



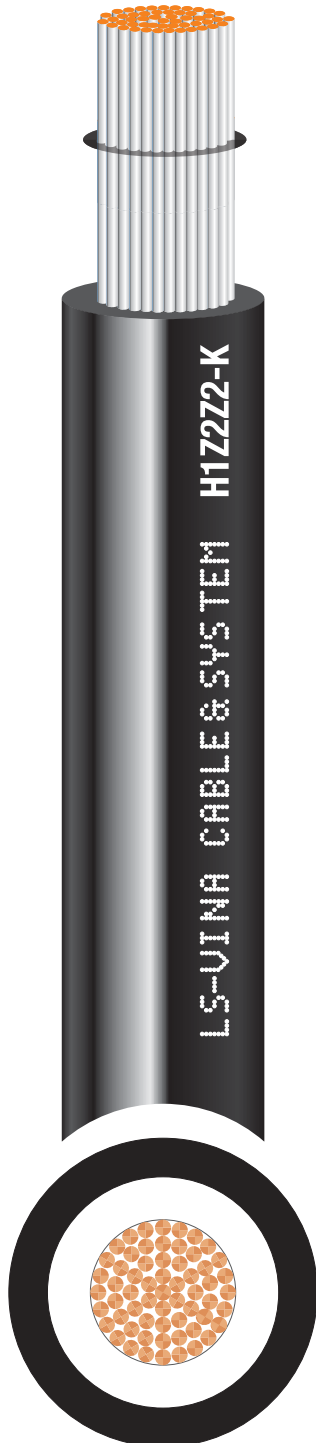
LS VINA Cable & System

# Electric cables for photovoltaic systems

BS EN 50618



JAN-2020



**APPLICATION**

Photovoltaic cables for use in Photovoltaic (PV) Systems, in particular for installation at the Direct Current (DC.) side. These cables are suitable for permanent outdoor use for many years under variable demanding climate conditions. Relatively stringent requirements are set for these products in line with the expected harsh usage conditions.

**STANDARD**

BS EN 50618:2014

**CONSTRUCTION**

- Conductor : BS EN 60228, Class 5 flexible tinned copper
- Insulation : Halogen-free cross-linked compound, White colored
- Sheath : Halogen-free cross-linked, flame retardant compound

**SPECIFICATION**

**Voltage rating**

DC: 1.5kVdc

AC: 1.0/1.0kVac

**Temperature rating**

The cables are designed to operate at a normal maximum conductor temperature of 90 °C, but for a maximum of 20 000 hours a max. conductor temperature of 120 °C at a max. ambient temperature of 90 °C is permitted.

**Minimum bending radius**

OD: overall diameter of cable

- Fixed : 4 OD

- Flexed: 5OD

**Test voltage**

DC voltage: 15kVdc / 5minutes

AC voltage: 6.5kVac / 5minutes

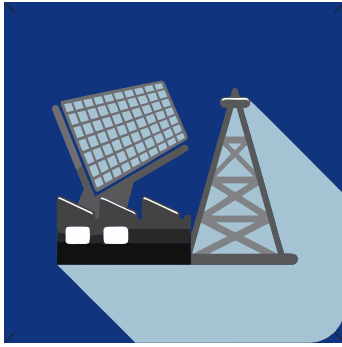
**Sheath color**

Black or Black with Red strip or optional

**Cable marking**

Printed on sheath surface with 550mm interval:

LS-VINA Cable & System \*H1Z2Z2-K [SIZE] SQMM \* (Year of Mnf.)



## PHOTOVOLTAIC CABLES BS EN 50618

### FEATURES

- UV resistant
- Flame retardant to IEC 60332-1-2
- Halogen free accordance with BS EN 50525-1
- Low smoke density accordance with IEC 61034-2

### TECHNICAL CHARACTERISTIC

Number and nominal cross sectional area of conductors	Thickness of insulation Specified value (1)	Thickness of sheath Specified value (2)	Mean overall diameter Upper limit Informative value	Maximum DC resistance of conductor at 20°C	Minimum insulation resistance		Approx. overall diameter of cable	Approx. overall weight of cable
					at 20°C	at 90°C		
mm <sup>2</sup>	mm	mm	mm	Ω/km	MΩ.km	MΩ.km	mm	kg/km
2.5	0.7	0.8	5.9	8.21	690	0.69	5.7	50
4	0.7	0.8	6.6	5.09	580	0.58	6.2	70
6	0.7	0.8	7.4	3.39	500	0.50	6.8	90
10	0.7	0.8	8.8	1.95	420	0.42	7.7	130
16	0.7	0.9	10.1	1.24	340	0.34	9.5	205
25	0.9	1.0	12.5	0.795	340	0.34	11.4	305
35	0.9	1.1	14.0	0.565	290	0.29	12.8	405
50	1.0	1.2	16.3	0.393	270	0.27	14.9	565
70	1.1	1.2	18.7	0.277	250	0.25	17.2	800
95	1.1	1.3	20.8	0.210	220	0.22	18.9	1010
120	1.2	1.3	22.8	0.164	210	0.21	21.0	1290
150	1.4	1.4	25.5	0.132	210	0.21	23.3	1590
185	1.6	1.6	28.5	0.108	200	0.20	25.9	1930
240	1.7	1.7	32.1	0.082	200	0.20	29.3	2560

(1) : The smallest value measured shall not fall below 90 % of the specified value by more than 0.1 mm

(2) : The smallest value measured shall not fall below 85 % of the specified value by more than 0.1 mm

# CABLES