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B2 BATTERY PACK

Revision April 18, 2016

Terms Used in This Warranty and the Instructions

Battery pack – This always refers to the complete **B2** battery system. The lead-acid battery, the carrying case, shoulder strap, coiled-cord, and the charger labeled YL-41-120500D AC Adaptor (or other models).

Charger – This always refers to the 115VAC Dongguan Yinli Electronics Co. Ltd. AC Adaptor model YL-41-120500D (or other models) charger that is supplied with the battery pack.

Case – This always refers to the heavy duty nylon case that is complete with the shoulder strap, belt loops, wires, fuse, battery wire harness, and coiled-cord with mating connector.

Battery – This always refers just to the sealed lead-acid Universal UB1280 (12V at 8 AH).

Light – This always refers to the SuperBright 3 4000 series light assemblies models 4254, 4312, 4351, or 4368 (but without the AC power supply).

B2 BATTERY PACK WARRANTY

The UV SYSTEMS, Inc. **B2** battery pack complete with charger, case, and coiled-cord is guaranteed to be free of defects in materials, workmanship, and manufacture for one (1) year from date of purchase. Consumable and disposable products including fuses and battery are guaranteed to be free from defects in workmanship and materials for six (6) months from the date of purchase. If failure of any item or component occurs during the warranty period, UV SYSTEMS, Inc. will examine the inoperative item or component and have the option of repairing or replacing any part(s) which, in the judgment of UV SYSTEMS, Inc. was originally defective or became so under conditions of normal usage and service.

Except where such limitation and exclusions are specifically prohibited by applicable law, (1) the consumer's sole and exclusive remedy shall be the repair or replacement of defective products as described above and (2) UV SYSTEMS, Inc. shall not be liable for any consequential or incidental damage or loss whatsoever and (3) the duration of any and all expressed and implied warranties, including limitation, and fitness for a particular purpose, is limited to a period of one (1) year from the date of purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow exclusion or limitation of consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

A. INSTRUCTIONS

CAUTION

It is very important that the lead-acid battery be recharged with the YL-41-120500D AC Adaptor charger as soon as practical after the battery is fully discharged. Any lead-acid battery that is in a discharged state can be damaged by sitting too long uncharged. Even if one day goes by before plugging in the charger, some damage could be done. If a battery is in a fully discharged state for one or two weeks without being charged, it could be ruined or have greatly reduced capacity. When this happens, the battery plates go through a phenomenon called "sulfation" and that prevents the plates from accepting a full charge.

B. BATTERY FEATURES

The sealed lead-acid Universal UB1280 battery is trouble free and is made with spill-proof and leak-proof construction. The battery is maintenance free and can be used in any position. It has a one-way gas valve to prevent any excess gas build up in case of incorrect charging. Note that it is very unlikely that this battery can ever be incorrectly charged when used with the accompanying YL-41-120500D AC Adaptor charger (as long as the charger is not left connected indefinitely). The battery should give you long trouble free life if used and charged correctly. **Do not** connect the battery charger to the SuperBright 3 AC Adaptor (power supply), the connectors can mate but damage could be done if they are connected together.

C. INSTALLATION AND CONNECTION

The wires should be connected to the battery inside the case, if not, zip open the case and connect the white wire (with the red connector) to the red terminal (+) of the battery and the black wire (with the black connector) to the black terminal (-) of the battery. **IT IS VERY IMPORTANT THAT YOU OBSERVE THIS POLARITY** otherwise the SuperBright 3 might be damaged. Once connected, you should not have to disconnect the battery. The heavy duty coiled cord is permanently attached to the battery bag. And in fact the coiled-cord is so strong that you can use the cord to carry the battery and bag, however that is not recommended. The coiled-cord comes out a button hole opening at the end of the battery bag.

D. BEFORE FIRST USE

The **B2** battery pack comes with a partially charged battery. However, it is recommended that the battery be charged for at least 24 hours before being used the first time.

E. TO USE THE BATTERY WITH THE SuperBright 3

The coiled-cord that connects to the SuperBright 3 is permanently attached to the carrying case so you cannot lose it. The carrying case can be hung on your belt by unhooking the Velcro belt loops and putting them over your belt, that way you do not have to take off your belt. Also the shoulder strap can be disconnected when you are carrying the battery and case on your belt. You can even connect the ends of the shoulder strap together to use as a belt for the carrying case. Many prefer to use both the shoulder strap and belt together to help distribute the weight. An US Army surplus ammunition belt makes a great belt since it is heavy duty and wide to help distribute the weight. When not using the **B2** some people use the belt loops to keep the coiled-cord from flopping.

F. CHARGER AND CHARGING TIME

The connector on the charger should be mated with the connector on the end of the coiled-cord. **DO NOT** connect the charger to the SuperBright 3 AC Adaptor power supply. Those connectors will mate, but if you do connect them damage could happen to the charger or the power supply (or both). Remember the charger **must only be connected to the battery pack** through the end of the coiled-cord. The 115VAC YL-41-120500D AC Adaptor charger (or other charger) is designed to charge a fully discharged UB1290 battery in about 32 to 36 hours. Shorter charging times (typically 24 hours) can be used if the battery is not fully discharged. Any time you use the B2 for several hours or longer you should charge the battery. There is very little danger of overcharging the battery with the charger that is included with the B2. However, it is not recommended that the charger be left connected indefinitely (as in a trickle charger). If the battery is left plugged into the charger for weeks and weeks on end, it might be possible that the battery would become so hot that some of the electrolyte might vent from the one-way vents, if that happens then the capacity of the battery has been diminished. To determine the charge of the battery when the charger is connected, the voltage at the battery terminals could be measured. However, this is not required. If the voltage at the terminals is at least 13.8VDC to 14.4VDC (when the charger is on) the battery is fully charged. Voltages above 14.4VDC do not add any significant charge to the battery.

