

ELECTRONIC TUBE REFERENCE

R51BV

Specialized - Photo Tube electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION

CONSTRUCTION

PHOTOEMISSIVEDETECTOR

Vacuum blue-sensitive phototube optimized for portable 16 mm optical sound-on-film reproduction.

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

SECTION1 PhotoemissiveDetector	
MAXIMUM PLATE VOLTAGE	500 V
Photoelectric section. Published anode-cathode capacitance approximately 2.0 pF.	

The rectangular anode of this tube offers no interference to the smallest of light sources, thus permitting a shadow-free cathode area. This particular Visitron is commonly used in portable 16 MM scund-on-film production "A" type sensitive to infra-red and "B" type sensitive to blue. The R51 blue sensitive Visitron phototubes have increased sensi- tivity to light scources predominating in blue radiation and a negligible sensitivity This variant uses the blue-sensitive cathode surface described by the family datasheet. The V variant is the higher-voltage vacuum version listed in the maximum-ratings table.

SOURCE OPERATING CONDITIONS

195X Visitron Rauland

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

195X VISITRON RAULAND

Section 1 · PhotoemissiveDetector

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Peak Anode Voltage	500 V	Variant-specific maximum rating
Anode-Cathode Capacitance	2 pF	Variant-specific general characteristic
The R5	1	The R51 Series is supplied with two types of cathode surfaces,
The R5	1 V	The R51 blue sensitive Visitron phototubes have increased sensi-
track in conjunction with an incandescent light source. The R5	1 V	track in conjunction with an incandescent light source. The R51B blue sensitive
Cathode Size [1]	843	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Cathode Size [2]	500	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Cathode Size [3]	843	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Cathode Size [4]	500	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Cathode Size [5]	843	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Cathode Size [6]	500	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Cathode Size [7]	843	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Cathode Size [8]	500	Cathode Size. 843" x .500" .843" x .500" .843" x .500"
Capacitance (Anode-Cathode) [1]	2.5 pF	Capacitance (Anode-Cathode) ... 2.5 MMF. 2.0 MMF. 2.5 MMF. 2.0 MMF.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance (Anode-Cathode) [2]	2 pF	Capacitance (Anode-Cathode) ... 2.5 MMF. 2.0 MMF. 2.5 MMF. 2.0 MMF.
Capacitance (Anode-Cathode) [3]	2.5 pF	Capacitance (Anode-Cathode) ... 2.5 MMF. 2.0 MMF. 2.5 MMF. 2.0 MMF.
Capacitance (Anode-Cathode) [4]	2 pF	Capacitance (Anode-Cathode) ... 2.5 MMF. 2.0 MMF. 2.5 MMF. 2.0 MMF.
Leakage Resistance (Min) . = [1]	1000 Mohm	Leakage Resistance (Min) . = 1000 Meg. 1000 Meg. 1000 Meg. 1000 Meg.
Leakage Resistance (Min) . = [2]	1000 Mohm	Leakage Resistance (Min) . = 1000 Meg. 1000 Meg. 1000 Meg. 1000 Meg.
Leakage Resistance (Min) . = [3]	1000 Mohm	Leakage Resistance (Min) . = 1000 Meg. 1000 Meg. 1000 Meg. 1000 Meg.
Leakage Resistance (Min) . = [4]	1000 Mohm	Leakage Resistance (Min) . = 1000 Meg. 1000 Meg. 1000 Meg. 1000 Meg.
Anode Voltage, Peak [1]	90 V	Anode Voltage, Peak. 90V 500V oV S0V
Anode Voltage, Peak [2]	500 V	Anode Voltage, Peak. 90V 500V oV S0V
Luminous Sensitivity ([1]	25 V	Luminous Sensitivity (25v) = . 35 uA/L DC 35 uA/L DC 40 uA/L DC 37 uA/L DC
Luminous Sensitivity ([2]	35 V	Luminous Sensitivity (25v) = . 35 uA/L DC 35 uA/L DC 40 uA/L DC 37 uA/L DC
Luminous Sensitivity ([3]	35 V	Luminous Sensitivity (25v) = . 35 uA/L DC 35 uA/L DC 40 uA/L DC 37 uA/L DC
Luminous Sensitivity ([4]	40 V	Luminous Sensitivity (25v) = . 35 uA/L DC 35 uA/L DC 40 uA/L DC 37 uA/L DC
Luminous Sensitivity ([5]	37 V	Luminous Sensitivity (25v) = . 35 uA/L DC 35 uA/L DC 40 uA/L DC 37 uA/L DC
Gas Amplification [1]	12	Gas Amplification. 12 - - - 10 - -
Gas Amplification [2]	10	Gas Amplification. 12 - - - 10 - -
Temperature, ambient [1]	160 C	Temperature, ambient. 160°C 100°C 100°C 100°C
Temperature, ambient [2]	100 C	Temperature, ambient. 160°C 100°C 100°C 100°C
Temperature, ambient [3]	100 C	Temperature, ambient. 160°C 100°C 100°C 100°C
Temperature, ambient [4]	100 C	Temperature, ambient. 160°C 100°C 100°C 100°C