

Subminiature cold-cathode trigger tube for counting and switching circuits. Heaterless gas discharge provides compact digital control.

GENERAL CHARACTERISTICS

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

SECTION RATINGS

SECTION 1 Thyratron	
MAXIMUM PLATE VOLTAGE	310 V
MAXIMUM CATHODE CURRENT	4 mA
MINIMUM REGULATOR CURRENT	2 mA
MAXIMUM REGULATOR CURRENT	4 mA
STARTING VOLTAGE	153 V
MAINTAINING VOLTAGE	116 V
Published Mullard cold-cathode ratings and operating characteristics promoted where applicable; additional trigger/display values retained as parameters.	

The Z700U is a subminiature cold-cathode trigger tube with a primer cathode, intended for decade counting and switching circuits. It uses positive triggering and requires a small continuous priming discharge for stable light/dark characteristics.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1963 Mullard

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1963 MULLARD

Section 1 · Thyatron

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Trigger ignition voltage range	137 to 153 V	PositiveTrigger
Anode-cathode maintaining voltage range at 3 mA	111 to 121 V	—
Trigger-cathode maintaining voltage typical	115 V	—
Trigger ignition voltage drift typical maximum	3 V	—
Long-ignition trigger ignition voltage shift maximum	175 V	—
Maximum counting speed	5 kHz	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Recommended anode working voltage range	200 to 310 V	—
Recommended average cathode current range	2.0 to 4.0 mA	—
Priming cathode resistor recommended	18 Mohm	—
Minimum anode-to-priming-cathode supply voltage	200 V	—
Priming discharge current typical	3 uA	—
Transfer current maximum at 250 V	30 uA	—
Anode voltage maximum	310 V	—

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode current peak maximum	16 mA	Pulse
Cathode current average maximum over 1 s	4 mA	—
Negative trigger current maximum while ignited	100 uA	—
Short trigger pulse width	20 us	Pulse
Short-pulse trigger voltage minimum	153 V	Pulse
Short-pulse trigger voltage typical with 100 pF coupling	175 V	Pulse

APPLICATION		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Application	Decade counting / switching	—

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