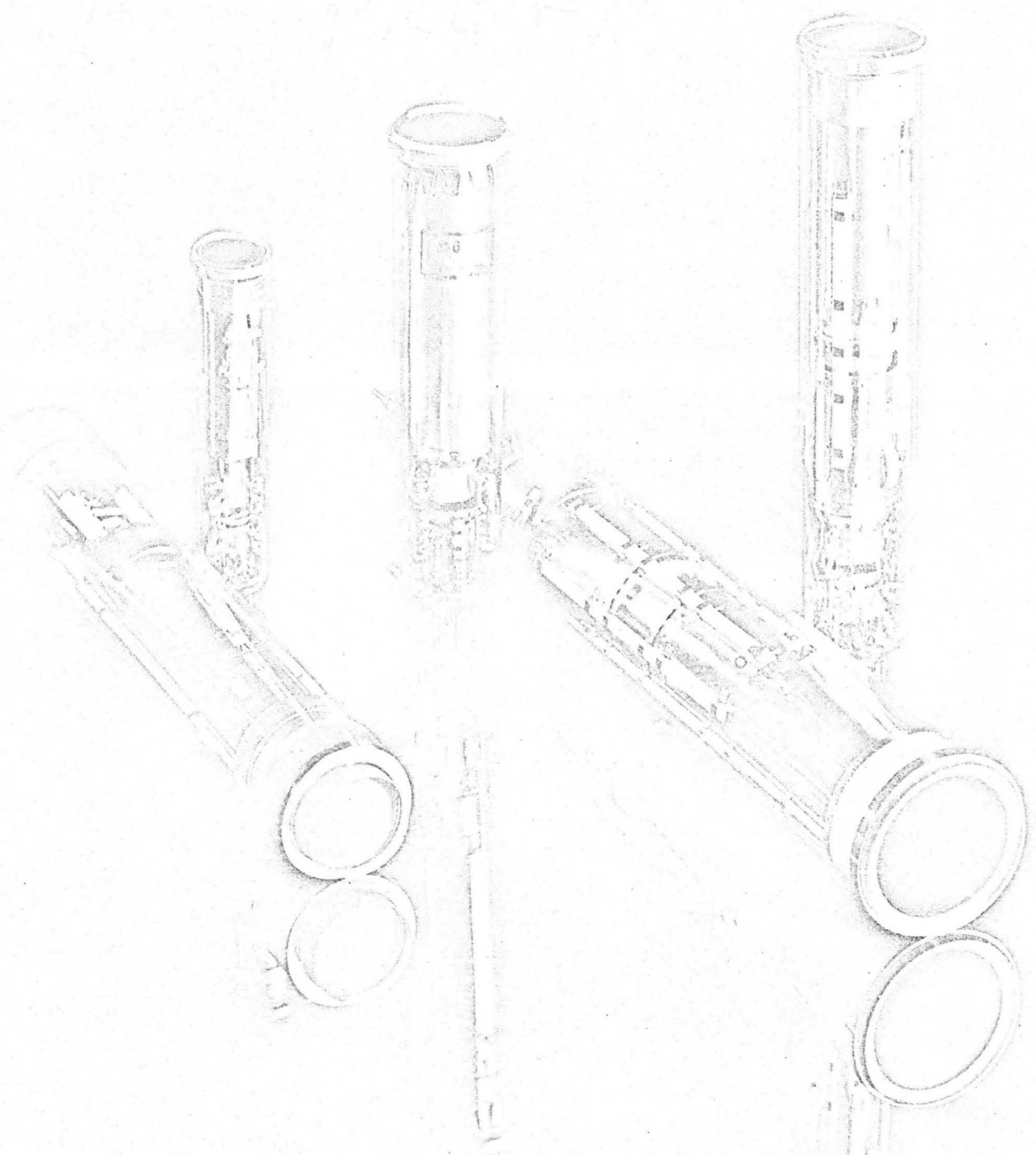


Toshiba TOSHIBA

VIDICON TUBES

○High Sensitivity ○High Resolution ○High Picture Quality
○Wide Products Range for Versatile Purpose



Toshiba Vidicon Tubes Feature

- High Sensitivity
- High Resolution
- High Picture Quality
- Wide Products Range for Versatile Purpose

Toshiba manufactures Vidicon tubes in four diameter sizes according to the purpose and performance 1" type is the most popular, 2/3" type is appreciated for its compactness and for high resolution 1.5" types are available.

