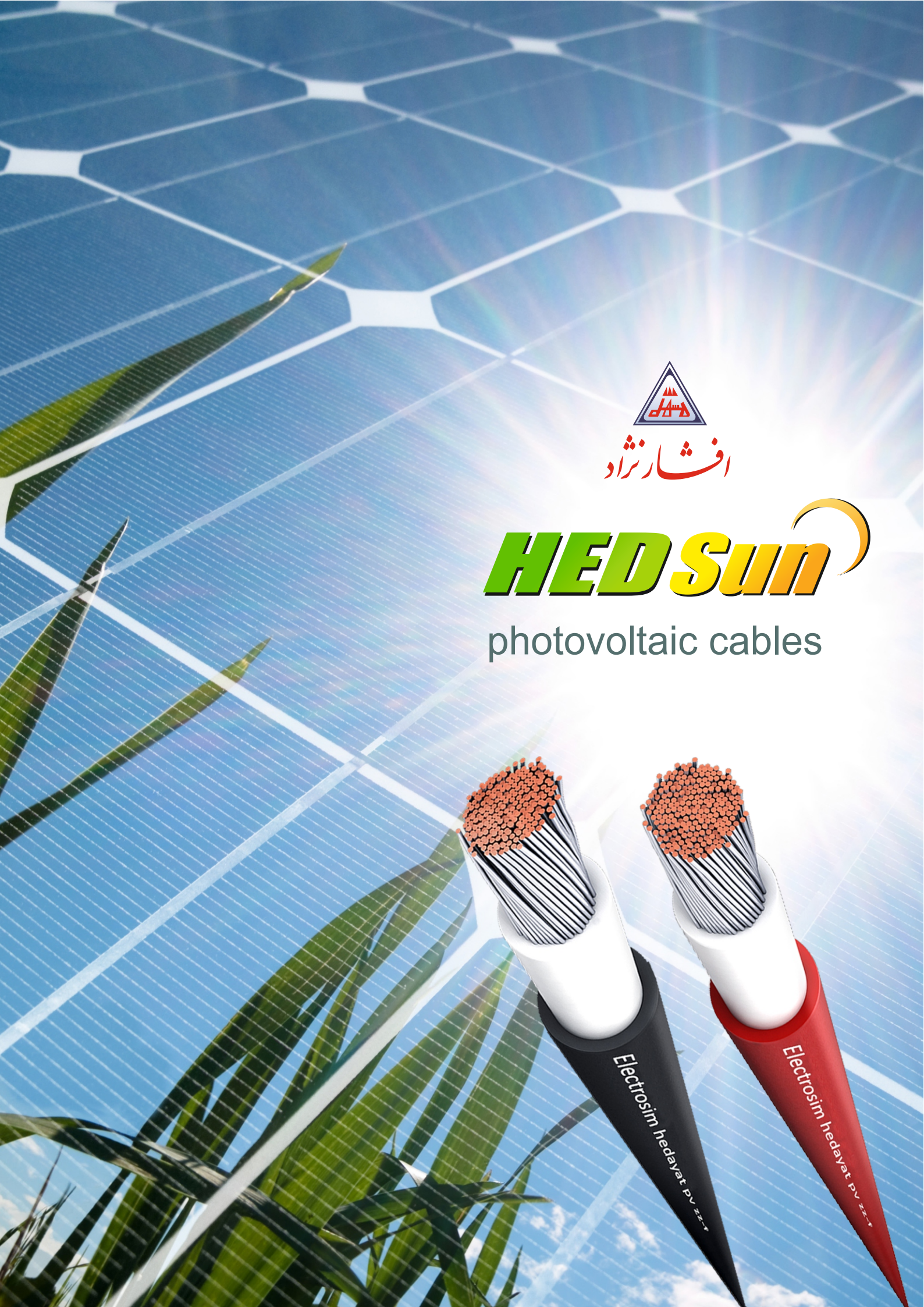
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HED Sun

photovoltaic cables





Advantages

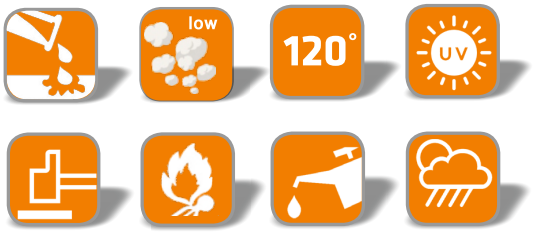
- EN50618 & IEC62930 approval
- UV, Ozone and hydrolysis resistant
- High temperature resistance, the materials do not melt or flow
- Very long service life, good cold flexibility
- Compatible to all popular connectors

Photovoltaic power cables
UV resistant, flame retardant

HEDsun-H1Z2Z2-k

Applications

Double insulated ,halogen free cross-linked cables for photovoltaic power applications. With reduced diameter and integrated jacket



Construction

Conductor	Tinned fine copper strands, acc. to IEC 60228,class 5
Insulation	XLPO, halogen free,cross-linked
Jacket	XLPO,flame retardant, halogen free, cross-linked,UV and ozone resistant
Jacket color	black,red

