

Thin Film Solar Materials – CIGS Products



Copper Indium Gallium Selenide solar cell (CIGS) are manufactured by vacuum deposition, where thin layers of copper, indium, gallium and selenium are coated on glass or plastic. To collect the current a transparent conductive front contact (AZO or ITO) and a metallic back contact are required.

Due to the high absorption coefficient of sunlight of CIGS materials the layers can be much thinner than for other Semiconductor materials. This brings the advantages that CIGS modules are not only available on Glass but also on flexible light-weight substrates. Additionally, CIGS has very good low-light absorption efficiency which allows to use CIGS Modules for facade constructions or at less sunny regions.

Vital Thin Film Materials provide high purity CIGS products for thin-film solar module manufacturers, including CIGS, CIG, CuIn, CuGa, In_2S_3 , In_2Se_3 , CZTSe, CZTS, AZO, ITO, Ti and Mo Targets, as well as CIGS, CIG, and Se powder or shots.

Targets

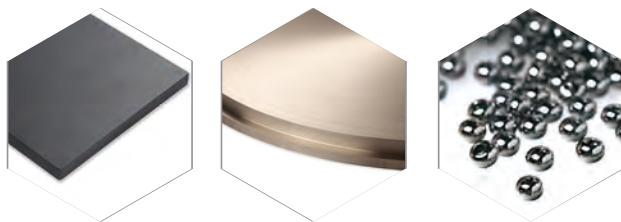
Products	CIGS Rotary Target	CIGS Planar Target	CIG Planar Target	CI Planar Target	CG Planar Target
Purity	>99.99%	>99.99%	>99.99%	>99.99%	>99.99%
Density	>90%	>94%	>94%	>94%	>94%
Size	Customized				

Evaporation Materials

Products	CIGS Powder	CIG Powder	Se Shot
Purity	>99.9999%	>99.9995%	>99.99999%
Dimensions	Customized		

Vital Thin Film Material provide closed loop recycling for In, Ga, Se contained waste, as spent targets, chamber and shield scrap and end of life products as well as custom-made recycling solutions for complex waste streams.

VTFM is ISO9001, ISO14001 and OHSAS18001 certified.



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