

GENERAL ELECTRIC

INDUSTRIAL AND COMMERCIAL SEPARATE FIELD MESH VIDICONS

8507

8541

8572

8604

General Electric offers these new vidicons which feature a "separate field mesh"...for better center-to-edge uniformity and reduced beam-landing error...to provide superior characteristics of...
EXTENDED RESOLUTION AND HIGH AMPLITUDE RESPONSE

As a result improved picture quality is obtained for
STUDIO...REMOTE...and INDUSTRIAL APPLICATIONS

Additional General Electric Vidicons also available - See Data Folder ETR-3786

8507**FOR STUDIO AND REMOTE PICKUP**

Features high sensitivity and low lag similar to 7735A... provides very high quality pictures with extended resolution capability and higher amplitude response.

8541 LOW HEATER POWER**FOR STUDIO AND REMOTE PICKUP**

Designed for transistorized cameras... similar to 8507 except with lower heater power rating of 0.6 watt... with same high sensitivity, low lag characteristics... and extended resolution plus high amplitude response.

8572**FOR FILM PICKUP**

Features minimum lag and sensitivity characteristics of 7038... designed specifically for film pickup applications... black and white or color.

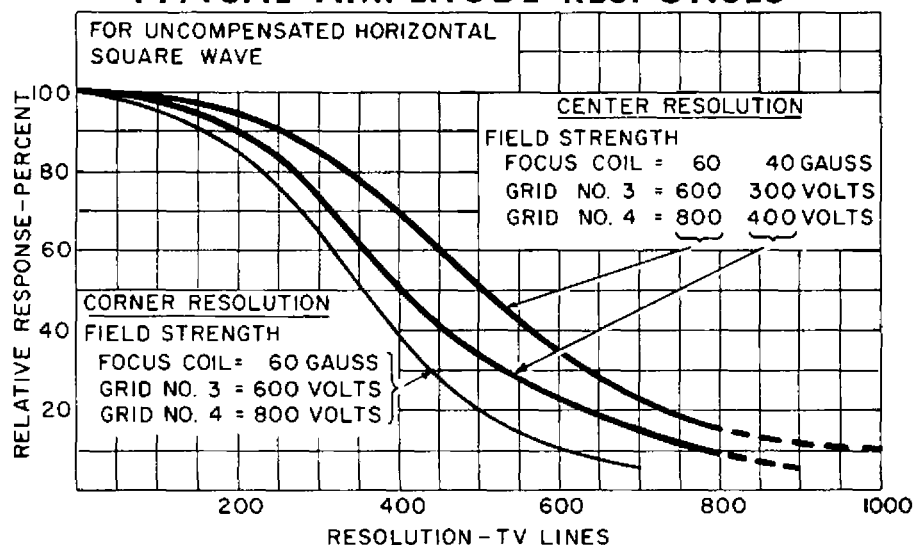
8604 LOW HEATER POWER**FOR FILM PICKUP**

Designed for transistorized film cameras... same as 8572 except with lower heater power rating of 0.6 watt.