In each size of diameter further classified specifications are provided for the best fit for the customers wide variety of applications.

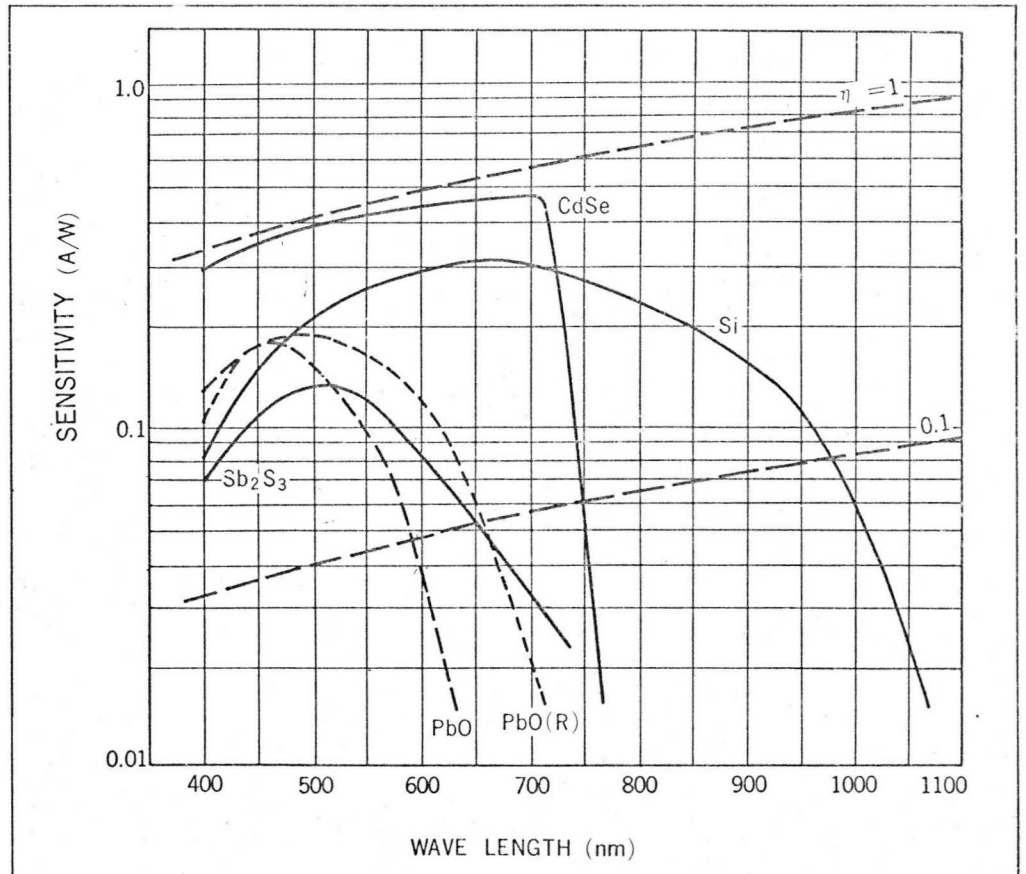


SELECTION GUIDES

| | Magnetic - Focus Magnetic - Deflection Vidicons | | | Electrostatic - Focus Magnetic - Deflection Vidicons | | | Electrostatic- Focus Electrostatic- Deflection Vidicons | Heater Power |
|--------------------------------|--|--|-------------------------------|---|------------|--------------|---|--------------------|
| | 2/3" (18) | 1" (25) | 1.2" (30) | 2/3" (18) | 1" (25) | 1.5" (40) | 1" (25) | |
| Integral Mesh Connection | | 7262A 7735A | | | | | | ◀ 0.6 W ◀ 3.8 W |
| Separate Mesh Connection | 8844 8844 (W) □ E5022 ○ E5052 □ E5061 | 8541 8573 ○ E5036 ○ E5041 □ E5001 □ E5063 | | □ E5071 E5045 | 8134 | 8480 | 25PE 12 | ◀ 0.6 W |
| | | | △ E5040 △ E5054 △ E5055 | | | | | ◀ 1.9 W |
| | | 8507 | | | | | | ◀ 3.8 W |

