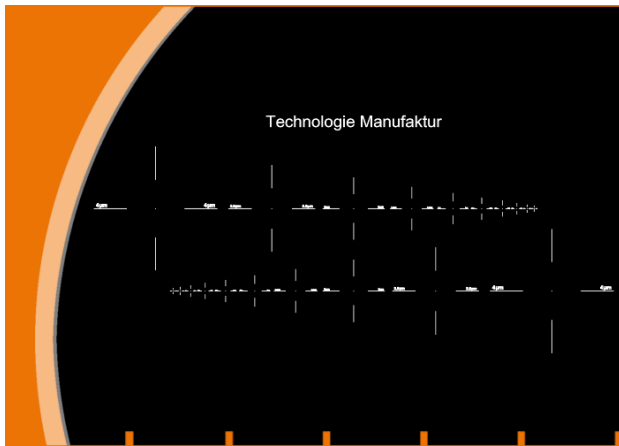


# Star Test TC-ST01

## Stepped rows of Pinholes from 0.18 $\mu\text{m}$ - 4 $\mu\text{m}$



Pinholes of 0.18  $\mu\text{m}$  to 4  $\mu\text{m}$  diameter are provided on this testchart. The identically stepped pinholes are arranged in two rows in the reverse order. The pinholes are provided with sufficient dark area to darken the entire field of view of the lens to be tested. These pinholes are suitable for star testing of microscopic lenses and for general optical development tasks.

Our high-resolution testcharts are made with high-precision e-beam lithography. A quartz substrate with broad spectral transmission (DUV-VIS-NIR), on which a chromium layer of high optical density is applied, serves as a support. The test structures are produced by ablation of the chromium layer, whereby structural sizes down to 100 nm are possible. At the same time, excellent dimensional tolerances and straightness of the structural edges is ensured.

<b>Substrate</b>	Quartz wafer (fused silica), 20 mm x 10 mm x 1 mm (layout see next page)
<b>Substrate holder</b>	Microscope slide format 75 mm x 25 mm x 1.5 mm, Stainless steel with laser engraving
<b>Patterned layer</b>	Chrome, optical density OD > 8@400 nm / 6@550 nm / 4.5@750 nm / 3.6@1 $\mu\text{m}$
<b>Pinhole graduation (diameter)</b>	4.0 $\mu\text{m}$ , 2.8 $\mu\text{m}$ , 2.0 $\mu\text{m}$ , 1.4 $\mu\text{m}$ , 1.0 $\mu\text{m}$ , 0.7 $\mu\text{m}$ , 0.5 $\mu\text{m}$ , 0.35 $\mu\text{m}$ , 0.25 $\mu\text{m}$ , 0.18 $\mu\text{m}$
<b>Dimensional tolerance (max. absolute error)</b>	100 nm/cm = $10^{-5}$
<b>Spectral transmission range</b>	200 nm – 2000 nm

## Star Test TC-STO1 Layout

