players, tablet PC's, digital cameras and in fact anything that can be charged using 5V USB technology. All of our products have been fully tested for battery capacity, conversion efficiency and battery protection circuits. All battery ratings quoted are the "real" capacity of the batteries fitted. Most of our products are very slim, light weight and compact and are manufactured using thin lithium polymer battery cells. They will fit easily into the pocket or handbag. Conversion efficiencies of our products are high and recharge times are kept to a minimum with 2A charging inputs on the higher powered products.

Some manufacturers of these types of devices make wild claims about battery capacity, recharge times and the number of charges achievable for your mobile phone from one battery pack. The first thing to understand is that whatever the mAh rating of the battery in a battery power pack, not all of this is available to charge your phone or other equipment. The Lithium battery is rated at 3.7V. The USB output is 5VDC. Therefore the 3.7V has to be converted to 5VDC through an internal voltage regulator, so there are losses in efficiency here. When you charge your mobile or other device this will also have a 3.7V lithium battery fitted. So the 5V from our power pack now has to be dropped to the charger level within the mobile, which is 4.2VDC, therefore resulting in more inefficiency. Add to this the fact that the battery will give more of it's capacity when operating at normal ambient temperature than it will when it is cold. So you can understand the problem. On average the conversion rate from our products is around 80 to 85% and over 90% for some models. But this does depend on temperature, discharge rate and age of the battery. In the specification attached we have tried to give an indication of what performance you can expect when charging an average mobile phone and also the recharge period for charging our battery pack. For example if you see claims of 5 hours charge time for a 10,000mAh battery pack when it only charges at 5V 1 Amp input then this is completely ridiculous! A 1 Amp charger would take more than 10 hours to charge a 10,000mAh (10Ah) battery! When charging our power bank battery packs you can use either a 5V 1A or 2A USB charger. If our model is rated at 1A input it will simply use only what is required from a 2A charger. And if rated at 2A input it will obviously charge much faster with 2A USB charger than with a 1A version. Same applies to your mobile devices you can use either the 1A or 2A output where fitted. The current limiting will be done in your device so you cannot overcharge your device.

We also offer a range of USB travel charger products with interchangeable AC heads that enable them to be used in most countries in the world. All of the USB products are not just CE marked for Europe but carry full international safety approvals.

We hope that you will find this information useful and hope you will find our products of interest and above all reliable when used with your mobile devices.



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Portable Rechargeable Mobile Power Banks

Model SPB1501 Credit Card Size Charger



Features

- Very compact, credit card size lithium battery pack (5.5mm thick)
- 1500mAh battery can charge typical mobile phone up to 70%
- 5V 500mA micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 3-4 hours
- 5V 600mA USB output will give top up power to mobile smart phones, digital cameras, etc.
- Fits easily into pocket or handbag to provide emergency back up power when you need it
- A four LED display shows battery charge condition
- Rubberized black back and brushed aluminium front plate

Model SPB2801 Ultra Compact Charger



Features

- Ultra compact, lithium battery pack measures 91 x 51 x 11mm
- 2800mAh battery can fully charge a typical mobile smart phone
- 5V 1A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 3-4 hours
- 5V 1A USB output will charge typical smart phone in same time as your AC mobile charger
- Fits easily into pocket or handbag to provide emergency back up power when you need it. Comes complete with cable and connectors for most smart phones.
- A four LED display shows battery charge condition
- Also features a convenient push button LED torch
- Textured matt black finish

Model SPB8001 Higher Power Ultra Slim Charger



Features

- Ultra compact, high power lithium battery pack measures only 135 x 67 x 12mm
- 8000mAh battery can charge a typical mobile smart phone 3-4 times and also charge tablet PC's and other mobile devices using USB charging technology. Charge capability depends on tablet PC internal battery size
- 5V 2A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 8-9 hours or faster if using a 2A AC-DC charger, such as tablet PC charger
- 5V 2A USB output will charge typical smart phone in same time as your AC mobile charger.
- Fits easily into pocket or handbag to provide emergency back up power when you need it. Comes complete with cable and connectors for most smart phones.
- Textured matt black finish

Portable Rechargeable Mobile Power Banks

Model SPB5001 Executive Compact Charger



Features

- Very high quality metal alloy and glass effect finish
- Compact design measures only 105 x 58 x 14mm
- 5000mAh lithium battery can charge typical smart phone 2 times or more
- 5V 1A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 5-6 hours
- 5V 1A USB output will charge typical smart phone in same time as your AC mobile charger
- A four LED display shows battery charge condition
- Can fit easily into pocket or handbag
- Ideal high quality corporate gift for your customers

Model PSB3800 Ultra Slim Compact Charger



Features

- Ultra slim, lithium battery pack measures 100 x 59 x 11mm
- 3800mAh battery can give 1.5+ full charges to typical mobile smart phone
- 5V 1A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 4 hours
- 5V 2A USB output will charge typical smart phone in same time as your AC mobile charger or give top up charge to tablet PC
- Fits easily into pocket or handbag to provide emergency back up power when you need it. Comes complete with cable and connectors for most smart phones.
- A four LED display shows battery charge condition
- Also features a convenient push button LED torch
- High gloss piano black finish

