

# ALPHA® PV-READY Ribbon™

ALPHA® PV Ribbon helps speed up tabbing and stringing processes, while reducing module assembly costs.

## ALPHA® PV-READY RIBBON™

### Resilient Flux-Coated

The Ready Ribbon family of resilient flux-coated flat wire Photovoltaic (PV) ribbon eliminates the need to dispense flux during tabbing and stringing operations. Resilient flux is applied to standard solder-coated copper ribbon and delivered on standard spools. Ready Ribbon resilient flux is compatible with a wide variety of solder types, including SnPbAg, SnPb and low temperature SnBi. Excellent shelf life provides significant manufacturing advantages.

### Features & Benefits

- Increases manufacturing up time by eliminating flux applicator maintenance
- Reduces cell scrap rate due to line restart testing associated with flux related soldering problems
- Excellent pull strength due to uniform flux deposition over the ribbon
- Compatible with standard tabber /stringer assembly soldering systems

## ALPHA® PV-RIBBON

### Unfluxed

ALPHA PV-Ribbon is high-quality solder-coated copper ribbon delivered on precision traverse wound spools delivered with a variety of solder alloys, including SnPbAg, SnPb and low-temperature SnBi.

### Product Information

#### Alloys

- Sn60Pb40
- Sn63/Pb37
- Sn62/Pb36/Ag2
- SnAg3.5
- Sn42Bi58
- Other alloys by special request

#### Ribbon Widths

- 0.5mm
- 2.0mm
- 2.5mm
- 4.0mm
- Others by special request

#### Spool Sizes

4kg and 5kg



### ALPHA® PV RIBBON COPPER OPTIONS

Common Name	Cu – ETP / CDA-110	Cu – DFE / CDA-101
Copper Content	99.90%	99.99%
Tensile Strength – Half Hard	38,000-46,000 psi	38,000-46,000 psi
Tensile Strength – Dead Soft Annealed	32,000-36,000 psi	32,000-36,000 psi
09mElongation – 2" Half Hard	15% minimum	15% minimum
Elongation – Dead Soft Annealed	20% minimum	20% minimum

### PRIMARY SOLDER ALLOY COATINGS AVAILABLE<sup>1</sup>

ALLOY	LIQUIDUS	ATTRIBUTES
<b>LEAD CONTAINING</b>		
Sn60/Pb40 Sn63/Pb37	188°C 183°C	Most common Pb-containing solder used today in PV Solar Module assembly application
Sn62/Pb36/Ag2	179°C	Common Pb-containing alloy used for the added impact of the Ag.
<b>LEAD FREE</b>		
Sn97/Ag3	221-230°C	Most common lead-free solder used today in PV Solar Module assembly application
Sn100	232°C	Common tinning alloy often used for bus bar applications
SACX®0807	227°C	Proprietary lead-free SnAgCu alloy designed to deliver maximum value and processability while maintaining solder joint reliability.

1. Other alloys are available to meet customer specifications and our technical staff is available to discuss your technical requirements and an appropriate alloy to meet your specifications

### Packaging

- DIN 125 Reels Length 125mm, Width 125mm, Bore 16mm, Traverse 100mm: Barrel 80mm
- Reels are packed in carton boxes, which are placed in secure wooden cases for transportation.
- Camber: 6mm max, deviation in 1m of length as measured from center