ELECTRONIC TUBE REFERENCE

R59AV

Specialized - Photo Tube electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PHOTOEMISSIVEDETECTOR

Vacuum S1 red/infrared phototube for 35 mm theater optical sound reproduction and industrial sensing.

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 R59 series tubes are widely used in theater sound projection equipment. This medium sized tube has long been prominent in 35 MM semi- portable systems. Its rugged dependability makes it exceptionally adartable to "A" type sensitive to infra-red and “B” type sensitive to blue. The blue sensitive Visitron tubes have a high response to blue radiation and insignificant response to red radiation. This tube will prove advan- This variant uses the S1 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
equipment. This medium sized tube has long been prominent in	**35**	equipment. This medium sized tube has long been prominent in 35 MM semi-
Cathode Size.....ovvvvineninneenn [1]	**1.37 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"
Cathode Size.....ovvvvineninneenn [2]	**62 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"
Cathode Size.....ovvvvineninneenn [3]	**1.37 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"
Cathode Size.....ovvvvineninneenn [4]	**62 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"
Cathode Size.....ovvvvineninneenn [5]	**1.37 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"
Cathode Size.....ovvvvineninneenn [6]	**62 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"
Cathode Size.....ovvvvineninneenn [7]	**1.37 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"
Cathode Size.....ovvvvineninneenn [8]	**62 V**	Cathode Size.....ovvvvineninneenn 1.37" x .62" 1.37" x .62" 1.37"" x .62" 1.37" x .62"

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Capacitance (Anode-Cathode) [1]	**2.5 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 MMF.
Capacitance (Anode-Cathode) [2]	**2 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 MMF.
Capacitance (Anode-Cathode) [3]	**8 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 MMF.
Capacitance (Anode-Cathode) [4]	**7 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 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.
Cathode Size.....covviii [1]	**1.37 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Cathode Size.....covviii [2]	**62 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Cathode Size.....covviii [3]	**1.37 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Cathode Size.....covviii [4]	**62 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Cathode Size.....covviii [5]	**1.37 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Cathode Size.....covviii [6]	**62 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Cathode Size.....covviii [7]	**1.37 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Cathode Size.....covviii [8]	**62 V**	Cathode Size.....covviii. ... 1.37" x 62" 1.37" x 62" 1.37" x .62" 1.37" x .62"
Capacitance (Anode-Cathode) [1]	**2.5 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF, < .7 MMF.
Capacitance (Anode-Cathode) [2]	**2 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF, < .7 MMF.
Capacitance (Anode-Cathode) [3]	**8 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF, < .7 MMF.
Capacitance (Anode-Cathode) [4]	**7 pF**	Capacitance (Anode-Cathode)..... 2.5 MMF. 2.0 MMF. < .8 MMF, < .7 MMF.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Leakage Resistance (Min) [1]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Megq.
Leakage Resistance (Min) [2]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Megq.
Leakage Resistance (Min) [3]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Megq.
Leakage Resistance (Min) [4]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Megq.
Anode Voltage, Peak [1]	**9 V**	Anode Voltage, Peak..... 9oV 500V 90V 500V
Anode Voltage, Peak [2]	**500 V**	Anode Voltage, Peak..... 9oV 500V 90V 500V
Anode Voltage, Peak [3]	**90 V**	Anode Voltage, Peak..... 9oV 500V 90V 500V
Anode Voltage, Peak [4]	**500 V**	Anode Voltage, Peak..... 9oV 500V 90V 500V
Luminous Sensitivity ([1]	**25 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 35 uAL/DC 40 uA/L DC 35 uAL/DC
Luminous Sensitivity ([2]	**40 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 35 uAL/DC 40 uA/L DC 35 uAL/DC
Luminous Sensitivity ([3]	**35 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 35 uAL/DC 40 uA/L DC 35 uAL/DC
Luminous Sensitivity ([4]	**40 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 35 uAL/DC 40 uA/L DC 35 uAL/DC
Luminous Sensitivity ([5]	**35 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 35 uAL/DC 40 uA/L DC 35 uAL/DC
Gas Amplification [1]	**8**	Gas Amplification ..... 8 - 8
Gas Amplification [2]	**8**	Gas Amplification ..... 8 - 8
Temperature, ambient [1]	**100 C**	Temperature, ambient ..... 100°C 100°C 100°C 100°C
Temperature, ambient [2]	**100 C**	Temperature, ambient ..... 100°C 100°C 100°C 100°C
Temperature, ambient [3]	**100 C**	Temperature, ambient ..... 100°C 100°C 100°C 100°C
Temperature, ambient [4]	**100 C**	Temperature, ambient ..... 100°C 100°C 100°C 100°C
Anode Voltage, Peak [1]	**0 V**	Anode Voltage, Peak..... 0V 500V 9oV 500V

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Anode Voltage, Peak [2]	**500 V**	Anode Voltage, Peak..... 0V 500V 9oV 500V
Anode Voltage, Peak [3]	**9 V**	Anode Voltage, Peak..... 0V 500V 9oV 500V
Anode Voltage, Peak [4]	**500 V**	Anode Voltage, Peak..... 0V 500V 9oV 500V
Luminous Sensitivity [1]	**250 V**	Luminous Sensitivity ..... 250 uA/L DC 45 uA/L DC 250 uA/L DC 45 uA/L DC
Luminous Sensitivity [2]	**45 V**	Luminous Sensitivity ..... 250 uA/L DC 45 uA/L DC 250 uA/L DC 45 uA/L DC
Luminous Sensitivity [3]	**250 V**	Luminous Sensitivity ..... 250 uA/L DC 45 uA/L DC 250 uA/L DC 45 uA/L DC
Luminous Sensitivity [4]	**45 V**	Luminous Sensitivity ..... 250 uA/L DC 45 uA/L DC 250 uA/L DC 45 uA/L DC
Luminous Sensitivity ([1]	**25 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 40 uA/L DC 40 uA/L DC 40 uwA/L DC
Luminous Sensitivity ([2]	**40 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 40 uA/L DC 40 uA/L DC 40 uwA/L DC
Luminous Sensitivity ([3]	**40 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 40 uA/L DC 40 uA/L DC 40 uwA/L DC
Luminous Sensitivity ([4]	**40 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 40 uA/L DC 40 uA/L DC 40 uwA/L DC
Luminous Sensitivity ([5]	**40 V**	Luminous Sensitivity (25v)..... 40 uA/L DC 40 uA/L DC 40 uA/L DC 40 uwA/L DC
Gas Amplification [1]	**8**	Gas Amplification ..... 8 - - 8
Gas Amplification [2]	**8**	Gas Amplification ..... 8 - - 8