ELECTRONIC TUBE REFERENCE

R59A

Specialized - Photo Tube electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PHOTOEMISSIVEDETECTOR

Gas-amplified S1 red/infrared phototube widely used in 35 mm theater sound-projection equipment.

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 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 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
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

Tube Tinker

An independent reference for electronic tubes, vacuum tubes, and their source documents.

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