

## About Olex

Olex is Australia's, and one of the world's, largest and most technically advanced manufacturers of power cables, with 70 years experience in cable production in Australia. In December 2006, Olex was acquired by the worldwide leader in the cable industry, Nexans.

Olex has three manufacturing sites in Australia and New Zealand, and manufactures a comprehensive range of power cables. Olex services the Australian and Asia Pacific energy, construction, mining and industrial markets with a variety of industrial, commercial, domestic and mining applications. For more information, visit [www.olex.com.au](http://www.olex.com.au)



# SOLAFLEX PV CABLES

High performance cables for solar applications

For more information on any of these cables  
Ph: **1300 CABLES**  
Web: [www.olex.com.au](http://www.olex.com.au)



## Solaflex PV

To help meet renewable and clean energy objectives, particularly the solar industry in Australia, Olex has developed **SOLAFLEX PV**, a cable that provides a durable, high-performance interconnection solution between photovoltaic (PV) panels and from panels to the “inverter” which transforms solar power into usable AC electricity. These cables are designed to meet the rigours of the outdoor application environment and provide long term durability and flexibility, combined with ease of installation.

Solaflex PV cable has been developed based on the requirements set in AS/NZS 5033 for the installation of PV arrays and AS/NZS 3000 “Wiring Rules”. The Solaflex PV cable design is an amalgamation of characteristics and properties of high performance polymeric materials developed by Olex and flexibility characteristics of Class 5 stranded copper. The cable is designed to resist degradation caused by exposure to the elements (sunlight, water, UV etc.) and also provide the flexibility which is important from an installation point of view.

## Advantages

- Durable (Indoor & Outdoor)
- Excellent electrical and mechanical performance (resistance to deformation) over a wide temperature range (0 to + 50°C ambient)
- Rated for operation of conductor to 90°C.
- Flame retardant, so will not propagate fire and will self-extinguish when fire ceases
- Proven UV performance in excess of 20 years when exposed to the Australian sun. Sheath which will not discolour or become brittle
- Excellent weathering and abrasion resistance
- Flexible and easily stripped for quick and efficient installation

## SOLAFLEX PV Single Core Cable 1000 V dc

### Application

These cables provide the means to interconnect between photovoltaic (PV) panels and from panels to the “inverter”. They operate at dc voltages and provide long life in exposed conditions.

### Design

1. Conductor Flexible Class 5 plain copper to AS/NZS 1125 in sizes 2.5mm<sup>2</sup> to 16mm<sup>2</sup>
2. Insulation 90°C rated flexible X-90 material to AS/NZS 3808  
Colour: Natural
3. Outer Sheath Flexible UV resistant TPE material to AS/NZS 3808.  
Available in Black, Red, Blue

### Marking

“Olex – ‘year’ – X-90 Solaflex Electric Cable – 1000 V DC – ‘size’ – for use in AS/NZS 5033 PV installations – CAUTION: DC CABLE – DO NOT DISCONNECT UNDER LOAD”

### Physical Characteristics

Conductor Size mm <sup>2</sup>	Cable Diameter mm	Weight kg / 100 m	Minimum Bending Radii mm	Olex Part Code
2.5	6.3	5.2	25	BDSR05PV001
4	6.9	7.1	28	BDSR06PV001
6	7.4	9.2	30	BDSR07PV001
10	8.6	13.9	35	BDSX01PV001
16	9.8	20.0	40	BDSX02PV001

### Electrical Characteristics

Conductor Size mm <sup>2</sup>	Voltage drop factor mV / A.m	Current Rating (exposed) Amps	Insulation Resistance MΩ.km	Conductor Resistance Ω/km @ 20°C
2.5	20.4	21	690	7.98
4	12.6	27	570	4.95
6	8.42	34	490	3.30
10	4.87	48	370	1.91
16	3.09	63	340	1.21

Note 1: Voltage drop factors are based on DC resistance of two conductors operating at maximum conductor temperature of 90°C.

Note 2: Current ratings based on AS/NZS 3008.1.1:2009 Table 5.



## SOLAFLEX PV Twin Core Cable 1000 V dc

### Application

These cables provide the means to interconnect between photovoltaic (PV) panels and from panels to the “inverter”. They operate at dc voltages and provide long life in exposed conditions.

### Design

1. Conductor Flexible Class 5 plain copper to AS/NZS 1125 in sizes 2.5mm<sup>2</sup> to 10mm<sup>2</sup>
2. Insulation Flexible V-90 material to AS/NZS 3808  
Colours available – Red, Blue
3. Outer Sheath Easytear PVC material to AS/NZS 3808.  
Available in Black UV resistant

### Marking

“Olex – ‘year’ – V-90 Solaflex Electric Cable – 1000 V DC – 2x ‘size’ – for use in AS/NZS 5033 PV installations – CAUTION: DC CABLE – DO NOT DISCONNECT UNDER LOAD”

### Physical Characteristics

Conductor Size mm <sup>2</sup>	Cable Dimensions mm x mm	Weight kg / 100 m	Minimum Bending Radii (flat side) Mm	Olex Part Code
2.5	11.3 x 7.5	14.1	34	DACR05P1002
4	12.9 x 8.3	19.0	37	DACR06P1002
6	14.0 x 8.8	23.7	40	DACR07P1002
10	16.3 x 10.0	34.5	45	DACX01P1002

### Electrical Characteristics

Conductor Size mm <sup>2</sup>	Voltage drop factor mV / A.m	Current Rating (exposed) Amps	Insulation Resistance MΩ.km	Conductor Resistance Ω/km @ 20°C
2.5	20.4	26	15	7.98
4	12.6	35	13	4.95
6	8.42	44	12	3.30
10	4.87	62	9.2	1.91

Note 1: Voltage drop factors are based on DC resistance of two conductors operating at maximum conductor temperature of 90°C.

Note 2: Current ratings based on AS/NZS 3008.1.1:2009 Table 11.

Note 3: Twin core cable may be operated at 90°C, when incorporated as equipment wiring and not exposed to mechanical damage.

