

37-710

Type USE-2 Photovoltaic Cable

Single-Conductor: 600V • Rated 90°C • RHW-2



Conductor

Soft annealed tin-coated flexible stranded copper per ASTM B-33

Insulation

Non-halogenated Extruded thermosetting Ethylene Propylene Rubber (EPR) meeting UL 44 and UL 854

Jacket

Black, low smoke non-halogenated, flame retardant, oil, abrasion, chemical and sunlight resistant cross-linked compound meeting UL 44 and UL 854



Conductor

Soft annealed stranded copper per ASTM B-8

Insulation

Black sunlight resistant and flame retardant cross-linked polyethylene (XLPE) per UL 854



Applications

AmerCable's Type USE-2 is a versatile single conductor cable designed to meet the different needs of the emerging Solar Industry. Applications include "pigtail" connections on the backside of PV panels; "homerun" connections between PV panels, collector boxes and inverters; and where also allowed by the National Electric Code (NEC).

Features

- Two (2) distinct designs to satisfy the multitude of applications: A two layer construction with a low-smoke, halogen-free, flame retardant and sunlight resistant cross-linked compound outer layer and Ethylene-Propylene Rubber (EPR) inner layer; and a single layer insulation of sunlight resistant cross-linked compound.
- Suitable for continuous operating temperature of 90°C wet or dry
- UL listed as Sunlight Resistant
- Flame Resistance: UL VW-1

Ratings & Approvals

- UL listed as Type USE-2
- UL listed as RHW-2
- UL Standard 44: Thermoset Insulated Wires & Cables, Type RHW-2, UL VW-1
- UL Standard 854: Standard for Safety for Service Entrance Cables, Type USE-2
- ASTM B-3: Standard Specification for Soft or Annealed Copper Wire
- ASTM B-8: Standard Specification for Concentric Lay Stranded Copper Conductors, Hard, Medium-Hard or Soft (Class B strand only)
- ASTM B-33: Standard Specification for Tinned Soft or Annealed Copper Wire for Electrical Purposes (Flexible strand only)
- ASTM B-172: Standard Specification for Rope-Lay Stranded Copper Conductors having Bunch-Stranded Members, for Electrical Conductors (Flexible strand only)
- TUV approval pending
- 90°C Temperature Rating

Type USE-2 Photovoltaic Cable

Single-Conductor: 600V • Rated 90°C • RHW-2

Type USE-2 • Class B Bare Copper

Part No. 37-710-	Size (AWG)	Number of Wires	Nominal Insulation Thickness (Inches)	Nominal Outer Diameter (Inches)	Approx. Weight (lbs/1000 ft)
101	14	7	0.045	0.173	23
102	12	7	0.045	0.192	33
103	10	7	0.045	0.212	47
104	8	7	0.060	0.271	75
105	6	7	0.060	0.308	110

• Cable diameters and weights are subject to +/- 5% manufacturing tolerance

Type USE-2 • Low-Smoke/Halogen-Free Flexible Tinned Copper

Part No. 37-712-	Size (AWG)	Number of Wires	Nominal Inner Layer Thickness (Inches)	Nominal Outer Layer Thickness (Inches)	Nominal Outer Diameter (Inches)	Approx. Weight (lbs/1000 ft)
201	14	19	0.045	0.030	0.240	38
202	12	19	0.045	0.030	0.258	48
203	10	37	0.045	0.030	0.282	64
204	8	168	0.060	0.030	0.331	95
205	6	61	0.060	0.030	0.343	119

Cable diameters and weights are subject to +/- 5% manufacturing tolerance

Type USE-2 • Low-Smoke/Halogen-Free Metric Tinned Copper

Part No. 37-712-	Size (mm)	Number of Wires	Nominal Inner Layer Thickness (mm)	Nominal Outer Layer Thickness (mm)	Nominal Outer Diameter (mm)	Approx. Weight (kg/km)
505	2.5	45	1.140	0.760	6.220	58
506	4.0	52	1.140	0.760	6.730	76
507	6.0	78	1.140	0.760	7.260	97

Cable diameters and weights are subject to +/- 5% manufacturing tolerance



Type PV • UL4703 Photovoltaic Cable

Single-Conductor: 2kV • Rated 90°C

Conductor

Soft annealed stranded copper per ASTM B-3

Insulation

Extruded thermosetting Ethylene Propylene Rubber (EPR) meeting UL 44 and UL 4703

Jacket

Black, flame retardant, oil, abrasion, chemical and sunlight resistant chlorinated polyethylene (CPE) meeting UL 44 and UL 4703

**Applications**

AmerCable's Type PV is a single conductor cable that meets the newest standards as introduced in National Electrical Code (NEC) Article 690. Applications include "pigtail" connections on the backside of PV panels; "homerun" connections between PV panels, collector boxes and inverters; and where also allowed by the NEC.

Features

- A two layer construction of flame retardant, oil and sunlight resistant Chlorinated Polyethylene (CPE) over an Ethylene-Propylene Rubber (EPR) inner layer. This design is based on a construction allowed for use on ungrounded systems as described in NEC Article 690 without the need for conduit when installed exposed.
- Suitable for continuous operating temperature of 90°C wet or dry
- UL listed as Sunlight Resistant
- Flame Resistance: UL VW-1

Ratings & Approvals

- UL listed as Type PV
- UL listed as RHH/RHW-2
- 90°C Temperature Rating
- UL Standard 44: Thermoset Insulated Wires & Cables, Types RHH, RHW-2, UL VW-1
- UL Subject 4703: Outline of Investigation for Photovoltaic Wire, Type PV
- ASTM B-3: Standard Specification for Soft or Annealed Copper Wire
- ASTM B-8: Standard Specification for Concentric Lay Stranded Copper Conductors, Hard, Medium-Hard or Soft (Class B strand only)
- ASTM B-33: Standard Specification for Tinned Soft or Annealed Copper Wire for Electrical Purposes (Flexible strand only)
- ASTM B-172: Standard Specification for Rope-Lay Stranded Copper Conductors having Bunch-Stranded Members, for Electrical Conductors (Flexible strand only)

Type PV – Flexible Tinned Copper

Part No. 37-711-	Size		Number of Wires	Nominal Inner Layer Thickness		Nominal Outer Layer Thickness		Nominal Outer Diameter		Approx. Weight	
	(AWG)	mm		Inches	mm	Inches	mm	Inches	mm	lbs/1000ft	(kg/km)
201	14	-	19	0.045	-	0.030	-	0.240	-	37	-
505	-	2.5	45	-	1.140	-	0.760	-	6.220	-	58
202	12	-	19	0.045	-	0.030	-	0.258	-	48	-
506	-	4.0	52	-	1.140	-	0.760	-	6.730	-	75
203	10	-	37	0.045	-	0.030	-	0.282	-	63	-
507	-	6.0	78	-	1.140	-	0.760	-	7.260	-	97
204	8	-	168	0.055	-	0.030	-	0.351	-	100	-

Cable diameters and weights are subject to +/- 5% manufacturing tolerance

Type PV – Class B Bare Copper

Part No. 37-711-	Size (AWG)	Number of Wires	Nominal Inner Layer Thickness (Inches)	Nominal Outer Layer Thickness (Inches)	Nominal Outer Diameter (Inches)	Approx. Weight (lbs/1000 ft)
101	14	7	0.045	0.030	0.243	37
102	12	7	0.045	0.030	0.262	48
103	10	7	0.045	0.030	0.282	64
104	8	7	0.055	0.030	0.331	94

**Consult factory
for other avail-
able sizes**

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