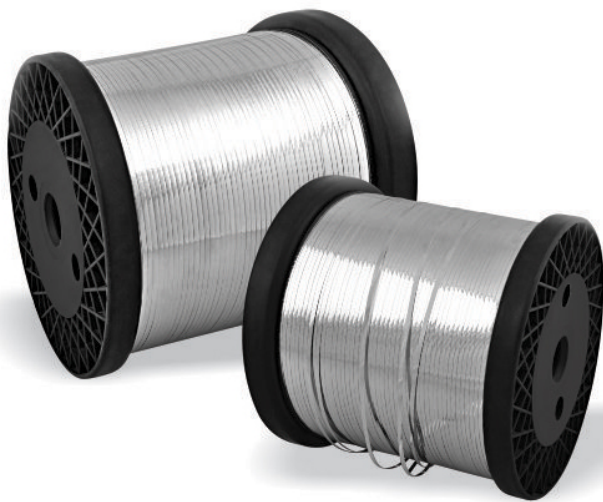


**NEOCAB®-PV**  
*Wire the Sun*



**PV 18-0811**  
COMPLIANCE

**PV 19-0811**  
COMPLIANCE

 **RoHS** **CE**





# NEOCAB<sup>®</sup>-PV

*Wire the Sun*

INTERCONNECT RIBBON & BUSBAR





NEOCAB® - one of the most trusted brand in cables and conductors, was created with an aim to cater High Quality Premium Cable Products to the market. Through times we catered products that required high-end INNOVATION and RESEARCH.

However, the willingness of THE INNOVATION took a leap further when NEOCAB-PV was created. NEOCAB-PV's evolution is from a generic cable product to the straightest, softest and flattest photovoltaic wire available in the market today. NEOCAB-PV evolved because market was in need for copper-based PV-Ribbon & PV-Cables which were efficient, innovative and made locally. Today, NEOCAB-PV's solar PV-Ribbon & PV-Cables are more VERSATILE than ever before & continues to bring notable leap forward in the evolution of photovoltaic wire.



## NEOCAB®-PV

### INTERCONNECT RIBBON & BUSBAR

PV RIBBON is a hot dip solder coated copper conductor of flat shape used in photovoltaic solar panels.

There are two types of PV Ribbon:

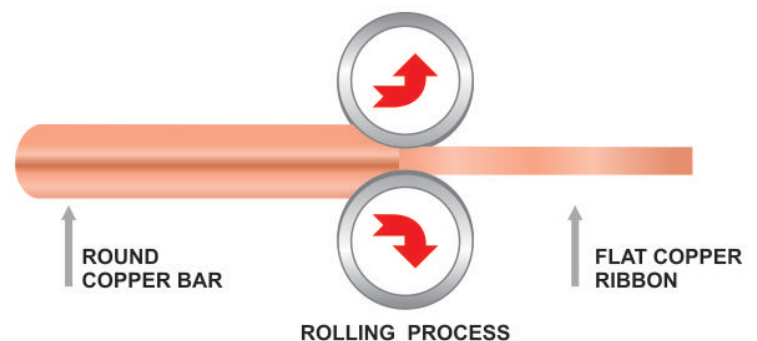
#### THE INTERCONNECT OR TABBING RIBBON

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

PV bus-bar is a hot dip tinned copper conductor installed around the perimeter of the solar panels. PV bus-bar connects interconnect ribbon to the junction box.

NEOCAB-PV® is rolled from high-purity oxygen-free copper round wire and is hot-dip tinned. This state-of-the-art manufacturing technology guarantees consistent quality. We provide all typical coatings, including Silver Based and RoHS compliant lead-free coatings.



**PURE is RELIABLE :**

NEOCAB-PV® is rolled from high-purity oxygen-free copper round wire and is hot-dip tinned.

This state-of-the-art manufacturing technology guarantees consistent quality. We provide all typical coatings, including Silver Based and RoHS compliant lead-free coatings.

**VOICE of CUSTOMER :**

Every client has their unique need so we cater every request individually. Our technical team work closely with our market research team to choose the right product for client's application and to design a solution that works.

**MORE EFFICIENCY in ASSEMBLY-LINE :**

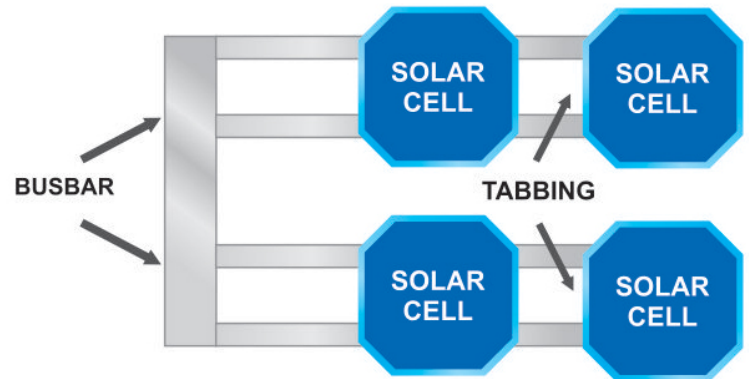
NEOCAB-PV's soft copper has a yield strength well below 70 N/mm<sup>2</sup> in normal production, which means there is less tension on the solar cells during soldering – so cell breakage is much less likely, which improves overall efficiency of solar PV-Module assembly.





