ELECTRONIC TUBE REFERENCE

R51A

Specialized - Photo Tube electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PHOTOEMISSIVEDETECTOR

Gas-amplified S1 red/infrared 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	90 V

Photoelectric section. Published anode-cathode capacitance approximately 2.5 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 scurces predominating in blue radiation and a negligible sensitivity This variant uses the S1 cathode surface described by the family datasheet. The non-V variant has published gas amplification in the family 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	**90 V**	Variant-specific maximum rating
Anode-Cathode Capacitance	**2.5 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" .843" x .500"
Cathode Size [2]	**500**	Cathode Size. .. .. .843" x .500" .843" x .500” .843" x .500" .843" x .500"
Cathode Size [3]	**843**	Cathode Size. .. .. .843" x .500" .843" x .500” .843" x .500" .843" x .500"
Cathode Size [4]	**500**	Cathode Size. .. .. .843" x .500" .843" x .500” .843" x .500" .843" x .500"
Cathode Size [5]	**843**	Cathode Size. .. .. .843" x .500" .843" x .500” .843" x .500" .843" x .500"
Cathode Size [6]	**500**	Cathode Size. .. .. .843" x .500" .843" x .500” .843" x .500" .843" x .500"
Cathode Size [7]	**843**	Cathode Size. .. .. .843" x .500" .843" x .500” .843" x .500" .843" x .500"
Cathode Size [8]	**500**	Cathode Size. .. .. .843" x .500" .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