

Model 2107 Photomultiplier Tube Base

Features

- Excellent time resolution
- Fast rise time
- Well suited for single photon counting
- 50 Ω negative anode output
- High impedance, capacitively coupled dynode output
- For grounded anode PM tubes (negative high voltage)
- Compatible with 21-pin PM tubes; RCA 8850, RCA 8575, Amperex XP2230

Description

The Model 2107 is a capacitively decoupled voltage divider intended to properly bias RCA 8575 photomultiplier tubes, or equivalent. A modified 2107, available by special order, will provide the proper dynode voltages for the RCA 8850 PM tube. Internal focus and dynode controls provide for optimization of detector resolution. An internal gain control allows matching of multiple tubes.

Excellent timing performance can be obtained by using the Model 2107 with RCA 8575 or 8850 photomultiplier tubes and either NaI or fast plastic scintillators. The Model 2107 and appropriate photomultiplier tubes are also well suited for single photon counting applications.

The Model 2107 provides two outputs. The anode signal is a fast, dc coupled 50 Ω output optimized for timing measurements. The dynode signal is a high impedance, capacitively coupled output useful for energy measurements.



Performance

Scintillators	P.M. Tube	Typical Results* Time Resolution (FWHM)
NE111/NE111	RCA 8850	200 ps
NE111/NE111	RCA 8575 or Amperex XP 2230	250 ps
NE111/NaI	RCA 8575 or Amperex XP 2230	700 ps

* Results may vary depending on energy range, photomultipliers, operating conditions, scintillator geometry and electronics used.

Specifications

INPUTS

- HIGH VOLTAGE – Accepts 0 to –3000 V; divider network draws 2 mA at –3000 V; negative bias voltage only.

OUTPUTS

- ANODE – Fast negative timing signal; $Z_{out} = 50 \Omega$.
- DYNODE – Linear, positive output from ninth dynode; capacitively coupled; $Z_{out} \approx 1 M\Omega$.

CONTROLS

- Internal potentiometers are available to adjust the focus electrode, the second dynode, and the twelfth dynode.

CONNECTORS

- ANODE and DYNODE – BNC.
- HIGH VOLTAGE – SHV.

PHYSICAL

- DIMENSIONS – 17.0 cm (6.7 in.) long, including connectors.
- WEIGHT – 0.34 kg (0.75 lb).



Phone contact information

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