

PHOTONIS Streak Tube Technology

PHOTONIS' streak tubes are the most advanced on the market owing to:

Bilamellar electron optics

This invention separates temporal and spatial electron crossover space charge saturation for combined optimal temporal and spatial resolution.

Transfer technology

The transfer technology is the ultimate production method to produce top-class multialkali photocathodes. It leaves no alkali dispensers inside the tube resulting in long-life cathodes.

Mastery of S1 manufacture

Our unique know-how of the S1-cathode process results in tubes with the same long life as traditional multi-alkali cathode tubes.

Tube Families

P500 family

These sealed tubes have the largest on-the-market input/output windows where a large number of temporal and spatial pixels are needed.

P900 compact tubes

These sealed tubes have an output format well-suited to image amplification and read-out by CCD image sensors. Some P900 tubes have an internal MCP for increased gain.

P820 fast bilamellars

These sealed tubes provide sub-picosecond temporal resolution whilst maintaining excellent spatial resolution and use bilamellar optics. Most tubes have an accelerating slit electrode for optimal spatial resolution but tubes with a mesh electrode or with grids are also offered for framing mode or synchroscan operation.

P840 fast bilamellars

Like the P820 family but with an internal MCP for higher gain.

P860 fast X-ray bilamellars

This X-ray family of open tubes provides a temporal resolution of <500 fs in the X-ray energy range of 100 eV to 3 keV. They are the standard of the fast [AXIS X-ray streak camera](#) now operating at several fast X-rays laser sites.

Customisation

Although PHOTONIS offers a broad catalogue of streak tubes it is often necessary to modify an existing design to optimise some parameters for a specific application. PHOTONIS regards such a modification as a standard procedure and has the full flexibility to optimise a design for almost any application in close co-operation with streak-camera manufacturers.

The photocathode options are:

- standard multialkali on sapphire window
- standard multiakali on glass window
- standard multialkali on fibre-optic window
- ERMA on glass window
- ERMA on fibre-optic window
- S1 on glass window.

The standard screen phosphors are P11, P22N or P43; faster phosphors such as P46 can be offered. Unfortunately, the P20 phosphor cannot be offered anymore as it contains Cd and is totally forbidden for healthcare reasons. The P22N is the 1:1 replacement.