

Helios ETL Screen H-SZ21024 semi-conductive ink was developed for the printed electronics market and is particularly well suited for OPV and PV.

Helios ETL Screen H-SZ21024 shows great performances on screen printing and blade coating. Low roughness, homogenous film and excellent compatibility are obtained on either ITO or any active layer for conventional and inverted structure.

**Processing: Screen printing, Blade coating**

### Ready-to-Use Ink

Material	ZnO nanoparticles
Solvent type	Alcohol mix
Viscosity (20°C)	30,0 ± 5,0 mPa.s
Surface tension	29 ± 5 mN/m
Storage stability	6 months at 18-25 °C away from light

### Typical Electrical Properties

Work function	4.0 ± 0.1 eV
Valence band	7.9 ± 0.1 eV
Conductivity (before illumination)	10 <sup>-8</sup> – 10 <sup>-7</sup> S/cm
Conductivity (under illumination with UV light)	10 <sup>-4</sup> – 10 <sup>-3</sup> S/cm

### Key advantages & benefits

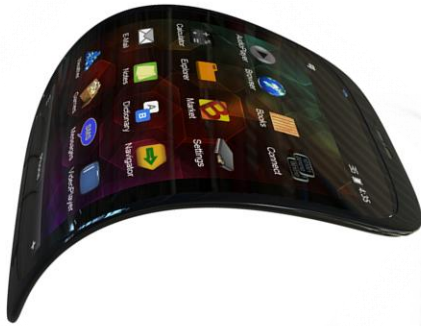
- Easy deposition under atmospheric conditions (Temperature and Pressure)
- Good optical performances (Visible light transmission > 90%)
- Non CMR ink
- Compatible with ITO and Ag NWs layers
- Compatible with most flexible substrates
- Low drying temperature making printing onto flexible substrates possible
- Thin layers are obtained (20 nm) with low roughness (RMS = 3 ± 1 nm)

### Typical Processing guidelines

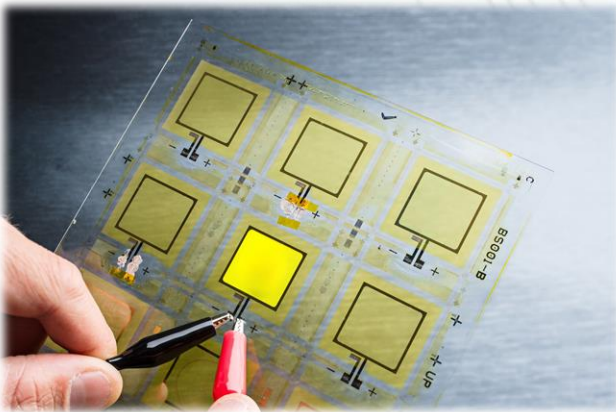
- Helios ETL Screen H-SZ21024 Semi Conductive Ink can be homogenized for 5 minutes in an ultrasonic bath in order to get rid of any aggregates
- Filtration on a 0.45 µm PTFE filter syringe to avoid any nozzles clogging
- Drying conditions: Oven, IR oven, Vacuum oven
- Clean-up solution: Ethanol/Acetone

## Applications

### Flexible OLED Display



### OLED on glass/ITO



### Flexible Transparent OPV



## Shipping & Packaging

- Standard sample order is 100 ml
- Standard bulk order is 1 l
- Standard delivery time is 10 days

For more information on our semi conductive inks, please contact:



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#### Limited Warranty

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