For 230VAC power a 230V to 115VAC step-down transformer is required. A small 230V to 115V step-down transformer with two round European pins is available from UV SYSTEMS, Inc. at an additional charge. It is part number **SB005b**.

G. RULE OF THUMB USE AND RECOMMENDATIONS

The rule of thumb is if you use the battery until the SuperBright 3 is noticeably dim or the lamp will not restart, then the battery is fully discharged. The exact number of hours of use on a fully charged battery is dependent on several factors, such as how long your SuperBright 3 is “on”, how many times you turn it “on”, how long between uses (the battery will recover some when not being used), and the total current drain on the battery. The UB1280 battery should conservatively operate a SuperBright 3 for about 7 hours on a full charge, when used intermittently.

If the battery is fully discharged, you should plug in the charger as soon as you can and leave the charger plugged in for at least 32 hours (36 hours recommended). Some may want to purchase an extra B2 battery pack so that they can have one charging while one is being used. Also extra batteries are available from UV SYSTEMS. If you only use the battery with the SuperBright 3 for a few hours of intermittent use, then your battery may not need to be recharged right away, but it still is a good idea to charge after use. If not fully discharged, it will not take long to recharge it. However, it is important that the battery be **stored fully charged**. When the battery is just sitting unused, it is recommended that it should be fully recharged about every nine (9) months. The hotter the ambient storage temperature of the battery, the more often it should be recharged, say every five (5) months in very hot weather or if stored next to a heat source such as a furnace. A lead-acid battery will hold its charge much better in cold weather (the cold

reduces the self-discharge of the battery). However, the battery should never be allowed to sit for longer than twelve (12) months without being charged, regardless of the battery ambient temperature. These recommendations are designed to optimize the life of your battery. Shorter charging times (less than 32 hours for a discharged battery) or longer storage times (longer than 1 year) between charges could reduce the life of your battery, that is, the number of charge/discharge cycles.

H. COLD TEMPERATURE STORAGE AND CAPACITY

Although the battery will hold its charge in cold temperature, the lower temperature reduces the capacity of the battery. For example, in a very cold ambient temperature (32°F or 0°C), the capacity of the battery would be approximately 70% of what it would be at (68°F or 20°C).

CHARGE THE BATTERY AFTER EVERY COMPLETE DISCHARGE and charge the battery at least every nine (9) months even if you haven't used it. It is also recommended that you charge the battery, after ever few hours of use.

I. BATTERY LIFE

The Universal UB1280 battery should last from 200 to 500 charge/discharge cycles depending on average depth of discharge. End of life is defined as when the battery can only achieve 80% of its original capacity. Replacement batteries are available from UV SYSTEMS. A detailed technical handbook about sealed lead-acid batteries is available from UV SYSTEMS.

J. TRANSPORTING THE BATTERY ABOARD ANY COMMERCIAL AIRCRAFT

The battery manufactured by Universal is of a non-spillable manufacture using starved electrolyte.

They may be transported aboard any commercial aircraft with no restrictions according to the following regulations.

FAA: Title 49CFR, Parts 100-199, Paragraph 173.260D

CAB: Air transport restricted articles, Circular No. 6D,
Page 57, Article 1924

IATA: Restricted articles regulations, Article 1924,
Packing Note 802, Section VI, Page 149, Section x,
Page 207

K. FUSES

For the **B2** battery pack a replacement 10A fuse (located in-line on the white wire) is available from any auto supply store.

L. ACCESSORIES

A **B215** fifteen foot cord is available that will allow you to plug your SuperBright 3 directly into a cigarette lighter (or auxiliary) jack in your car or truck. The male lighter plug on the **B215** has a replaceable 5A fuse in its plug to protect your car's battery in case the cord is shorted by a boulder or some other way. Also available is a **SB005b**, 230V to 115VAC step-down transformer for use with the 115VAC battery charger.

M. MY "MOST IMPORTANT LIGHT"

I want to give recognition to the most important light in my life, Jesus Christ, who said, "I am the world's light. No one who follows me stumbles around in the darkness. I provide plenty of light to live in."

John 8:12 "The Message" translation.

Don Newsome

FLUORESCENT MINERAL SOCIETY, INC.

The Fluorescent Mineral Society, Inc. (FMS), it is an international organization for those interested in the fluorescence and luminescence of minerals. It is not connected in any way with UV SYSTEMS, Inc. The FMS members keep in touch through the *UV Waves*, a bimonthly newsletter with articles about fluorescent minerals and their localities, ultraviolet lamps, and related matters. The yearly *Journal of the Fluorescent Mineral Society* publishes technical articles of lasting interest. FMS members have regular regional meetings, and get together at major mineral shows like those at Denver, Tucson and Franklin, NJ. The FMS was founded in 1971, and incorporated in 1993.

To receive a free application to the FMS contact UV SYSTEMS, Inc. or contact the Fluorescent Mineral Society, Inc., P.O. Box 572694, Tarzana, CA 91357, USA. You can also communicate by email with the president at president@uvminerals.org or you can visit the FMS web site at <http://www.uvminerals.org>

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