Model PSB8000 Ultra Slim Dual Output Compact Charger



Features

- Ultra slim, lithium battery pack measures 124 x 70 x 13mm
- 8000mAh battery can give up to 4 full charges to typical mobile smart phone
- 5V 2A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 8-9 hours or faster if using a 2A AC-DC charger, such as tablet PC charger
- 5V 1A & 2A USB outputs can charge two mobile devices at once for example smart phone and tablet PC.
- Fits easily into pocket or handbag to provide emergency back up power when you need it. Comes complete with cable and connectors for most smart phones.
- A five LED display shows battery charge condition
- Also features a convenient push button LED torch
- High gloss piano black finish

Portable Rechargeable Mobile Power Banks

Model PAF10AH4 Dual Output High Power Charger



Features

- Compact high power mobile charger measures 136 x 58 x 22mm
- 10,400mAh battery can give 5 full charges to typical mobile smart phone
- 5V 2A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 11-12 hours or faster if using a 2A AC-DC charger, such as tablet PC charger
- 5V 1A & 2A USB outputs can charge two mobile devices at once for example smart phone and tablet PC.
- Fits easily into pocket or handbag to provide emergency back up power when you need it. Comes complete with cable and connectors for most smart phones.
- A four LED display shows battery charge condition
- Also features a convenient push button LED torch
- High quality two tone matt black and beige finish

Model PAG14AH4 Dual Output Higher Power Charger



Features

- Compact higher power mobile charger features 14,400mAh lithium battery
- Extremely high conversion efficiency, can charge typical smart phone 8 or 9 times and tablet PC 1 or 2 times or more depending on PC battery capacity
- 5V 1.8A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 15-18 hours or faster if using a 2A AC-DC charger, such as tablet PC charger
- Two 5V USB outputs give total current of 3.1A max, enough to charge smart phone and tablet PC
- Suitable for long periods of back up for your mobile equipment when away from the AC supply. With normal use could provide power for a week or more.
- Touch sensitive on/off switch and four LED display shows battery charge condition
- High quality two tone white and beige finish, measures 125 x 74 x 22mm

Model PCM11AH2 Dual Output IP54 Water Resistant Charger



Features

- Compact water and shock resistant, with 11,200mAh lithium battery
- Can charge typical smart phone 5 times or more
- 5V 1A micro USB charging input, can be charged from PC USB port or your standard USB AC phone charger in 12-14 hours
- 5V 1A & 2A USB outputs can charge two mobile devices at once for example smart phone and tablet PC.
- Suitable for outdoor use where a more rugged product is desirable.
- A four LED display shows battery charge condition
- Also features a convenient push button LED torch
- Input and output connectors protected by rubber covers
- Rugged high impact plastic and rubber case measuring 123 x 76 x 24mm

Solar Rechargeable Mobile Power Banks

Model SOL1850 Slim Design Solar Charger



Features

- 1.1 Watt mono crystalline solar panel can charge internal battery from sunlight or can be charged from USB 5V 1A input from phone charger or PC USB port
- Slim design measures only 146 x 76 x 10mm
- 1850mAh lithium battery can recharge from 5V 1A USB input in 3 hours or by direct sunlight in 10-15 hours
- 5V 1A USB output will charge typical smart phone to about 90% capacity in the same time as your AC mobile charger
- A 3 LED display shows battery charge condition and red LED indicates solar charging
- Can fit easily into pocket or handbag

Model SOL5000 Dual Output Solar Charger



Features

- 0.7 Watt mono crystalline solar panel can charge internal battery from sunlight or can be charged from USB 5V 1A input from phone charger or PC USB port
- Compact design measures only 115 x 70 x 15mm
- 5000mAh lithium battery can recharge from 5V 1A USB input in 5-6 hours or by direct sunlight in 30 hours
- Can charge a typical mobile smart phone more than two full charges.
- 5V 1A & 2A USB outputs can charge two mobile devices at once for example smart phone and tablet PC.
- A 3 LED display shows battery charge condition and blue LED indicates solar charging
- Can fit easily into pocket or handbag

Model SOL3W2-5000 Solar Book Charger



Features

- Powerful 3.2W solar charger can fully charge from sunlight in 7-10 hours or 5-6 hours via USB charger
- High compatibility with electronic devices charged by USB output, such as cell phones, tablet PCs, cameras etc.
- 3 LED indicators show load (blue), charging (red) and fully charged (green)
- Built in high power LED flashlight with simple push button operation, can operate for 20 hours from fully charged battery
- Integral 3.7V 5000mAh A grade lithium polymer battery with full protection circuits
- Can charge typical smart phone from integral battery two times or more
- 5V 1A USB output to power electronic devices
- 5V 1A Mini USB input for battery charging when not charging by sunlight
- Very high battery conversion efficiency
- The 5V USB output can be used at the same time as the solar charger is being charged.
- Open book design folds to compact package when not being charged via sunlight
- Matt Black ABS enclosure measures 150 x 116 x 25mm closed, 150 x 210 x 25mm open