○ Si Vidicon
□ CHALNICON (CdSe)
△ Pbo Vidicon

SPECTRAL SENSITIVITY of TOSHIBA VIDICONS



VIDICON

| Type | Typical Applications | Remarks | Dimensions | | | Pin Connection |
|---------|---|---|-------------|---------------------|---------------|----------------|
| | | | Size (inch) | Overall Length (mm) | Diameter (mm) | |
| 72G2A | Compact, Industrial Transistorized TV Cameras | <ul style="list-style-type: none"> • Short Type • Low Power (0.6W) Heater • High Sensitivity | 1 | 130 | 28.6 | A |
| 7735A | Live TV and Industrial Cameras | <ul style="list-style-type: none"> • High Sensitivity | 1 | 159 | 28.6 | A |
| 8134 | Live TV and Industrial Transistorized Cameras, Color TV Film Pickup | <ul style="list-style-type: none"> • Electrostatic Focus and Magnetic Deflection • Low Power (0.6W) Heater | 1 | 159 | 28.6 | C |
| 8480 | Transistorized Cameras for Broadcast Film Pickup and Data Transmission Applications | <ul style="list-style-type: none"> • 1-1/2" Diameter Type • Electrostatic Focus • Magnetic Deflection • Low Power (0.6W) Heater • Very High Resolution • Separate Mesh Connection | 1.5 | 260 | 40.4 | G |
| 8507 | Live and Film TV, and Industrial Pickup Service | <ul style="list-style-type: none"> • Similar to the 7735A But Has Separate Mesh and Wall Electrodes • High Resolution | 1 | 159 | 28.6 | B |
| 8541 | Live and Film TV, and Industrial Transistorized Cameras | <ul style="list-style-type: none"> • Similar to the 8507 But Has Low Power (0.6W) Heater | 1 | 159 | 28.6 | B |
| 8573 | Live and Film TV, and Industrial TV Cameras | <ul style="list-style-type: none"> • Short Type • Low Power (0.6W) Heater • Separate Mesh Connection • High Resolution | 1 | 130 | 28.6 | B |
| 8844 | Compact Transistorized Industrial TV Cameras | <ul style="list-style-type: none"> • Very Short 2/3"-Diameter Type • Low Power (0.6W) Heater • Separate Mesh Connection • Higher Resolution • Low Lag | 2/3 | 100 | 19.6 | D |
| 8844(W) | Compact Transistorized Industrial TV Cameras | <ul style="list-style-type: none"> • High Sensitivity • Very Short 2/3"-Diameter Type • Low Power (0.6W) Heater • Separate Mesh Connection • Higher Resolution • Low Lag | 2/3 | 100 | 19.6 | D |
| 25PE12 | Compact, Transistorized Industrial TV Cameras for Special Scanning Systems | <ul style="list-style-type: none"> • Electrostatic Focus and Deflection • Low Power (0.6W) Heater | 1 | 159 | 28.6 | F |
| E5045 | Compact Industrial TV Cameras | <ul style="list-style-type: none"> • Very Short 2/3"-Diameter Type • Low Power (0.6W) Heater • Separate Mesh Connection • Electrostatic Focus and Magnetic Deflection | 2/3 | 106 | 19.6 | E |


