

STREAK TUBE ST_Y



ST-Y STREAK TUBE

INTRODUCTION

The Photek Streak (Camera) ST-Y is an all metal-ceramic tube is based on a design and produced by Ching Lai of Lawrence Livermore National Laboratory (LLNL). Recently Photek has subsequently made detail changes to improve distortion and spatial resolution.

The tube is available with a slotted grid electrode enabling a large area with high throughput in streak cameras, and a improve the spatial resolution and to reduce the overall image distortion.

An alternative version with a mesh in place of the slot. This latter version makes the tube eminently suitable for use in a framing camera using a 200 Volt cathode pulser and step voltage generator for the deflection electrodes

Operating modes and performance are described in our Technical Note 000823 12. However, distortion is less than 2.5% in framing mode and time resolution to 2 ps is possible

FEATURES

- ◊ Electrostatic Focus
- ◊ Framing Capability with High Resolution
- ◊ Time resolution to 5 ps
- ◊ 35 mm useful cathode area

APPLICATIONS

- ◊ New Streak Cameras
- ◊ LIDAR
- ◊ High Repetition Rate Framing Cameras
- ◊ High Speed Photography
- ◊ Replacement for ITT F4157

If you count photons.....count on

Photek

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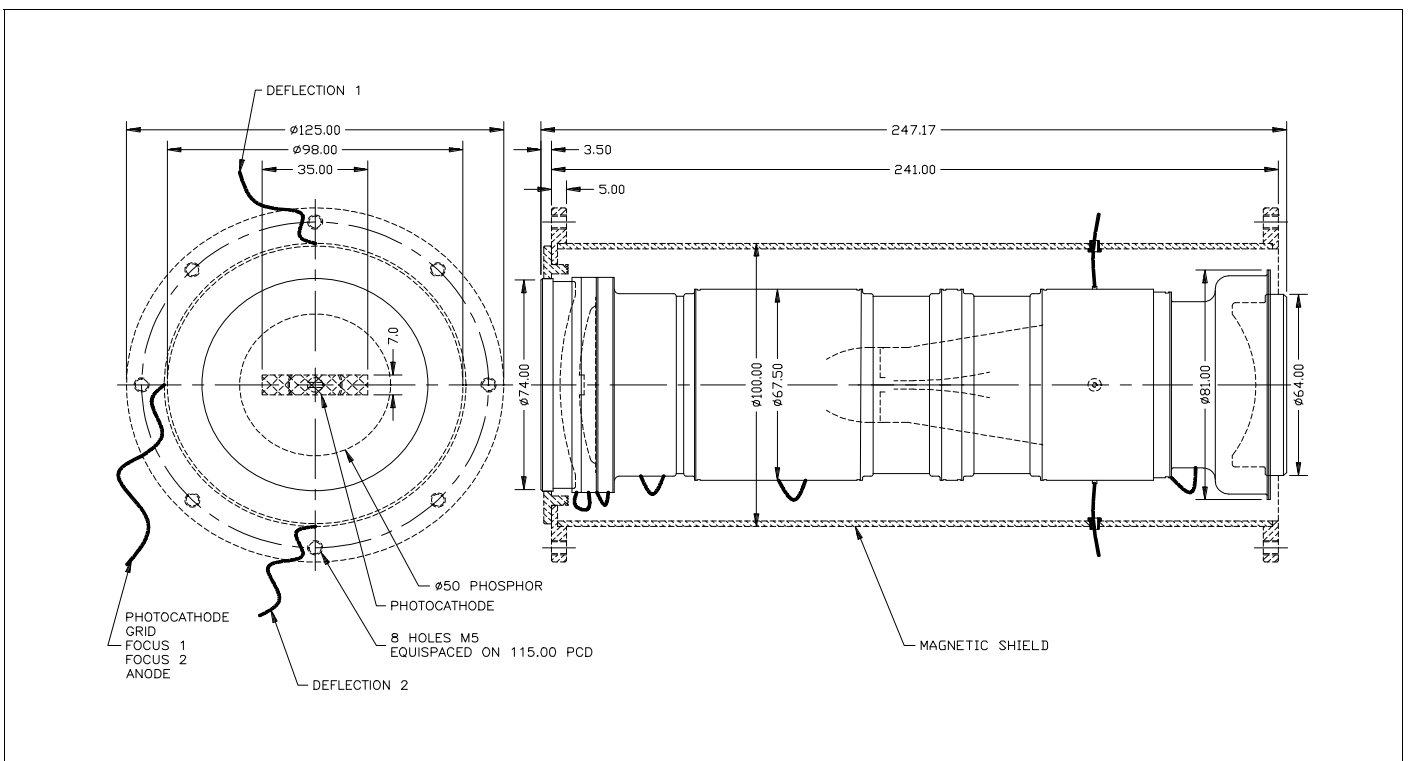
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TYPICAL CHARACTERISTICS

| | |
|--------------------------|--|
| Grid Extraction Mesh | 35 x 5 mm slot 16 mm diameter mesh |
| Phosphor screen diameter | 50 mm on fibre optic |
| Material | P11, P43, P46, P47 and others from the Photek range |
| Blemish quality | None bigger than 0.15 mm |
| Uniformity | 10% standard deviation/mean |
| Deflection sensitivity | 400 V/cm @ 15 kV is standard |
| Radiant gain | 50 watts/watt with P43 phosphor |
| Limiting resolution | 40 lp/mm |
| Phosphor | Photocathode: S20 or S25 on Fibre Optic. Other materials such as fused silica, MgF ₂ are possible, but with a loss in resolution due to the plano-concave design of the cathode optic. |



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