## MORE WATTAGE for MODULES :

With NEOCAB-PV's RIBBON a larger base copper cross-section is possible, improving the ELECTRON flow across cells, improving overall WATT output of each module.



## PRECISION ENGINEERING

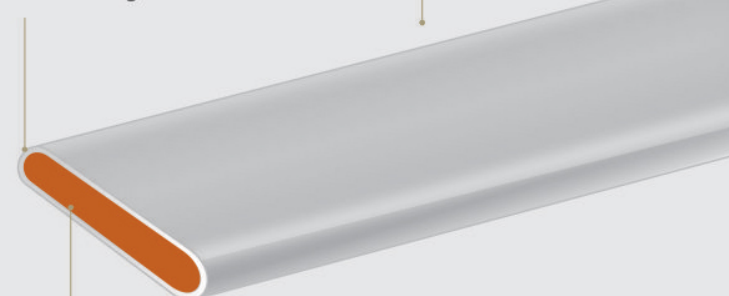
Neocab-PV® can produce extremely flat ribbon to the tightest tolerances of thickness and width. We roll from round-wire to deliver burr-free, high-consistency ribbon; and our coating process gives 100% coverage so there's no risk of discolouration.



## NEOCAB-PV INTERCONNECT RIBBON & BUSBAR

Perfectly Flat Core  
No Burr  
Core Rolled out of round bar with tight tolerances

Fully coated  
No Dis-coloration  
No Exposed Copper



ETP / OF Copper with 99.97 % Purity  
Uniform thickness and width throughout the length  
Hot-Dipped for burr-free uniform coating.

## Neocab-PV® SF – SUPER FLEXIBLE

With a high-purity oxygen-free copper core base, Neocab-PV® SF offers exceptional electrical conductivity combined with guaranteed elongation and yield strength. Neocab-PV SF provides enhanced mechanical properties to reduce cell breakage. It makes the solar module more fatigue resistant against weather changes during its lifetime

PV-Interconnect Ribbon and PV-Busbar Range				
		Interconnect Ribbon		Busbar
Available Sizes	Width(mm)	0.8 ≈ 2.5		3.0 ≈ 8.0
	Thickness(mm)	0.1 ≈ 0.3		0.1 ≈ 0.4
Standard Coating Thickness		≥ 20μm (single side)		
	Leaded Coating			
	Sn60Pb40		Sn62Pb36Ag2	
Coating Type	RoHS Comlianced (Lead Free) Coating			
	Sn100	Sn96Ag35 (Tin96.5%, Silver3.5%)		SnAgCu
Softness	Elongation		Yield Strength	
	Flexible	≥ 25%	Flexible	≤70
	Supper Flexible	≥ 30%	Supper Flexible	≤60
	Extream Flexible	≥ 35%	Extream Flexible	≤55
Quality	Confirms To	SEMI PV19-0811, SEMI PV18-0811		
		An ISO 9001-2008 Certified Company		

BASE METAL SPECIFICATIONS		
Specifications of the CORE Base Metal(copper)		
	Interconnect Ribbon	Busbar
Copper Grades	Cu-ETP	
	Cu-OF	
Resistivity	≤1.707 X 10 <sup>-8</sup> Ωmm <sup>2</sup> @ 20°C	
Density	8.89 gm/cm <sup>3</sup>	
Conductivity (100% min)	≥101%	
TOLERANCE VALUES		
	Interconnect Ribbon	Busbar
Thickness Tolerance	±0.008 mm	
Width Tolerance	±0.080 mm	

## Specifications of the Solder Coating (TIN-LEAD-Silver alloy)

	Interconnect	Busbar
Tin Coat Thickness	≥20μm(**Other thickness is available on request)	≥20μm(**Other thickness is available on request)
Tin Coat Thickness error	± 0.005 mm	± 0.009 mm
Type of Coating & Composition	Curing Temperature(°C)	Liquefaction Temperature( °C)
Leaded (Non RoHS)-60Sn40Pb	<b>183°C</b>	<b>190°C</b>
Leaded (Non RoHS)-62Sn36Pb2Ag	<b>179°C</b>	<b>189°C</b>
RoHS Complianted Lead Free-96.5Sn3.5Ag/Sn100/SnAgCu	<b>221°C</b>	<b>221°C</b>

## Observed Value for Neocab PV Interconnect Ribbon and Busbar

Testing Name	Interconnect Ribbon	Busbar
Dimensions Tolerance	±0.008 mm X±0.08 mm	±0.016 mm X±0.010 mm
Straightness	≤4mm/1000mm	≤3mm/1000mm
Solder Coat Thickness Tolerance	± 0.005 mm	± 0.009 mm
Tensile Strength	135Mpa≤ TS ≤ 250Mpa	135Mpa≤ TS ≤ 250Mpa
Yield Strength(R <sub>p0.02%</sub> )	50MPa≤Ys≤70Mpa,	≤130Mpa
Elongation	≥25 %	≥25 %
Electrical Resistivity	≤2.2 X 10 <sup>-8</sup> Ωm @ 20°C	≤2.2 X 10 <sup>-8</sup> Ωm @ 20°C

Manufacturing Process and Product Conforms to

- 1) ISO 9001:2008
- 2) SEMI Standard PV 18-0811
- 3) SEMI Standard PV 19-0811

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COMPLIANCE

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# NEOCAB<sup>®</sup>-PV

Wire the Sun

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