

STREAK TUBE ST_X



ST-X COMPACT STREAK TUBE

INTRODUCTION

The Photek Streak (Camera) tube ST-X is an all metal-ceramic construction based on an earlier design by Ching Lai of Lawrence Livermore National Laboratory (LLNL). Photek has subsequently made detailed 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.

An alternative version with a mesh in place of the slot makes the tube eminently suitable for use in a framing camera with 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 in streak mode.

FEATURES

- ◊ Electrostatic Focus
- ◊ Framing Capability with High Resolution
- ◊ Time resolution to 2 ps
- ◊ 18 mm useful cathode area

APPLICATIONS

- ◊ Replacement for Photonis P930
- ◊ New Streak Cameras
- ◊ LIDAR
- ◊ High Repetition Rate Framing Cameras
- ◊ High Speed Photography

If you count photons.....count on

Photek

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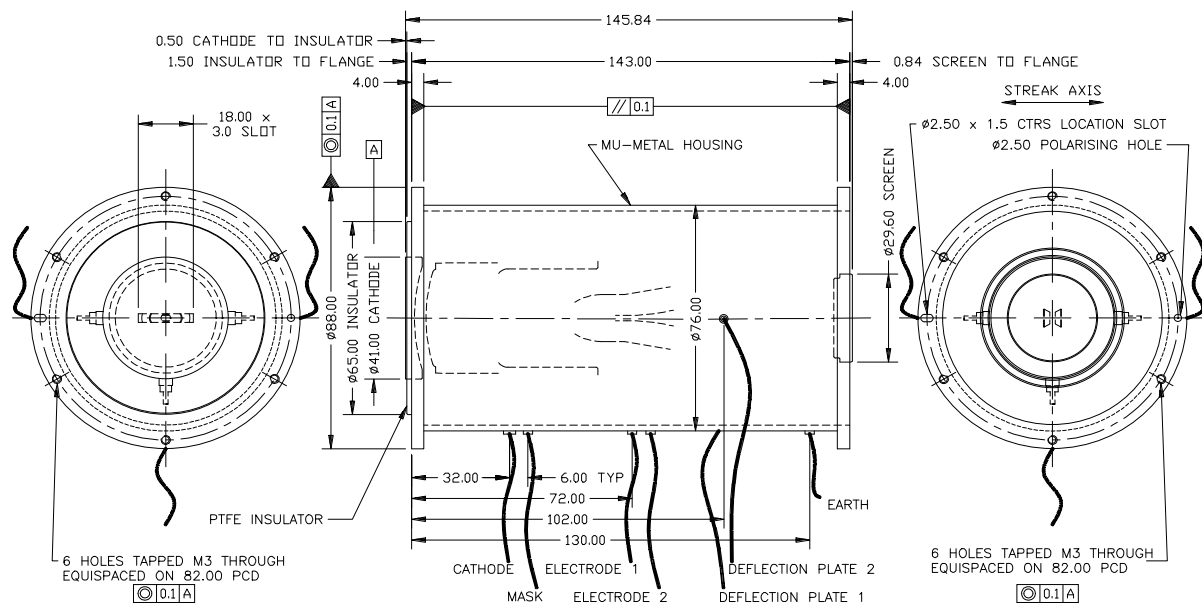
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TYPICAL CHARACTERISTICS

Grid Extraction Mesh	18 x 3 mm slot 10 mm diameter mesh
Phosphor screen diameter	25 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	550 V/cm @ 15 kV is standard
Radiant gain	50 watts/watt with P43 Phosphor
Limiting resolution	40 lp/mm
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 planocon-



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