



FLEXIBLE PHOTOVOLTAICS | AA Battery Charger

OVERVIEW:

Traditional power sources are heavy, expendable, detectable, not directly integrable into Warrior Systems, and do not have sufficient density for extended missions. Conversely, photovoltaics (PV) convert “free” light energy into electricity with no noise, moving parts, fuel consumption, or pollutant emissions. Significant recent advancements allow PV modules that are flexible and lightweight.

DESCRIPTION:

The PF 2x2 fanfold AA charger provides portable power for charging AA rechargeable batteries. Once unfolded this charger automatically begins charging. LED indicator confirms the batteries are charging. The indicator becomes solid once the batteries are fully charged. Ultra compact and ultra lightweight, the fanfold AA charger is ideal for Soldiers in the field.

APPLICATIONS:

Recharges 2 or 4 AA rechargeable batteries to provide power for any device that uses AA batteries.

BENEFITS:

- Tops off batteries to maximize run time.
- Provides lightweight on-Soldier power.
- Provides ability to charge AA batteries in remote locations.
- Reduces need for extra batteries.

FEATURES:

- Charges 2 - 1600mAh batteries in 4 hrs of full sun.
- Integrates lightweight, rugged PowerFilm® flexible solar panels directly with fabric.
- Charges up to 4 AA batteries at a time, in pairs.
- LED indicator confirms when the batteries finish charging.
- Rugged construction.
- Charger adds less weight than carrying 4 extra batteries.
- 6 grommets for easy attachment.

SPECIFICATIONS:

- **Capacity:** Two or Four NiMH or NiCAD AA batteries
- **Weight (w/o batteries):** ~ 3.4 oz
- **Approximate Time to Charge Two (2) Batteries:**
 - Full Sun: ~ 4 hours
 - Partly cloudy: ~ 6 - 8 hours
 - Overcast: ~ 16 hours

STATUS:

- The photovoltaic (PV) AA battery charger by Power Films was developed as a direct result of a Phase II SBIR effort with Natick Soldier RD&E Center.
- 1000 battery chargers were procured under an expedited contract for the AMC FAST Office and PEO Soldier, and another 1000 were evaluated by the Special Operations community.

POINT OF CONTACT:

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