

SARKUYSAN PV RIBBON WIRE

- Our new product PV ribbon wire is an essential component in every mainstream solar panel and is used to interconnect solar cells and provide connection to the junction box. PV ribbon wires are tinned or solder alloys coated copper ribbons between 1 mm – 6 mm wide and 0.08 mm – 0.50 mm thick with a 10 – 40 µm thick coating. The quality of Sarkuysan's PV ribbon and its soldering to the solar cells is essential to ensure panel efficiency and durability. PV ribbon is an electrolytic tin coated or hot dip solder alloy coated copper conductor used in photovoltaic solar panels. There are two types of PV ribbon : The interconnect or tabbing ribbon and PV bus bar, both needed in a typical silicon solar cell. Thin film panels usually require only bus bars.
- The interconnect ribbon is soldered directly onto silicon crystal to interconnect solar cells in a solar panel. The interconnect ribbon carries the current generated in solar cells to the PV bus bar. PV bus bar is a hot dip tinned copper conductor installed around the perimeter of the solar panels. PV bus bar connects interconnect ribbons to the junction box.



DIMENSIONAL RANGE AND TOLERANCES

Thickness	0.003 - 0.008 ± 0.0003in	0.008 - 0.020 ± 0.0004in
	0.080 - 0.200 ± 0,008mm	0.201 - 0.500 ± 0,010mm
Width	0.039 - 0.118 ± 0.003in	0.118 - 0.236 ± 0.0039in
	1.000 - 3.000 ± 0,080mm	3.001 - 6.000 ± 0.100mm

MECHANICAL PROPERTIES

Elongation	Min. 20%	Min. 20%
Yield Stress	13.0 ksi max.	18.8 ksi max.
(Rp0.2%)	max. 90 N/mm ²	max. 130 N/mm ²

PV RIBBON SPECIFICATIONS

Copper Core Material

Cu-OF

Coating Material

- Bare
- **Pure tin** : Sn 100 (T_{melt} : 232 °C / 450 °F)
- **SnPb Solder** : Sn60Pb40 (T_{melt}: 183-190 °C / 361 – 374 °F)
- **SnPb Solder** : Sn63Pb37 (T_{melt} : 183 °C / 361 °F)
- **SnPbAg Solder** : Sn62Pb36Ag2 (T_{melt}: 179 °C / 354 °F)
- Different solder alloys according to customer specifications.

Coating Thickness : 393–1574µin (10–40µm)

Tolerance of Coating Thickness : ± 30% max.

Most Common Coating Thickness : 787µin ± 157 µin (20µm ± 4µm)



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