



power connection cable series

# PV Wire UL 4703

## Solar Cable

UL 4703 2000 V DC sunlight-resistant &amp; direct-burial XLPE photovoltaic wire



UL 4703 PV Wire

600V / 1000V / 2000V DC

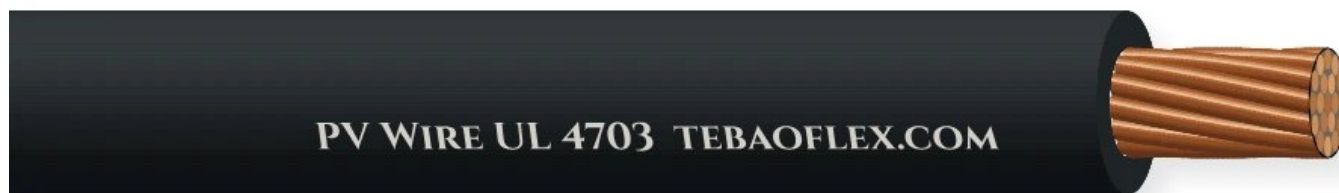
Direct Burial &amp; 720h UV

## Application

PV Wire UL 4703 Photovoltaic Solar Cable (600 V, 1000 V & 2000 V DC) engineered per UL 4703 and NEC Article 690.31 with stranded bare/tinned copper or AA-8000 aluminum conductors (14 AWG to 750 kcmil) and thick-wall cross-linked.

**Typical uses:** 1500 V / 2000 V DC Utility-Scale Solar Plants, Single-Axis & Dual-Axis Solar Tracker Harnesses, Combiner Box to Central/String Inverter Feeders, Commercial Rooftop & Carport PV Arrays, Grid-Scale Solar + Battery (DC-Coupled BESS)

## Construction



Cross-section, not to scale

- 1 Stranded tinned/bare copper (or AA-8000 Al) conductor
- 2 Heavy-wall cross-linked polyethylene (XLPE) dielectric
- 3 Sunlight-, moisture- & flame-resistant outer XLPE skin

ASTM B3 / B8 / B33 / B800  
compliant

## Technical data

Typical values

|                            |                                                                  |                            |                                                                   |
|----------------------------|------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------|
| Voltage ratings            | 600 V · 1000 V · 2000 V DC (UL 4703)                             | AC dielectric + spark test | 6.0–7.5 kV AC water-tank dielectric & 10–15 kV spark test         |
| Max. DC resistance @ 20 °C | 5.43 Ω/km (12 AWG) · 3.41 Ω/km (10 AWG) · 2.14 Ω/km (8 AWG)      | Long-term wet IR           | UL 44 / RHW-2 90 °C water immersion stability                     |
| Wet / dry operating temp.  | +90 °C Wet · +105 °C / +125 °C Dry (per UL 4703 print)           | Cold impact & cold bend    | -40 °C cold impact & cold mandrel bend per UL 1581                |
| Short-circuit temperature  | +250 °C (5 s)                                                    | XLPE insulation thickness  | 75 mil / 1.91 mm (14–10 AWG 2kV) · 85 mil / 2.16 mm (8–2 AWG 2kV) |
| Min. bend radius           | 5 × OD (unshielded single conductor)                             | Direct burial crush test   | Passes UL 854 underground service-entrance crush & impact         |
| Sunlight UV resistance     | 720-hour Carbon-Arc / Xenon-Arc weatherometer (≥ 80 % retention) | Flame propagation          | UL 1581 VW-1 vertical flame & IEEE 1202 / FT4 (1/0 AWG+ CT)       |
| Ammonia & rodent options   | Available with anti-termite/rodent nylon or bronze-tape barrier  | Standards                  | UL 4703 · Dual-rated UL 44 RHW-2 / UL 854 USE-2                   |

## Sizes

6 standard constructions

Tick the sizes you need and send this page to [info@tebaoflex.com](mailto:info@tebaoflex.com) or WhatsApp +86 185 9591 3361.

| Order designation                                 | AWG/kcmil & stranding                          | Nominal Ø<br>mm | Weight ≈<br>kg/km | Max. DC R<br>Ω/km | 90°C Air<br>A |
|---------------------------------------------------|------------------------------------------------|-----------------|-------------------|-------------------|---------------|
| 2000 V Tinned Cu String Wire 3 sizes              |                                                |                 |                   |                   |               |
| <input type="checkbox"/> PV Wire 12 AWG 2kV       | 12 AWG (3.31 mm <sup>2</sup> ) 19W Tinned Cu   | 6.15            | 54                | 5.430             | 40            |
| <input type="checkbox"/> PV Wire 10 AWG 2kV       | 10 AWG (5.26 mm <sup>2</sup> ) 19W Tinned Cu   | 6.76            | 74                | 3.410             | 55            |
| <input type="checkbox"/> PV Wire 8 AWG 2kV        | 8 AWG (8.37 mm <sup>2</sup> ) 19W Tinned Cu    | 8.08            | 115               | 2.140             | 80            |
| 2000 V DC Collector Feeders 3 sizes               |                                                |                 |                   |                   |               |
| <input type="checkbox"/> PV Wire 6 AWG 2kV        | 6 AWG (13.3 mm <sup>2</sup> ) 19W Tinned Cu    | 9.04            | 165               | 1.350             | 105           |
| <input type="checkbox"/> PV Wire 250 kcmil 2kV Cu | 250 kcmil (127 mm <sup>2</sup> ) 37W Cu CT     | 19.60           | 1,340             | 0.141             | 455           |
| <input type="checkbox"/> PV Wire 500 kcmil 2kV Al | 500 kcmil (253 mm <sup>2</sup> ) AA-8000 Al CT | 25.40           | 1,020             | 0.116             | 545           |

– 12 AWG and 10 AWG 2000 V outer diameters (6.15–6.76 mm) are calibrated to fit standard Stäubli MC4-Evo 2 and Amphenol H4 1500 V DC gland seals.

## Standards and approvals

- ✓ UL 4703 Listed PV Wire
- ✓ UL 44 RHW-2 / UL 854 USE-2
- ✓ NEC Art. 690 & CSA C22.2 No. 271

## Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

### Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/pv-wire-solar-cable



Typical values for this cable type, based on UL 4703 / CSA C22.2 No. 271 / NEC Article 690. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.