



SOLAR CABLE

AVOCAB is among one of the most trusted brands in cables and wires. It was created to cater to high-quality premium cable products to the market.

Through time we have catered to products that required high-end INNOVATION and RESEARCH.

AVOCAB's solar cables are a step towards the creation of environment-friendly cables for development of electricity through solar power. It is our effort to take part in energy conservation. Our range of PV-cables (also known as SOLAR CABLES) is more ADAPTIVE, more ROBUST, RUGGED and more VERSATILE than ever before. These cables are made in compliance standards such as RoHS and CE certification.

AVOCAB solar cables are exclusively made for applications in photovoltaic power systems. A solar cable interconnects solar panels and other electrical components of a photovoltaic system.

They are designed to have UV & ozone resistant, chemical and oil resistant, excellent FR properties, propagates smoke with low capacity when burned with an external source. They also contain zero or low halogen. This cable can survive extreme weather conditions. These cables are usually installed in hazard or explosion areas, industry and agriculture.



SPECIAL PROPERTIES OF SOLAR CABLES

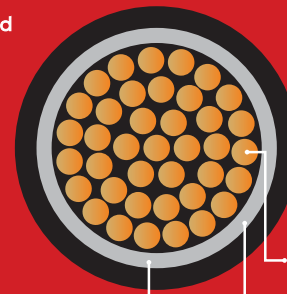
- LIFETIME RELIABILITY:** Lasts up to 30 years even under tough external conditions.
- OUTDOOR DURABILITY:** Resists extreme temperatures (40°C to 120°C maximum at the core) and ozone resistant.
- UV RESISTANCE:** Full protection against ultraviolet rays.
- HALOGEN-FREE:** Low smoke emission & low toxicity /corrosive during a fire.
- PROPERTIES AGAINST FIRE:** Flame retardant, fire retardant.
- FLEXIBILITY AND STRIP ABILITY:** For fast and easy installation.
- Under new environmental regulations. Easy installation with color identification (blue, red). Suitable to common connector types.

TYPES OF CONDUCTOR AVAILABLE

- Annealed Bunched Flexible Copper conductor with ATC Copper with 99.97% purity and 101% conductivity
- Tinned copper bunched flexible conductor with ATC Copper with 99.97% purity and 101% conductivity

TYPES OF INSULATION AVAILABLE

- Double insulated cross-linkable fire retardant low smoke zero halogens with conductor temperature rating up to 120°C.
- Double insulated flexible insulation with fire retardant low smoke zero halogens with conductor temperature rating up to 105°C.
 - First layer cross-linkable thermo-set polymer with conductor temperature rating 90°C.
 - Second layer UV stabilized FRLS-H sheath.



Flexible Annealed Tinned Bunched Copper Conductor

Cross-Linked Thermoset Insulation

HR-FR-LOW Smoke-Low Halogen Rohs Complying Outer Sheath

BEHAVIOUR IN CASE OF FIRE

- Single cable according to DIN VDE 0482 Part 332-1-2, DIN EN 60332-1-2
- Multiple Cable according to DIN VDE 0480 Part 266-2-1, DIN EN 50305-9
- Low smoke emission according to DIN VDE 0482 part 268-1&2
- Corrosively according to DIN EN 50267-2-2
- DIN EN 61034 & DIN EN 50268-2 (light transmittance<70%)
- Toxicity according to DIN EN 50305

XLOH INSULATED AND SHEATHED SOLAR CABLE DIMENSIONS AND AMPERAGE					
Solar DC Cables from PV Module to Array Junction Box (generally conforming to TUV Specification-2 Pfg 1169/08.2007)					
Single Core Size in sq. mm	Max. Conductor Diameter in mm	XL-LSOH Insulation Thickness Nominal in mm	XL-LSOH Insulation Thickness Nominal in mm	Overall Dia. Nominal in mm	Ampere Rating 2-Adjacent Cable on Surface
1.5	0.26	0.5	0.5	4.10+/-0.5	24
2.5	0.26	0.5	0.5	4.5+/-0.5	33
4	0.31	0.5	0.5	5.1+/-0.5	44
6	0.31	0.5	0.5	6.1+/-0.5	57
10	0.41	0.50	0.50	6.6+/-0.5	79
16	0.41	0.50	0.50	7.7+/-0.5	107

105° C HR Insulated and sheathed Solar Cable Dimensions and Amperage					
Solar DC Cables from PV Module to Array Junction Box (as per IS-694 and IS-1554 part 1 guidelines)					
Single Core Size in sq. mm	Max. Conductor Diameter in mm	105 C HR Insulation Thickness Nominal in mm	XL-LSOH Insulation Thickness Nominal in mm	Overall Dia. Nominal in mm	Ampere Rating 2-Adjacent Cable on Surface
1.5	0.26	0.6	0.9	5.5+/-0.5	22
2.5	0.26	0.7	0.9	5.5+/-0.5	31
4	0.31	0.8	0.9	6.5+/-0.5	40
6	0.31	0.8	0.9	7+/-0.5	51
10	0.41	1.0	0.9	8.5+/-0.5	71
16	0.41	1.0	0.9	9.5+/-0.5	95

XLPE Insulated and 90° C Solar HRFRLS-H sheathed Solar Cables Dimensions and Amperage					
Solar DC Cables from PV Module to Array Junction Box as per IS 7098 Part 1 guidelines					
Single Core Size in sq. mm	Max. Conductor Diameter in mm	105 C HR insulation Thickness Nominal in mm	105 C HR insulation Thickness Nominal in mm	Overall Dia. Nominal in mm	Ampere Rating 2-Adjacent Cable on Surface
1.5	0.26	0.7	0.9	5.0+/-0.5	20
2.5	0.26	0.7	0.9	5.5+/-0.5	28
4	0.31	0.7	0.9	6.0+/-0.5	36
6	0.31	0.7	0.9	6.5+/-0.5	46
Solar DC Cables from Array Junction Box to Main Junction Box & MJB to Inverter as per IS 7098 part 1 guidelines					
10	0.41	0.7	0.9	7.5+/-0.5	64
16	0.41	0.7	0.9	8.5+/-0.5	85

Required Features of solar cable

Chemical Features	Electrical Features	Mechanical Features	Thermal Features
<ul style="list-style-type: none"> Water resistant Resistant to mineral oils Resistant to acids & alkaline 	<ul style="list-style-type: none"> Voltage rating 1.5 (1.8) KV DC/0.6/1.0(1.2) KV AC High Voltage test 6.5 KV DC for 5 minutes 	<ul style="list-style-type: none"> Resistant to impact, tear & abrasion Minimum bending radius -4 times of overall diameter Safe pulling force -50 N/sqmm 	<ul style="list-style-type: none"> Maximum conductor temperature of operation 120°C during 20000 hours Minimum operating temperature: -40°C Generally conforming to TUV

CHANDRESH CABLES LIMITED

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