



Caledonian

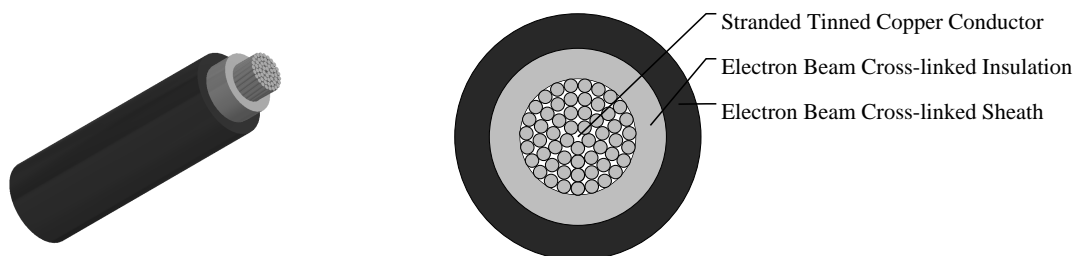
Photovoltaic Cables

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H1Z2Z2-K Photovoltaic Cables

PHOTOFLEX Photovoltaic Cable H1Z2Z2-K 1C4



APPLICATIONS

These cables are designed for connecting photovoltaic system components inside and outside of buildings and equipment with high mechanical requirements and extreme weather conditions.

STANDARDS

DIN EN 50618 (H1Z2Z2-K) (formerly PV-1F according to 2PfG 1169/08.2007)

Flame retardant according to EN 50265-2-1, IEC 60332-1, VDE 0482-332-1-2, DIN EN 60332-1-2

Low smoke emission according to EN 61034-2 (Light Transmittance $\geq 60\%$)

Halogen free according to EN 50525-1, Annex B

Low corrosivity of gases according to EN 50267-2-2, IEC 60754-2

APPROVALS

TUV Certification (B 18 01 98200 015)

CABLE CONSTRUCTION

Conductor: Stranded tinned copper conductor per DIN VDE 0295 and IEC 60228 Class 5.

Insulation: Electron beam cross-linked, halogen free and flame retardant compound.

Sheath: Electron beam cross-linked, LSZH and flame retardant compound, Black.

PHYSICAL AND THERMAL PROPERTIES

Thermal Properties

Maximum Voltage: 1.2KV (AC), 1.8KV (DC)

Ambient Temperature: $-40^{\circ}\text{C} \sim +90^{\circ}\text{C}$

Maximum Temperature At Conductor: 120°C (20000h) according to IEC/EN 60216-1

Short Circuit Temperature: $250^{\circ}\text{C}/5 \text{ sec}$

Thermal Endurance Test: According to EN 60216-2 (temperature index $+120^{\circ}\text{C}$)

Damp-Heat Resistance: According to EN 50618, Table 2 with 85% humidity (test acc. to EN 60068-2-78)

Electrical Properties

Rated Voltage U_0/U : 1/1 kV AC; 1.5/1.5 kV DC

Maximum Permitted DC Voltage: 1.8 kV DC (conductor/conductor, non earthed system, circuit not under load)

Insulation Resistance: 1000 M Ω -km



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Spark Test: 6000 Vac (8400 Vdc)

Voltage Withstand: 6500 Vac for 5 min

MECHANICAL PROPERTIES

Minimum Bending Radius: 4×OD (fixed), 5×OD (flexing)

Dynamic Penetration: According to Acc. to EN 50618, Annex D, Meets requirements of EN 50618.

Tensile Strength And Elongation Of Insulation And Jacket: 250°C

Anticipated Period Of Use: 25 years

Ovality: ≤15%

Chemical Properties

Ozone Resistance: According to EN 60811-403(25°C, 24h, (250 to 300) × 10⁻⁴%) ; Method B: EN 50396(40°C, 72h, 55%RH, (200 × 10⁻⁶%)

Weathering- UV Resistance(Resistance on sheath): tensile strength and elongation at break after 720h (360 Cycles) of exposure to UV lights (acc. to EN 50289-4-17, Method A According to HD 605/A1)

Ammoniac resistant

Very good resistance to oils and chemicals

High wear and robust, abrasion resistant

DIMENSION AND PARAMETERS

No. of Cores × Cross-sectional Area	AWG Size	Conduct Strand in	Conduct Diameter	Nominal Insulation Thickness	Nominal Sheath Thickness	Approx. Overall Diameter	Approx. Weight	Max. Conduct Resistance at 20 °C	Max. Insulation Resistance at 20 °C	Max. Insulation Resistance at 90 °C	Current Carrying Capacity (Single cable free in air)	Current Carrying Capacity (Single cable on surfaces)	Current Carrying Capacity (2 loaded cables adjacent on surfaces)
No. × mm ²			mm	mm	mm	mm	kg/km	MΩ × km	MΩ × km	MΩ × km	A	A	A
1 × 4	12	56/0.3	2.59	0.7	0.8	6.6	70	5.09	579	0.579	55	52	44