Molybdenum sputtering targets.

Molybdenum coatings are the crucial components of the thin-film transistors used in TFT-LCD screens. These provide instantaneous control of the individual image dots (pixels) and consequently ensure particularly sharp image quality. Molybdenum layers are also used as back contacts in CIGS solar cells.

But how to produce molybdenum thin films?

In the magnetron sputtering method tiny metal particles are vaporized from the sputtering targets and are then deposited as a thin film on the glass substrate. In this fast, economical coating process, all the materials must meet the highest quality criteria. You can rely on our molybdenum sputtering targets:

There's none cleaner.

No targets are cleaner than ours. The most important benefits: your films possess an outstanding level of electrical conductivity and minimized particle formation during the PVD process. Because: Metallic and gaseous impurities in the sputtering target are reproduced almost 1:1 in the sputtered functional layer and result in particle formation during the PVD process (arching effect). We guarantee that our molybdenum targets have a purity of at least 99.97 %. The average purity of our targets lies at an unbeatable 99.99 %. The typical oxygen content is 6 ppm. This value is a fraction of that achieved by our competitors. In this way, we help ensure that every pixel in the TFT-LCD display is precisely controlled and that the CIGS back contact functions perfectly.
Maximum density. Homogeneous microstructure.

Thanks to the special forming processes we use, Plansee's molybdenum sputtering targets have a density of almost 100%. You benefit from a faster process due to higher sputtering speeds. The denser the molybdenum target is, the better the conductivity of the created layer.

The flexibility of our production process allows to adjust the microstructure of our coating material to achieve just the effect you want. If the grains of the sputtering target are uniformly aligned, you benefit from constant erosion rates and homogeneous layers.
You want the perfect coating? We create it.

In the PVD process, everything must fit together perfectly. Only if all the process parameters are fully harmonized it is possible to create the coating that precisely meets your requirements. In our PVD application laboratory, we perform sputtering in near-real life conditions. Here, our team of developers creates coatings and conducts in-depth analyses based on your specifications. Thanks to this collaboration with you and a wide range of development institutes, we can minimize the time to market required for the development of new coating materials.

The best proof of our expertise is us! We coat many of our products such as semiconductor base plates and x-ray targets in-house using the PVD, CVD, APS and VPS coating processes.

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Planar molybdenum targets.

For more than 20 years, our materials have proved their worth as thin films in TFT displays.

- Extremely pure
- Maximum density
- Homogeneous microstructure

You can choose between our single and multi-piece planar targets, which we will be delighted to bond for you in-house. We produce planar sputtering targets for all commonly used systems as well as to specific customer needs.

Rotary molybdenum targets.

You want to make the most of what you’ve got? With our rotary targets, you can use more than 75 % of the target material and enjoy a longer period of utilization. We produce rotary targets of up to four meters in length on reusable steel or titanium backing tubes.

You can also test our monolithic rotary targets which do not require a backing tube. These are less sensitive to temperature and can be sputtered at extremely high power densities of up to 30 kW/m.
Monolithic targets now with ID-coating.

You want to save costs? Then we have something new for you: A polymer-based inner diameter coating for monolithic sputtering targets. Find out more about it.

Learn more about our molybdenum rotary targets.
Flawless quality from a single supplier.

We are the only manufacturer of sputtering targets to perform every stage of the production process in-house. From the raw material through to the finished product: including the development of new materials and the optimization of our coating methods and coatings. Sintering is the cornerstone of our powder metallurgical production process. This is the method we use to manufacture compact metallic components from porous powder blanks. With the world's largest hot rolling mill for refractory metals, we produce planar targets of maximum density. We use special forming processes to manufacture our rotary targets.