

# TYPE PHOTOVOLTAIC / USE-2 / RHH / RHW-2 - ALUMINUM CONDUCTOR - 1KV/2KV

Patents: [encorewire.com/patents](http://encorewire.com/patents)



## ENGINEERING SPECIFICATIONS

### Standards

Underwriters Laboratories Standards UL-44, UL-854, UL-1581, UL 2556, UL-4703; UL 1685 (70,000 Btu/hr) Flame Test (1/0 AWG and larger); NEMA WC70/ICEA S-95-658; NFPA 70 (NEC®) Article 690; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; VW-1 optional; UL Listing #E-326525

## CONSTRUCTION

### Conductors

Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836

### Insulation

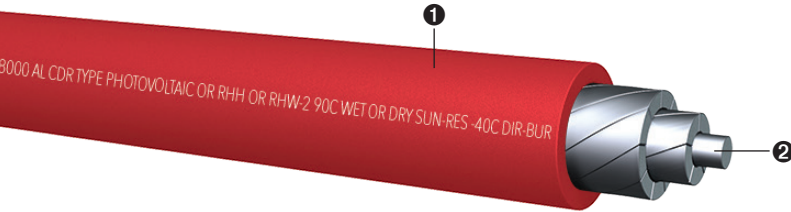
Cross-linked polyethylene (XLPE) insulation per UL-44, UL-854 and UL-4703

## APPLICATIONS

Type Photovoltaic building wire is suitable for outdoor rooftop applications without conduit or raceways and for use in raceways installed underground in wet locations where condensation and moisture accumulations within the raceway do not exceed 90°C. Photovoltaic wire is rated to 90°C in dry locations. When installed in accordance with NEC Section 690.31(C)(2), PV Source and PV Output, single-conductor cable of all sizes, can be installed in outdoor Cable Trays, where applicable. Type USE-2 is permitted for 600-volt applications only. Type RHH/RHW-2 is permitted for applications up to 1000 volts.

## FEATURES

Insulation compound is rated sunlight-resistant in all sizes and colors. Photovoltaic conductors of 1/0 and larger are rated for CT use. May be used for direct burial per UL-854 and UL-4703. Complies with Flexibility at Low Temperatures and Cold Impact tests at -40°C.



- ① SmartSun XLPE Insulation
- ② Compact Stranded Conductor, AA-8000 Series

Size (AWG or KCMIL)	No. of Strands	Compact Diameter of Aluminum Conductor (in)	Insulation Thickness XLPE (in)		Outside Diameter (in)		Approximate Net Weight (lbs/1000 ft)		Allowable Ampacity @ 90° (Amps) <sup>1</sup>		Standard Packaging (ft)
			1KV 2KV	1KV 2KV	1KV 2KV	1KV 2KV	1KV 2KV	1KV 2KV	1KV/2KV		
8	7	0.134	0.085	0.304	41	45	500' 1000' 2500' 5000' Reels				
6	7	0.169	0.085	0.339	54	55	500' 1000' 2500' 5000' Reels				
4	7	0.213	0.085	0.383	74	75	500' 1000' 2500' 5000' Reels				
3	7	0.238	0.085	0.408	86	85	500' 1000' 2500' 5000' Reels				
2	7	0.268	0.085	0.438	104	100	500' 1000' 2500' 5000' Reels				
1	8	0.299	0.105	0.509	137	115	500' 1000' 2500' 5000' Reels				
1/0	10	0.336	0.105	0.546	163	135	500' 1000' 2500' 5000' Reels				
2/0	12	0.376	0.105	0.586	194	150	500' 1000' 2500' 5000' Reels				
3/0	15	0.423	0.105	0.633	234	175	500' 1000' 2500' 5000' Reels				
4/0	19	0.475	0.105	0.685	283	205	500' 1000' 2500' 5000' Reels				
250	22	0.520	0.120	0.760	341	230	500' 1000' 2500' 4000' Reels				
300	21	0.570	0.120	0.810	395	260	500' 1000' 3500' Reels				
350	24	0.616	0.120	0.856	451	280	500' 1000' 3000' Reels				
400	27	0.659	0.120	0.899	505	305	500' 1000' 3000' Reels				
500	34	0.736	0.120	0.976	612	350	500' 1000' 2500' Reels				
600	41	0.813	0.135	1.083	741	385	500' 1000' 2000' Reels				
700	45	0.877	0.135	1.147	850	425	500' 1000' 1500' Reels				
750	47	0.908	0.135	1.178	900	435	500' 1000' 1500' Reels				
900	58	0.999	0.135	1.269	1062	480	500' 1000' Reels				
1000	61	1.060	0.135	1.330	1163	500	500' 1000' Reels				

<sup>1</sup> Ampacity of conductors are based on the National Electrical Code (NFPA 70) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable. The above data is approximate and subject to manufacturing tolerances.

### 1KV/2KV PRINT LEGEND:

**14 AWG THROUGH 1 AWG:** ENCORE WIRE CORP (SIZE) AA-8000 AL CDR TYPE PHOTOVOLTAIC WIRE 2000V OR USE-2 600V OR RHH OR RHW OR RHW-2 600V/1000V GR2 DIR-BUR 90C WET OR DRY SUN-RES -40C XLPE (UL) DATE TIME OPERATOR QC MACHINE

**1/0 AWG THROUGH 1000 KCMIL:** ENCORE WIRE CORP (SIZE) AA-8000 AL CDR TYPE PHOTOVOLTAIC WIRE 2000V OR USE-2 600V OR RHH OR RHW OR RHW-2 600V/1000V GR2 DIR-BUR 90C WET OR DRY FOR CT USE SUN-RES -40C XLPE\*(UL) DATE TIME OPERATOR QC MACHINE

### Standard Conductor Colors

Black/White/Red/Yellow/Green
*Brown/*Orange/*Gray

\*Minimum runs on request. Contact local Sales Rep.