

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

## ENGINEERING SPECIFICATIONS

### Standards

Underwriters Laboratories® Standards UL-44, UL-854, UL-1581, UL-2556, UL-4703 ; NEMA WC70/ICEA S-95-658; NEMA RV4; NFPA 70 (NEC®); RoHS Compliant; American National Standards Institute; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; IEEE 1202/FT4 Flame Test; ICEA T-29-520 (210,000 Btu/hr) Flame Test; ARRA 2009 Section 1605 "Buy American" Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-326525



Listing E-174428

## 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 and raceways installed underground, in wet locations, and where condensation and moisture accumulations do not exceed 90°C. Permitted for Type Photovoltaic per UL-854 and UL-4703 for applications requiring direct burial. For applications requiring type Photovoltaic conductor, temperatures shall not exceed 90°C in wet or 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.

## FEATURES

Cables comply with UL's VW-1 (vertical wire flame) rating. Insulation compound is rated sunlight-resistant in all sizes and colors. Photovoltaic conductors of 1/0 and larger are rated for CT use. Compliant with IEEE 1202/FT4 Flame Test and ICEA T-29-520 Flame Test. May be used for direct burial per UL-854. PV wire is UL-4703 certified, sunlight-resistant in all sizes and colors.



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

Size (AWG or KCMIL)	No. of Strands		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	Compact Diameter of Aluminum Conductor (in)				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:

**8 AWG THROUGH 1 AWG:** ENCORE WIRE CORP (SIZE) AA-8000 AL CDR TYPE PHOTOVOLTAIC WIRE OR USE-2 OR RHH OR RHW OR RHW-2 GR2 DIR-BUR 90C WET OR DRY VW-1 SUN-RES -40C 2000V XLPE (UL) DATE TIME OPERATOR QC  
**1/0 AWG THROUGH 1000 KCMIL:** ENCORE WIRE CORP (SIZE) AA-8000 AL CDR TYPE PHOTOVOLTAIC WIRE OR USE-2 OR RHH OR RHW OR RHW-2 GR2 DIR-BUR 90C WET OR DRY VW-1 FT4 IEEE 1202 SUN-RES -40C 2000V XLPE (UL) FOR CT USE DATE TIME OPERATOR QC

### Standard Conductor Colors

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

\*Minimum runs on request.  
Contact local sales Representative.

800.962.9473

www.encorewire.com

