



TYPE

CK1020
CK1021*Excellence in Electronics*

These tubes are glass, thin-wall, organic self-quenching counter tubes for detecting beta and gamma radiation. They are designed for use in battery operated survey instruments and prospector's units for locating radioactive material.

The CK1020 or CK1021 can be used as replacements in present survey instrument probes by using a connector inside the probe, such as Amphenol #91-MPF3S.

There are available, microphone connectors, such as Amphenol #91-MC3F, which could provide the basic unit for a simple probe using type CK1021. A splash-proof fitting, having a rubber washer which clamps around the cable, is also available from Amphenol as #91-714.

As the connector terminal numbers do not agree with the RMA base numbering system, the wiring to the connector should be carefully checked before inserting the tube.

MECHANICAL DATA

BULB: CK1020=T-5 1/2 Glass, CK1021=T-5 Glass

BASE: 3 Pin (See Base Diagram)

THIN WALL: 35 mg. per sq. cm. (Note 1)

TERMINAL CONNECTIONS:

Pin 1 Cathode
Pin 2 Plate
Pin 3 No Connection

MOUNTING POSITION: Any

ELECTRICAL DATA

MAXIMUM RATINGS:

Testing Voltage (dc) (Note 2)	1000 volts
Counting Rate	12000 CPM
Temperature Range	-40 to +55 °C
Geiger Threshold (dc)	850 volts

CHARACTERISTICS AND TYPICAL OPERATION:

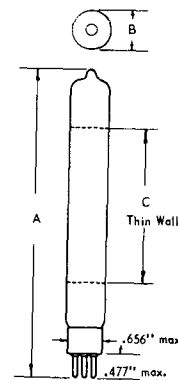
Plateau Length (dc)	150 volts
Relative Plateau Slope (Per 100 volts)	3 %
Operating Voltage (dc)	900 volts
Background (approx.) (Note 3)	60 CPM
Efficiency (min)	90 %
Life	10 ⁸ counts
Capacity (avg.)	1.6 μfd

NOTE 1: Use caution when handling thin wall of bulb.

NOTE 2: The plateau length for new tubes is longer than indicated, however, *do not test* for maximum length as tubes are readily damaged by very short discharges at the end of plateau. The maximum rating test voltage should not be exceeded during voltage for the tubes with 900 volts recommended operating voltage.

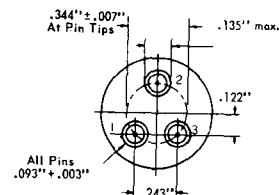
NOTE 3: The tube is covered with an opaque coating to exclude light.

NOTE 4: Capacity includes pins.



TUBE DIMENSIONS

Tube	A max.	B max.	C min.
CK1020	6"	3/4"	3"
CK1021	5 1/4"	21/32"	2 1/2"



BASE DIMENSIONS

Tentative Data

INDUSTRIAL TUBE DIVISION

RAYTHEON COMPANY