SIGNIFICANT ADVANTAGES OF SEPARATE FIELD MESH VIDICONS

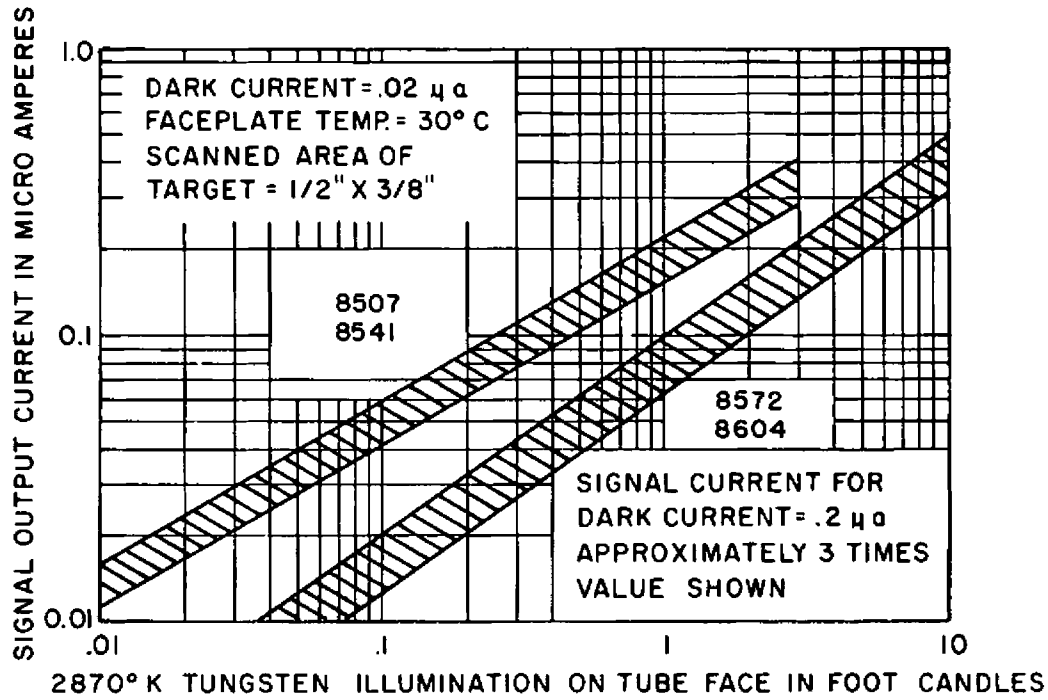
- Extended resolution... 1000 TV lines.
- Higher amplitude response... 70% @ 400 TV lines.
- Can be over-beamed without loss of resolution... allows presetting of beam for discharge of peak high-lights without further adjustment... excellent feature for automatic target control cameras.
- Excellent signal uniformity over wide range of target voltages.
- Can be operated at lower target voltages without loss of picture quality.

TYPICAL AMPLITUDE RESPONSES

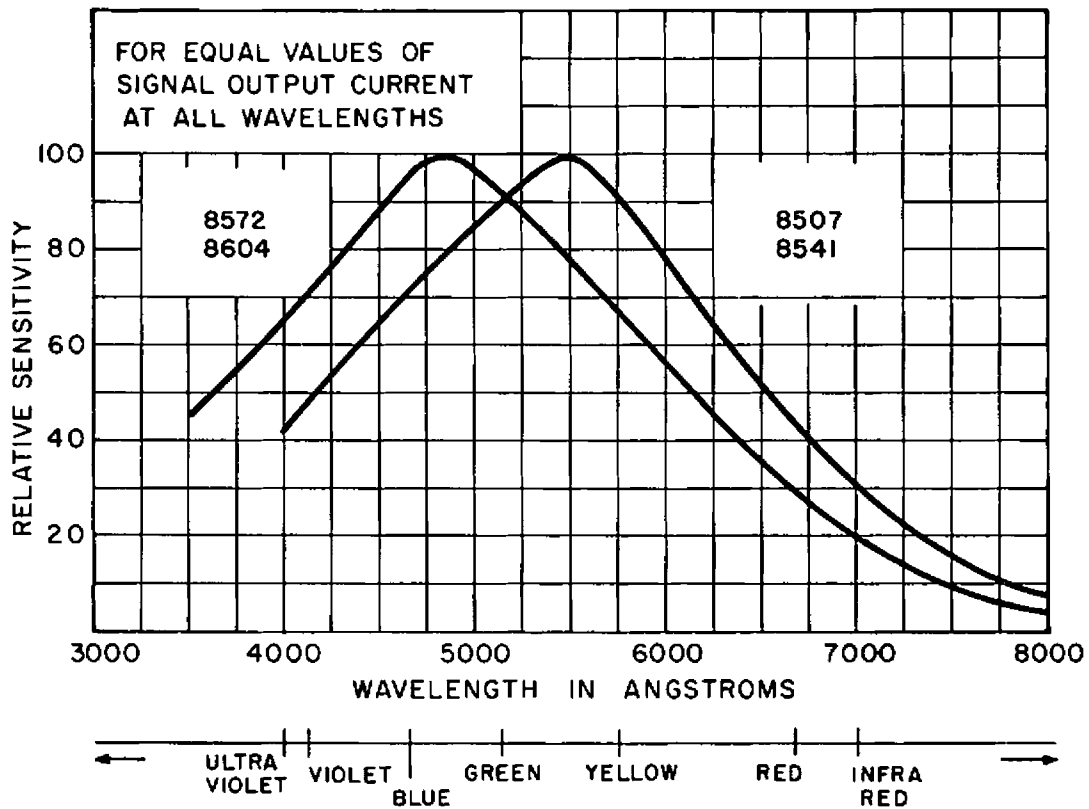


from JEDEC release
#4853, Nov. 16, 1964

LIGHT TRANSFER CHARACTERISTICS



SPECTRAL SENSITIVITY CHARACTERISTICS



ESSENTIAL SPECIFICATIONS AND RATINGS

ELECTRICAL—ALL TYPES

Cathode—unipotential
 Heater voltage, AC or DC $6.3 \pm 10\%$ volts
 Heater current
 8507, 8572 0.6 ampere
 8541, 8604 0.09 ampere
 Focus and deflection method Magnetic
 Direct interelectrode capacitance
 Anode to all other electrodes 3.6 pf

