Strong base for high power semiconductors.

With our molybdenum and tungsten, we make sure that power diodes, thyristors and transistors keep their cool. With their outstanding thermal conductivity, electrical conductivity and material purity, our base plates reliably dissipate heat away from the active device.
Avoiding stress.

Mechanical stresses between the semiconductor material and the substrate may impair the functioning of the product. Our substrates have a coefficient of thermal expansion similar to that of the semiconductor material. In this way, we ensure an exceptionally long component lifetime. To coat our materials, we use the PVD process which guarantees exceptional material purity and extremely homogeneous coatings. This avoids reverse voltages between the semiconductor and the substrate.

Following the coating process, our substrates are clean as never before. And to keep them this way, they are individually packaged in our cleanroom. And you benefit from particle-free substrates.

Customized base plates.

Customized designs are part of our everyday work. Would you like to put us to the test? That's not a problem. Because we'll accompany you every step of the way – from the initial prototype through to series production. You can rely on the quality of our base plates:

<table>
<thead>
<tr>
<th></th>
<th>Molybdenum</th>
<th>Tungsten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purity [%]</td>
<td>99.97</td>
<td>99.97</td>
</tr>
<tr>
<td>Coefficient of thermal expansion at 20 °C [ppm/K]</td>
<td>5.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Electrical conductivity at 20 °C [1/(Ωm)]</td>
<td>17.9 · 10⁶</td>
<td>18.0 · 10⁶</td>
</tr>
<tr>
<td>Electrical resistance at 20 °C [Ωmm²/m]</td>
<td>0.056</td>
<td>0.050</td>
</tr>
<tr>
<td>Thermal conductivity at 20 °C [W/(m·K)]</td>
<td>142</td>
<td>164</td>
</tr>
</tbody>
</table>
Advanced coatings for your application.

You can purchase our molybdenum and tungsten base plates coated with ruthenium, nickel, chromium, silver and gold. These metals provide optimum protection against oxidation and improve the electrical contact. Thanks to their excellent adherence, they provide an optimum compound between the base plate and the semiconductor. We apply our coatings by means of physical vapor deposition (PVD), which guarantees exceptional material purity and extremely homogeneous coatings. Alternatively, we can supply you with galvanically applied coatings.
Top quality from a single supplier.

We handle every stage in the manufacture of our products for heat dissipation in-house. From the raw materials through to the finished product: including the development of new materials.
You want it. We'll supply it.

The typical dimensions of our molybdenum and tungsten base plates:

Molybdenum discs
Thickness: 0.1 mm ≥ 7.0 mm
Diameter: 2.5 mm ≥ 150.0 mm

Tungsten discs
Thickness: 0.4 mm ≥ 7.0 mm
Diameter: 2.5 mm ≥ 150.0 mm

Rectangular molybdenum
Thickness: 0.1 mm ≥ 5.0 mm
Long side: 1.0 mm ≥ 70.0 mm
Short side: 0.2 mm ≥ 10.0 mm

Rectangular tungsten plates
Thickness: 0.4 mm ≥ 5.0 mm
Long side: 1.0 mm ≥ 70.0 mm
Short side: 0.2 mm ≥ 10.0 mm