Tungsten sputtering target.

Tungsten layers are components of the thin-film transistors used in TFT-LCD screens. They are used wherever large screen formats, particularly high image definition and optimized contrasts are needed. But tungsten is also used as a diffusion barrier and a conductive connector in the microelectronics industry.

At high temperatures, thin films made of materials with low melting points may diffuse and intermix with the adjacent layers. This does not happen with tungsten. This material has the highest melting point of all metals – as a result, tungsten layers are particularly stable.

Using the world's largest hot rolling mill for refractory metals, we recently succeeded in manufacturing the largest tungsten sputtering target on Earth. The benefit to you of our large formats: The coating process is more stable and the deposited layers are of higher quality.
High material purity.

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). Sputtering targets made from high-purity materials are therefore required for the coating process. We guarantee that our tungsten targets have a purity of at least 99.97%.
Maximum density.

Thanks to the special forming processes we use, Plansee's tungsten sputtering targets have a density of almost 100%. As a result, your process benefits from a particularly high level of conductivity and time savings due to the excellent sputtering speeds.

Homogeneous microstructure.

Thanks to our powder metallurgical production process, we can adjust the microstructure of our coating material to achieve just the effect you want. You benefit from uniform sputtering rates and homogeneous layers. As a result, we can guarantee you uniform erosion and outstandingly homogeneous layers.

The complex processes involved in manufacturing microelectronic components present a particular challenge in respect of the homogeneity and uniform thickness of the tungsten layer. If these demands are to be met, the tungsten targets that are used must always have a uniform microstructure. Our manufacturing approach allows us to ensure that our targets have the necessary microcrystalline transformation structure. This has benefits for the sputtering process.

Our many years of experience ensure that, like peas in a pod, all of our targets are identical.
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.
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.
Raw material: sure and certain.

Ever since 1921, our customers have been able to rely on Plansee as an independent private company. Like us, they place great importance on reliability and continuity – especially when it comes to raw materials procurement. With Global Tungsten & Powders (GTP) and a holding in Molibdenos y Metales (Molymet), the Plansee-Group covers all the stages involved in the processing of tungsten and molybdenum – from powder manufacture through the subsequent powder metallurgy processes and on to the production of semifinished products and customer-specific components.