Photoconductive Layer

Spectral response See page 2
 Rectangular image, 4 × 3 aspect ratio, max useful
 diagonal 0.62 inch
 Orientation—horizontal scan should be essentially parallel to a
 plane passing through the tube axis and short index pin.

MECHANICAL—ALL TYPES

Overall length $6.25 \pm .25$ inches
 Greatest diameter $1.125 \pm .01$ inches
 Weight, approximate 2 ounces
 Operating position any

Bulb T8
 Base Small button ditetral 8 pin (JEDEC No. E8-11)
 Socket Cinch No. 54A18088 or equivalent
 Focus-deflection-alignment coil assembly
 Cleveland Electronics VYFA-261 or equivalent

MAXIMUM RATINGS—ABSOLUTE VALUES—ALL TYPES

Faceplate, scanned area $1/2 \times 3/8$ inch
 Illumination 1000 foot-candles
 Temperature 71° centigrade
 Target voltage 100 volts
 Target current, peak 0.60 μ a
 Dark current 0.25 μ a
 Grid No. 4 voltage 1000 volts
 Grid No. 3 voltage 1000 volts

Grid No. 2 voltage 750 volts
 Grid No. 1 voltage
 Negative bias value 300 volts
 Positive bias value 0 volts
 Peak heater-cathode voltage
 Heater negative with respect to cathode 125 volts
 Heater positive with respect to cathode 10 volts

TYPICAL OPERATION—AVERAGE VALUES—ALL TYPES

Faceplate, scanned area $1/2 \times 3/8$ inch
 Illumination See light transfer curves P. 2
 Temperature 30° to 35° centigrade
 Resolution-limiting }
 Amplitude response } See P.1 and special ratings
 Field strength at center of focus coil See special ratings
 Field strength of adjustable alignment coil 0 to 4 gauss

Minimum peak-to-peak blanking voltage
 When applied to Grid No. 1 75 volts
 When applied to cathode 20 volts
 Grid No. 1 voltage for picture cutoff -45 to -100 volts
 Grid No. 2 voltage 300 volts
 Grid No. 3 voltage }
 Grid No. 4 voltage } See special ratings

	8507, 8541		8572, 8604	
	Average	Maximum	Average (Live)	Min. Lag (Film)
Sensitivity				
Faceplate Illumination	1 ft-c	.1 ft-c	15 ft-c	100 ft-c
Target Voltage	20 to 40 Volts	35 to 70 Volts	30 to 50 Volts	10 to 30 Volts
@ dark current	0.02 μ a	0.2 μ a	0.02 μ a	0.004 μ a
Signal Output	See Page 2	See Page 2	See Page 2	0.3 μ a

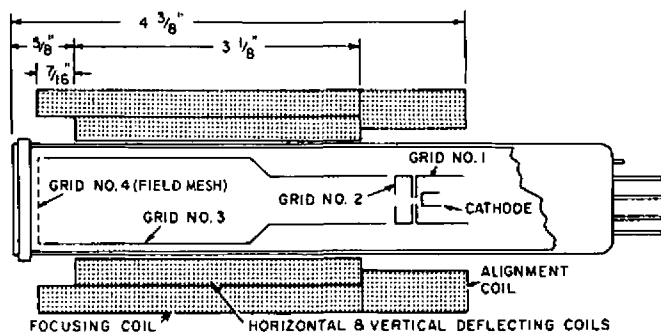
SPECIAL RATINGS FOR HIGH RESOLUTION PERFORMANCE

