

PLANAR TRIODE

For quantitative investigations of controllable high-vacuum tubes. Recording triode characteristics, determining the negative polarity of electron charges and generating cathode rays (model of an 'electron gun') is also possible. Also intended for investigating technical applications of triodes as amplifiers and oscillators (with Helmholtz coils **P67-0150**).

Cathode filament voltage: $U_f = 7.5 \text{ V}$ / $I_f = 3 \text{ A}$

Anode voltage: $U_a = 300 \text{ V}$

Anode current: typically $I = 1.4 \text{ mA}$ at $U_f = 7.5 \text{ V}$, $U_a = 300 \text{ V}$

Grid voltage: $-300 \text{ V} = U_g = 300 \text{ V}$

Grid current: typically $I_g = 0.9 \text{ mA}$ at $U_f = 7.5 \text{ V}$, $U_a = 300 \text{ V}$

P67-0400 Planar Triode

Required accessories:

P67-0100 Tube Holder

P67-1000 Lead Set

P58-6000 Power Supply, 360V, multi output

LUMINESCENCE TUBE

For investigating luminescence during and after electron bombardment of a phosphorous anode, as well as excitation of fluorescence and phosphorescence. Luminescence can also be observed following irradiation of the phosphorous anode with ultraviolet light.

Cathode filament voltage: $U_f = 7.5 \text{ V}$, $I_f = 1.8 \text{ A}$

Anode voltage: $U_a = 5 \text{ kV}$

Anode current: typically $I_a = 150 \mu\text{A}$ at $U_a = 4.0 \text{ kV}$

P67-0450 Luminescence Tube

Required accessories:

P67-0100 Tube Holder

P67-1000 Lead Set

P58-6500 High-Voltage Power Supply, 5kV

MALTESE CROSS TUBE

For demonstrating the linear propagation of electron beams in field-free spaces by projecting the shadow of a Maltese cross on a fluorescent screen. Also intended for observing the focussing of electron beams by magnetic fields as an introduction to electron optics. Comparison between the Maltese-cross shadows of electron beams and electromagnetic radiation (light) in a magnetic field.

The lower segment of the Maltese-cross has a hole which makes it possible to ascertain the orientation of the cross' shadow under the influence of magnetic fields.

Cathode filament voltage: $U_f = 7.5 \text{ V}$, $I_f = 1.8 \text{ A}$

Anode voltage: $U_a = 5 \text{ kV}$

Anode current: typically $I_a = 150 \mu\text{A}$ at $U_a = 4.0 \text{ kV}$

P67-0500 Maltese Cross Tube

Required accessories:

P67-0100 Tube Holder

P67-1000 Lead Set

P58-6500 High-Voltage Power Supply, 5kV

Recommended accessories:

P67-0150 Helmholtz coils

P58-4400 Power Supply, 0-35V, 5A



P67-0450



P67-0500