ELECTRONIC TUBE REFERENCE

R71B

Specialized - Photo Tube electronic tube

CONSOLIDATED TECHNICAL DATA
1 SECTION
CONSTRUCTION
PHOTOEMISSIVEDETECTOR

Visitron gas-filled blue-sensitive phototube for sound-on-film and industrial electronic control equipment. Gas amplification enhances photocurrent for dependable optical sensing in weighing, conveyor, illumination, smoke, and turbidity systems.

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.

One of the most commonly used Visitron phototubes of today, the R71 series is universally accepted as THE phototube to use where depend- ability and long trouble-free operation is desired. Recommended as ideal for sound-on-film applications. When used for this purpose this tube is exceptionally The R71 tube is also used extensively in electronic control equipment for weighing, conveyor, illumination controls, smcke and turbidity This variant uses the blue-sensitive 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 R7	**1**	The R71 series is supplied with two types of cathode surfaces,
response to red radiation of the R7	**1 V**	response to red radiation of the R71 blue sensitive tube makes it valuable in
TYPE R7IT Series R7	**1**	TYPE R7IT Series R71T tubes with anode cap are supplied with non-hygro-
Cathode Surface.....covenn [1]	**1.25 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0
Cathode Surface.....covenn [2]	**1 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0
Cathode Surface.....covenn [3]	**1.25 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0
Cathode Surface.....covenn [4]	**1 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0
Cathode Surface.....covenn [5]	**1.25 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0
Cathode Surface.....covenn [6]	**1 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0
Cathode Surface.....covenn [7]	**1.25 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Cathode Surface.....covenn [8]	**1 V**	Cathode Surface.....covenn. 1.25" x 1.0” 1.25” x 1.0” 1.25” x 1.0” 1.25" x 1.0
Capacitance (Anode-Cathcde) [1]	**2.5 pF**	Capacitance (Anode-Cathcde)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 MMF.
Capacitance (Anode-Cathcde) [2]	**2 pF**	Capacitance (Anode-Cathcde)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 MMF.
Capacitance (Anode-Cathcde) [3]	**8 pF**	Capacitance (Anode-Cathcde)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 MMF.
Capacitance (Anode-Cathcde) [4]	**7 pF**	Capacitance (Anode-Cathcde)..... 2.5 MMF. 2.0 MMF. < .8 MMF. < .7 MMF.
Leakage Resistance (Min) [1]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Meg.
Leakage Resistance (Min) [2]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Meg.
Leakage Resistance (Min) [3]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Meg.
Leakage Resistance (Min) [4]	**1000 Mohm**	Leakage Resistance (Min)..... 1000 Megq. 1000 Meg. 1000 Meg. 1000 Meg.
Cathode Surface [1]	**1.25**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
Cathode Surface [2]	**1**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
Cathode Surface [3]	**1.25**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
Cathode Surface [4]	**1**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
Cathode Surface [5]	**1.25**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
Cathode Surface [6]	**1**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
Cathode Surface [7]	**1.25**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
Cathode Surface [8]	**1**	Cathode Surface..... 1.25" x 1.0 1.25" x 1.0” 1.25" x 1.0" 1.25" x 1.0”
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.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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.
Anode Voltage, Peak..... sov [1]	**500 V**	Anode Voltage, Peak..... sov 500V 90V 500V
Anode Voltage, Peak..... sov [2]	**90 V**	Anode Voltage, Peak..... sov 500V 90V 500V
Anode Voltage, Peak..... sov [3]	**500 V**	Anode Voltage, Peak..... sov 500V 90V 500V
Luminous Sensitivity [1]	**250 V**	Luminous Sensitivity..... 250 uA/L DC 40 uwA/L DC 250 uA/L DC 40 uA/L DC
Luminous Sensitivity [2]	**40 V**	Luminous Sensitivity..... 250 uA/L DC 40 uwA/L DC 250 uA/L DC 40 uA/L DC
Luminous Sensitivity [3]	**250 V**	Luminous Sensitivity..... 250 uA/L DC 40 uwA/L DC 250 uA/L DC 40 uA/L DC
Luminous Sensitivity [4]	**40 V**	Luminous Sensitivity..... 250 uA/L DC 40 uwA/L DC 250 uA/L DC 40 uA/L DC
Luminous Sensitivity ([1]	**25 V**	Luminous Sensitivity (25v)..... 45 uA/L DC 37 uA/L DC 45 uA/L DC 37 uA/L DC
Luminous Sensitivity ([2]	**45 V**	Luminous Sensitivity (25v)..... 45 uA/L DC 37 uA/L DC 45 uA/L DC 37 uA/L DC
Luminous Sensitivity ([3]	**37 V**	Luminous Sensitivity (25v)..... 45 uA/L DC 37 uA/L DC 45 uA/L DC 37 uA/L DC
Luminous Sensitivity ([4]	**45 V**	Luminous Sensitivity (25v)..... 45 uA/L DC 37 uA/L DC 45 uA/L DC 37 uA/L DC
Luminous Sensitivity ([5]	**37 V**	Luminous Sensitivity (25v)..... 45 uA/L DC 37 uA/L DC 45 uA/L DC 37 uA/L DC
Temperature, ambient [1]	**100 C**	Temperature, ambient..... 100°C 100°C 100°C 100°C

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
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..... Qv [1]	**500 V**	Anode Voltage, Peak..... Qv 500V 0V 500V
Anode Voltage, Peak..... Qv [2]	**0 V**	Anode Voltage, Peak..... Qv 500V 0V 500V
Anode Voltage, Peak..... Qv [3]	**500 V**	Anode Voltage, Peak..... Qv 500V 0V 500V
Luminous Sensitivity [1]	**300 V**	Luminous Sensitivity..... 300 uA/L DC 55 uA/L DC 300 uA/L DC 55 uA/L DC
Luminous Sensitivity [2]	**55 V**	Luminous Sensitivity..... 300 uA/L DC 55 uA/L DC 300 uA/L DC 55 uA/L DC
Luminous Sensitivity [3]	**300 V**	Luminous Sensitivity..... 300 uA/L DC 55 uA/L DC 300 uA/L DC 55 uA/L DC
Luminous Sensitivity [4]	**55 V**	Luminous Sensitivity..... 300 uA/L DC 55 uA/L DC 300 uA/L DC 55 uA/L DC
Luminous Sensitivity ([1]	**25 V**	Luminous Sensitivity (25v)..... 50 uA/L DC 50 uA/L DC 50 uA/L DC 50 uA/L DC
Luminous Sensitivity ([2]	**50 V**	Luminous Sensitivity (25v)..... 50 uA/L DC 50 uA/L DC 50 uA/L DC 50 uA/L DC
Luminous Sensitivity ([3]	**50 V**	Luminous Sensitivity (25v)..... 50 uA/L DC 50 uA/L DC 50 uA/L DC 50 uA/L DC
Luminous Sensitivity ([4]	**50 V**	Luminous Sensitivity (25v)..... 50 uA/L DC 50 uA/L DC 50 uA/L DC 50 uA/L DC
Luminous Sensitivity ([5]	**50 V**	Luminous Sensitivity (25v)..... 50 uA/L DC 50 uA/L DC 50 uA/L DC 50 uA/L DC