	AVERAGE PERFORMANCE	HIGH PERFORMANCE
Grid No. 3 voltage (a) (Beam focus)	300 volts	600 volts
Grid No. 4 voltage (b) (field mesh)	400 volts	800 volts
Focus coil-field strength at center	40 ± 4 gauss	60 ± 4 gauss
Resolution		
Center	900 TV lines	1000 TV lines
Corner	600 TV lines	700 TV lines
Amplitude response at 400 TV lines:		
Center	50%	70%
Peak deflecting coil current:		
Horizontal	170 ma	250 ma
Vertical	20 ma	30 ma

FOOT NOTES

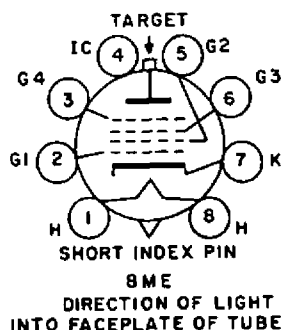
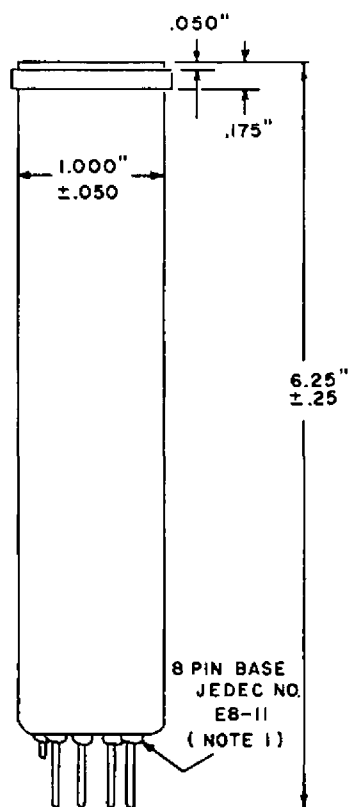
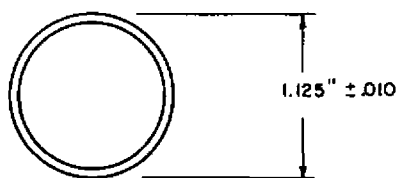
- Beam focus (grid No. 3) voltages shown under Special Ratings are attained by providing the focus coil field strength indicated. If a different operating voltage for grid No. 3 is desired, then an appropriate change in focus coil current will be needed to establish the correct field strength. Additionally, with a higher focus coil field strength, a corresponding increase in horizontal and vertical sweep power will be required.
- Exact ratio of grid No. 4 (field mesh) to grid No. 3 voltages shown is not critical providing range is from 1.3 to 1.6.

COMPONENT SCHEMATIC



RELATIVE LOCATION OF VIDICON WITHIN ASSOCIATED FOCUS, DEFLECTION AND ALIGNMENT COIL ASSEMBLY FOR OPTIMUM RESOLUTION AND AMPLITUDE RESPONSE.

OUTLINE SPECIFICATIONS



- PIN 1: HEATER
- PIN 2: GRID NO. 1
- PIN 3: GRID NO. 4 - FIELD MESH
- PIN 4: INTERNAL CONNECTION - DO NOT USE
- PIN 5: GRID NO. 2
- PIN 6: GRID NO. 3 - BEAM FOCUS
- PIN 7: CATHODE
- PIN 8: HEATER
- FLANGE: TARGET
- SHORT INDEX PIN: INTERNAL CONNECTION DO NOT USE

NOTES

1. Base-pin positions fit 0.25 inch thick, 10-hole flat-plate gage with holes located as follows: 9 holes, 0.0550(±0.0005) inch Dia. equally spaced, 0.2052 (±0.0005) inch apart on a circle, 0.6000(±0.005) inch Dia., plus a center hole, 0.300(±0.001) inch Dia., concentric with 9-hole circle.

FOR COMPLETE INFORMATION AND AVAILABILITY:

In the United States:

General Electric Company

Pickup Tube Operation
Syracuse, New York
Tel. 456-3210

Clifton, New Jersey
200 Main Ave.
Tel. GR 2-8100

Chicago, Illinois
3800 N. Milwaukee Ave.
Tel. SP 7-1600

Los Angeles, California
11840 W. Olympic Blvd.
Tel. BR 2-8566 or GR 9-7765

or: Local General Electric Broadcast Tube Distributor

In Canada:

Canadian General Electric Company, Ltd.
189 Dufferin Street
Toronto, Ontario
LE 4-6311

Outside U.S.A.
and Canada

International General Electric Company
Electronic Component Sales
159 Madison Avenue
New York 16, N. Y., U.S.A.

Printed in U.S.A.