

AMERICAN WIRE GROUP
EMPOWERING A BETTER WORLD

SunGuard® Photovoltaic Wire

AWG's SunGuard® Photovoltiac (PV) Wire is primarily used in free air, conduit or direct burial for wiring of grounded and ungrounded photovoltaic applications in accordance with the National Electric Code (NEC). The cable is suitable for use in dry or wet locations at temperatures not to exceed 90°C. The cable is rated 2000 V dc. SunGuard® is available with black or red insulation and is made with copper or aluminum conductors.



Solar panel interconnection strings go back to a combiner box. They are in an open air installation, tied to a racking system. This involves running a 12 AWG to 8 AWG wire from the combiner box to the ground in a short run (less than 100 feet). PV wire can also connect combiner boxes to inverters. These wires are usually power-sized aluminum cables (4/0 AWG to 1000 kcmil) that extend for hundreds of feet. Direct burial or trench installation can accommodate many circuits in a single common trench. This cost-effective method allows for native backfill to support the foundation.

www.buyawg.com

Empowering a Better World with SunGuard® Photovoltaic Wire

ALUMINUM vs COPPER: Let's Compare

ALUMINUM

Aluminum PV wire is significantly lighter than copper, making it easier to handle, transport and install. It is also more affordable due to its lower material costs. As a result, aluminum PV wire is suitable for large-scale installations, such as utility-scale solar farms, due to its cost-effectiveness and weight considerations.



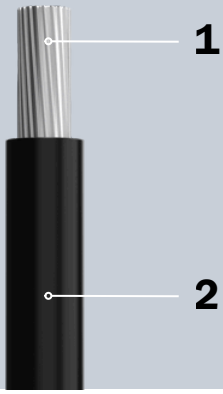
COPPER

Copper PV wire has approximately 1.7x more electrical conductivity than aluminum, allowing for smaller conductor sizes for the same current capacity. Copper is also highly durable, more resistant to corrosion and retains flexibility over time. Copper PV wire is commonly used for smaller installations, high-temperature environments, and areas requiring high conductivity.

Photovoltaic Construction

1. Conductor: Compact stranded or compressed concentric stranded aluminum alloy 8000 wire, or annealed copper wire

2. Insulation: Abrasion, moisture, and heat resistant colored crosslinked polyethylene (XLPE). Available in black or red.



PARALLELING SUNGUARD®

SunGuard® is available in copper or aluminum, in black or red, and can be supplied as single or paralleled reels with up to two conductors—streamlining installation, reducing pull time, and improving layout efficiency in large-scale solar projects.





SUNGUARD® ACCESSORIES

Along with SunGuard® Photovoltiac Wire, we also offer accessories such as splices, compressions, shear bolts, and more, making this a complete system.

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