



ELECTRONIC TUBE REFERENCE

1P42

Specialized - Photo Tube electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PHOTOEMISSIVEDETECTOR

RCA 1P42 miniature high-vacuum head-on S-9 photoemissive detector with semitransparent circular photocathode, peak response near 480 nm, and opposed end terminals.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	2
NOMINAL HEATER	— / —	PARALLEL HEATER	— / —
HEATING	Indirect; cold cathode	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 PhotoemissiveDetector	
MAXIMUM PLATE VOLTAGE	180 V
MAXIMUM CATHODE CURRENT	0.0004 mA
RCA 1P42 miniature high-vacuum S-9 head-on photoemissive detector. Maximum anode supply 180 V DC/peak AC, average cathode current max 0.4 μA, average cathode-current density max 25 μA/in², peak cathode current max 1.5 μA (1950), ambient max 75 °C. Dark current max 0.005 μA at 25 °C. Peak spectral response 480±50 nm; 1960 median radiant sensitivity 0.025 A/W at 480 nm and luminous sensitivity 37 μA/lm; 1950 average 0.020 A/W and 30 μA/lm. Interelectrode capacitance 1.9 pF, semitransparent circular photocathode, optical window area 0.030 in² and diameter >=0.19 in. No heater; small-end anode and large-end photocathode.	

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes,
and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker