

Compact electrostatically self-focusing infrared image converter for night-vision systems, converting near-infrared scenes into visible images.

GENERAL CHARACTERISTICS

BASE DESIGNATION	—	BASE PINS	—
NOMINAL HEATER	— / —	PARALLEL HEATER	— / —
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

SECTION RATINGS

SECTION1 ImageConverterIntensifier

No fixed ratings recorded.

Electrical ratings/characteristics audited; additional published numeric data retained in parameter table.

The 6914 (D16) is a compact electrostatically self-focusing infrared image-converter tube for night-vision systems. It converts near-infrared radiation at an S1 photocathode into a visible image on a fluorescent screen.

SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1972 Thomson CSF

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

1972 THOMSON CSF

Section 1 · ImageConverterIntensifier

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
φS5	1	φS5 1 PHOTOCATHODE
The [1]	6914 V	The 6914 (D 16) is a monovoltage type, self-
The [2]	16 V	The 6914 (D 16) is a monovoltage type, self-
Nominal tube voltage	16 V	Nominal tube voltage 16 kV
Direct interelectrode capacitance, approximate	5 pF	Direct interelectrode capacitance, approximate 5 pF
Photocathode current at nominal voltage {note 1}	1 V	Photocathode current at nominal voltage {note 1)
Ambient temperature e [1]	20	- Ambient temperature e 20±5 °c
Ambient temperature e [2]	5	- Ambient temperature e 20±5 °c
Anodevoltage [1]	16 V	-Anodevoltage 16 000 \")
Anodevoltage [2]	0 V	-Anodevoltage 16 000 \")
Anode circuit resistance ... e	100	- Anode circuit resistance ... e 100 MQ
Color temperature of unfiltered radiation source	2854	- Color temperature of unfiltered radiation source . . 2854 °K
Dark current . . . v v it it ittt n e	20 mA	Dark current . . . v v it it ittt n e 0.02 HA
Fi = unfiltered luminous flux (	2854	Fi = unfiltered luminous flux (2854 °K tungsten lamp) in lumen, incident on the photocathode,
Center resolution : in a [1]	1 us	- Center resolution : in a 1/6 useful minimum diameter concentric circle on photocathode.
Center resolution : in a [2]	6 us	- Center resolution : in a 1/6 useful minimum diameter concentric circle on photocathode.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published value [1]	7 us	7 - Center magnification shall be measured with a separation of object lines of 1/6 of the useful minimum photocathode
Published value [2]	1 us	7 - Center magnification shall be measured with a separation of object lines of 1/6 of the useful minimum photocathode
Published value [3]	6 us	7 - Center magnification shall be measured with a separation of object lines of 1/6 of the useful minimum photocathode
Published value [1]	8 us	8 - Peripheral magnification shall be measured with a separation of object lines of 4/5 of the useful minimum photocathode
Published value [2]	4 us	8 - Peripheral magnification shall be measured with a separation of object lines of 4/5 of the useful minimum photocathode
Published value [3]	5 us	8 - Peripheral magnification shall be measured with a separation of object lines of 4/5 of the useful minimum photocathode
Published value	10	10 - This is the value of equivalent input illumination (I.R.F.) required to give an increase of luminance on the screen equal
The tube shall be subjected to a temperature cycling with extremal values, + [1]	68	The tube shall be subjected to a temperature cycling with extremal values, +68 °C and —54 °C and held at
The tube shall be subjected to a temperature cycling with extremal values, + [2]	-54	The tube shall be subjected to a temperature cycling with extremal values, +68 °C and —54 °C and held at
Published value [1]	1	1 - A sinusoidal vibration having an amplitude of 1. 5 mm, at a frequency of 30 Hz, for a period of 2. 1/2 minutes.
Published value [2]	1	1 - A sinusoidal vibration having an amplitude of 1. 5 mm, at a frequency of 30 Hz, for a period of 2. 1/2 minutes.
Published value [3]	5	1 - A sinusoidal vibration having an amplitude of 1. 5 mm, at a frequency of 30 Hz, for a period of 2. 1/2 minutes.
Published value [4]	30	1 - A sinusoidal vibration having an amplitude of 1. 5 mm, at a frequency of 30 Hz, for a period of 2. 1/2 minutes.
Published value [5]	2	1 - A sinusoidal vibration having an amplitude of 1. 5 mm, at a frequency of 30 Hz, for a period of 2. 1/2 minutes.

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Published value [6]	1	1 - A sinusoidal vibration having an amplitude of 1.5 mm, at a frequency of 30 Hz, for a period of 2. 1/2 minutes.
Published value [7]	2	1 - A sinusoidal vibration having an amplitude of 1.5 mm, at a frequency of 30 Hz, for a period of 2. 1/2 minutes.
Published value [1]	2	2 - A sinusoidal vibration having an amplitude of 1.0 mm, at a frequency of 50 Hz, for a period of 2 minutes.
Published value [2]	1	2 - A sinusoidal vibration having an amplitude of 1.0 mm, at a frequency of 50 Hz, for a period of 2 minutes.
Published value [3]	0	2 - A sinusoidal vibration having an amplitude of 1.0 mm, at a frequency of 50 Hz, for a period of 2 minutes.
Published value [4]	50	2 - A sinusoidal vibration having an amplitude of 1.0 mm, at a frequency of 50 Hz, for a period of 2 minutes.
Published value [5]	2	2 - A sinusoidal vibration having an amplitude of 1.0 mm, at a frequency of 50 Hz, for a period of 2 minutes.
The tube shall be subjected to a	75	The tube shall be subjected to a 75 g peak half-sine shock with six shock pulses parallel to, and six shock
pulses perpendicular to, its longitudinal axis. The duration of each shock pulse should be [1]	6	pulses perpendicular to, its longitudinal axis. The duration of each shock pulse should be 6 ms + 2 ms,
pulses perpendicular to, its longitudinal axis. The duration of each shock pulse should be [2]	2	pulses perpendicular to, its longitudinal axis. The duration of each shock pulse should be 6 ms + 2 ms,
Storage temperature should not exceed	68	Storage temperature should not exceed 68 °C. The period the tube is submitted to this limit temperature
Photocathode end	4295	Photocathode end 42,95
Published value [1]	1	1:25 of the photocathode
Published value [2]	25	1:25 of the photocathode

TUBE TINKER

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

