

# Ion Optical Grids for Applications in Time-Of-Flight Mass Spectrometry



- Parallel wire grid
- 18  $\mu\text{m}$  Tungsten wire construction
- 92% transmission (250  $\mu\text{m}$  pitch)
- Flat to within 30  $\mu\text{m}$ \*
- Extremely rugged and damage resistant
- Circular or rectangular up to 180 mm
- Ceramic or metal frames
- Customization capability available

ETP Electron Multipliers introduces its new range of parallel wire analytical grids. Developed to facilitate the high-speed performance of ETP's latest range of TOF detectors, the grids are also applicable to ion and electron optics.

The grids are ideal for application as field isolation and termination elements in both linear and reflectron instruments. They may be incorporated in sources, analyzers and anywhere a high-transmission, flat grid structure is required.

Constructed from high strength tungsten wires, ETP grids are extremely rugged in comparison to similar products fabricated from photo-etched mesh materials. This ruggedness makes them less prone to damage from handling, or during instrument manufacture. The uniformity of the wires and the accuracy to which they are spaced ensure that the

specified grid transmission is held to a high tolerance ( $\pm 0.1\%$ ). The wires of the standard grid are 18  $\mu\text{m}$  tungsten at a pitch of 250  $\mu\text{m}$ , giving a transmission of 92%.

Standard grids are available as single units. For quantity orders, a customization capability exists to fabricate grids to customer specifications. Please contact ETP to discuss your customization requirements.

#### Standard grid specifications:

- 100 mm circular metal/ceramic frame
- 18  $\mu\text{m}$  tungsten wire
- 250  $\mu\text{m}$  pitch (92% transmission)
- Parallel wire construction

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Typical Grid Configuration

\*ETP's manufacturing process produces structures with an overall flatness of 30  $\mu\text{m}$ . Our rugged tungsten wire construction eliminates the warping and bowing often seen with photo-etched mesh material. Stricter flatness requirements are available at higher cost; however, our experience has shown that 30  $\mu\text{m}$  is sufficient for even the most demanding applications.

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