

# CP-005

## Screen Print Copper Paste for PV Metalisation

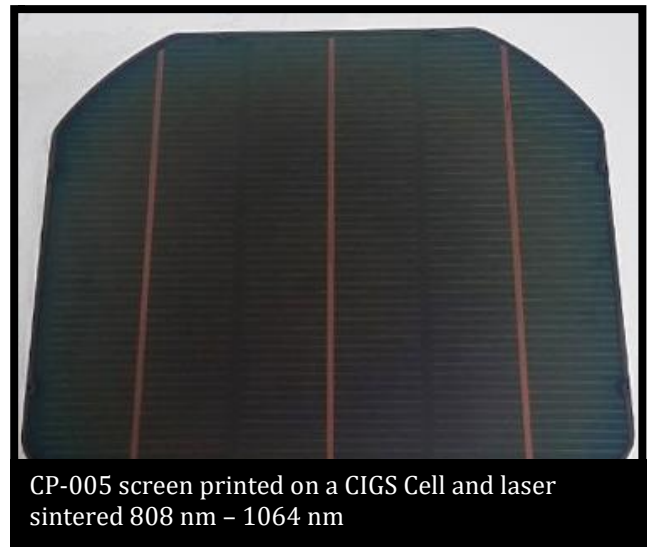
*A nanocopper-based paste for printed electronics*

### Product Overview

CP-005 is a screen printable copper paste, suitable for metalisation for thin film solar cells

CP-005 is formulated to provide excellent conductivity and adhesion laser sintered by direct imaging at high speeds

Can be used on a variety of PV substrates including CIGS, CIS and other PV metalisation layers



### Processing

<b>Screen Printing Equipment</b>	Flatbed (Both sheet and reel to reel)
<b>Screen Type</b>	Stainless steel mesh and polyester mesh
<b>Line Thickness/Height</b> (sintered)	Typically 15 µm (Depending on screen)
<b>Line Width</b>	Typically 125 µm
<b>Ink on Screen (Printing Life)</b>	>4 hours - (Depending on printing process)
<b>Substrates</b>	PV Metalisation, CIGS, CIS
<b>Clean up solvent</b>	Isopropanol, acetone
<b>Diluent/Thinner</b>	DT-001
<b>Typical Drying Conditions</b>	Can be dried in standard convection ovens and vacuum ovens @ 60°C 30–60 minutes Under IR dryer @ 80°C 15–30 minutes Forced air convection @ 80°C 15–30 minutes
<b>Typical Sintering Conditions</b>	Laser processing 808 nm – 1064 nm

## Applications

CP-005 paste formulation is designed to be compatible for PV Metalisation.

This paste has been developed for high throughput screen printing in a production environment.

Not suitable for Silicon cells without a conductive barrier layer.

## General Use, Storage and Shelf Life

The product should be kept sealed in its container and stored at room temperature (<25°C). The shelf life of unopened containers is six months from date of shipment.

Prior to use, please ensure that the paste is mixed thoroughly for a few minutes taking care to avoid introducing air to the paste.

## Safety and Handling

For safety and handling information relating to the use of this product, please refer to the Safety Data Sheet (SDS).

## Technical Support

Intrinsiq works closely with its customers to ensure this product is optimized for their process. For more product information or technical support, please contact your local representative.

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## Typical Compositional properties

<b>Solids content</b> (Weight %)	~85%
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<b>Viscosity [Pa.S]</b> (Bohlin CVO 100 at 50 s <sup>-1</sup> @ 25°C)	15-25
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<b>Density [g/ml]</b>	~3.5
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## Typical Electrical & Physical Properties (Cured)

<b>Sheet Resistance</b> <b>[mΩ/sq/25µm]</b>	~20
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<b>Adhesion</b> (ASTM D3359)	5B
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<b>Cured Thickness [µm]</b>	10-25
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