Mechanical Features

Impact resistance
Abrasion resistance
Tear resistance

installation Thermal characteristics

Operating temperature	-40°C up to +120°C
Ambient temperature	-40°C up to +90°C >25 years (TUV)
Max. short circuit temp.	280°C,5s

Electrical characteristics

Rated value	1500/1800V DC
Test voltage	6500 VAC ,50 HZ, 5min

Bending radius	<10 mm	>10 mm
Fixed installation	>4 x Ø	>5 x Ø
Occasionally moved	>5 x Ø	>7 x Ø

HEDSun

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Dimensions and current cacpacity

HEDsun (PV)				
Conductor Cross-section mm^2	Conductor outer diameter max. mm	cable overall Diameter mm	Bending Radius Fixed mm	Weight kg/km
1x1.5	1.6	4.6	15	30
1x2.5	1.9	5.0	17	40
1x4	2.4	5.5	18	54
1x6	2.9	6.1	20	74
1x10	4.0	7.0	23	115
1x16	5.6	8.4	30	175
1x25	6.4	10	34	265
1x35	7.5	11.6	50	363
1x50	9.0	13.6	58	522
1x70	10.8	15.8	66	732
1x95	12.6	17.5	75	914
1x120	14.2	19.5	82	1162
1x150	15.8	21.7	91	1432
1x185	17.4	24.2	101	1781
1x240	20.4	27.1	114	2307
1x300	23.4	30.3	128	2900
1x400	26.8	34.3	170	3860

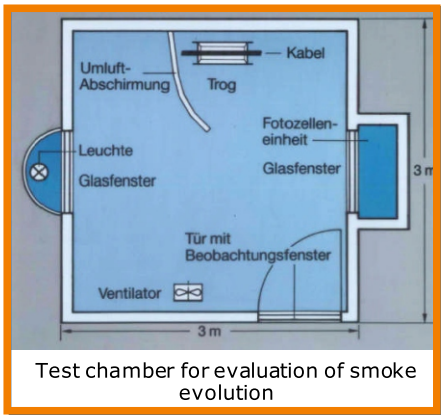
CONDUCTOR SIZE mm^2	CURRENT CARRYING CAPACITY ACCORDING TO METHOD OF INSTALLATION(30°C)			
	SINGLE CABLE FREE IN AIR A	SINGLE CABLE ON A SURFACE A	TWO CABLES TOUCHING ON A SURFACE A	MAX. SHORT CIRCIT CURRENT KA
1x1.5	31	30	24	0.21
1x2.5	42	40	33	0.36
1x4	57	54	45	0.57
1x6	72	69	58	0.86
1x10	98	96	80	1.43
1x16	132	130	107	2.29
1x25	183	174	138	3.58
1x35	227	215	171	5.01
1x50	287	273	209	7.15
1x70	361	344	269	10.01
1x95	433	411	328	13.59
1x120	508	483	382	7.16
1x150	590	560	441	21.45
1x185	671	638	506	26.46
1x240	808	767	599	34.32
1x300	913	866	693	42.9
1x400	1098	1041	825	57.2

Properties of HEDsun (PV) H1Z2Z2-k acc. to BS EN 50618

Chemical Parameters

Behaviour against Fire

HEDsun (PV) cables are tested for flame propagation on single cable according to EN 60332-1-2 and on multiple cables according to EN 50305-9. The smoke evolution is tested according to EN 61034-2, with Light Transmittance > 70%. The cables are halogen-free according to EN 50525-1 - Annex B, and with a toxicity index < 3 (per EN 50305).



Test chamber for evaluation of smoke evolution

Oil Resistance

In addition to the normative requirements, sheathing material is tested for 24 hours immersion in oil at 100°C.

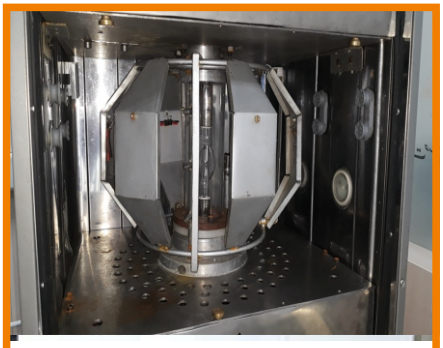


Equipment for measuring light conductivity and pH-value (halogen free)

Weather Resistance

External agents related to weather conditions (such as UV radiations, ozone and water) can degrade the rubber materials, causing a reduction of the performances of the cables. Therefore HEDsun (PV) cables are tested in order to ensure:

- Ozone resistance: complete cable has no cracks after 72 hours at 40°C, with 55% relative humidity and 2ppm of ozone concentration
- UV resistance: tensile strength and elongation at break are measured after a conditioning of 720 hours (360 cycles) exposed to UV light


Test chamber for UV test

Acid and Alkaline Resistance

Resistance of the sheathing material against a 23°C acid (N-Oxalic Acid) and alkaline solution (N-Sodium Hydroxide) is tested for 7 days.

Ammonia Resistance

In addition to the normative requirements, HEDsun (PV) is tested for 30 days in saturated ammonia atmosphere.


Propagation of vertical flame on complete single cable (acc. to EN 60332-1-2)


Test chamber for ozone test


Test equipment for measuring corrosivity of gases (halogen free)