TOSHIBA
VIDICON TUBES

| Cathode | | Focusing Method | Deflection Method | Typical Performance Data | | | | | | Type |
|---------|---------|-----------------|-------------------|---------------------------------------|--------------------|-------------------------|----------------------------------|---------------------------------------|------------------------------------|---------|
| Ef (V) | If (mA) | | | Faceplate Illumination Intensity (lx) | Target Voltage (V) | Dark Current (μ A) | Signal Output Current (μ A) | Limiting Center Resolution (TV Lines) | Amplitude response at 400 TV lines | |
| 6.3 | 95 | M | M | 10 | 10 ~ 50 | 0.02 | 0.20 | 700C | 30 | 7262A |
| 6.3 | 600 | M | M | 10 | 10 ~ 50 | 0.02 | 0.20 | 700C | 30 | 7735A |
| 6.3 | 95 | S | M | 10 | 10 ~ 50 | 0.02 | 0.20 | 750C | 35b | 8134 |
| 6.3 | 95 | S | M | 80 | 10 ~ 50 | 0.02 | 0.40 | 1200C | 60b | 8480 |
| 6.3 | 600 | M | M | 10 | 10 ~ 50 | 0.02 | 0.20 | 750C | 50b | 8507 |
| 6.3 | 95 | M | M | 10 | 10 ~ 50 | 0.02 | 0.20 | 750C | 50b | 8541 |
| 6.3 | 95 | M | M | 5 | 10 ~ 50 | 0.10 | 0.27 | 750C | 50b | 8573 |
| 6.3 | 95 | M | M | 15 | 10 ~ 50 | 0.02 | 0.20 | 700C | 30b | 8844 |
| 6.3 | 95 | M | M | 10 | 10 ~ 50 | 0.02 | 0.33 | 700C | 30b | 8844(W) |
| 6.3 | 95 | S | S | 10 | 10 ~ 50 | 0.02 | 0.20 | 500C | 10 | 25PE12 |
| 6.3 | 95 | S | M | 15 | 10 ~ 40 | 0.02 | 0.20 | 600C | 15 | E5045 |

Focus Method M: Magnetic Focus, S: Electrostatic Focus
 Deflection Method M: Magnetic Deflection, S: Electrostatic Deflection
 C Center Resolution
 b High Voltage

SI VIDICON (Silicon Diode Array Target Vidicon)

| Type | Typical Applications | Remarks | Dimensions | | | Pin Connection |
|---------------|---|---|-------------|---------------------|---------------|----------------|
| | | | Size (inch) | Overall Length (mm) | Diameter (mm) | |
| E5036 (E5058) | TV Telephone Industrial Special TV Cameras | <ul style="list-style-type: none"> Extremely High Sensitivity No Burn - In Extremely Low Lag Very Low Dark Current | 1 | 159 (130) | 28.6 | B |
| E5052 | TV Telephone Compact, Industrial Special TV Cameras | <ul style="list-style-type: none"> Extremely High Sensitivity No Burn - In Extremely Low Lag Very Low Dark Current | 2/3 | 100 | 19.6 | D |
| E5041 | TV Telephone Industrial Special TV Cameras | <ul style="list-style-type: none"> Extremely High Sensitivity No Burn - In Extremely Low Lag Very Low Dark Current Long Life | 1 | 159 | 28.6 | B |

CHALNICON (Cadmium Selenide photoconductive target Vidicon)

| | | | | | | |
|---------------|---|---|-----|-----------|------|---|
| E5001 (E5074) | Live and Film Color TV, and Industrial Color TV Cameras | <ul style="list-style-type: none"> Extremely High Sensitivity Wide Spectral Response High Resolution No Burn - In Very Low Dark Current | 1 | 159 (130) | 28.6 | B |
| E5022 | Compact Live and Film Color TV, and Industrial Color TV Cameras | <ul style="list-style-type: none"> Extremely High Sensitivity Wide Spectral Response High Resolution No Burn - In Low Lag Negligible-Flare Effect | 2/3 | 100 | 19.6 | D |
| *E5071 | Compact Live and Film Color TV, and Industrial Color TV Cameras | <ul style="list-style-type: none"> Extremely High Sensitivity Electrostatic Focus and Magnetic Deflection Wide Spectral Response No Burn - In | 2/3 | 106 | 19.6 | D |
| *E5061 | Compact Live and Film Color TV, and Industrial Color TV Cameras | <ul style="list-style-type: none"> Very Low Lag Wide Spectral Response Extremely High Sensitivity No Burn - In High Resolution | 2/3 | 100 | 19.6 | D |
| *E5063 | Live and Film Color TV and Industrial Color TV Cameras | <ul style="list-style-type: none"> Very Low Lag Wide Spectral Response Extremely High Sensitivity No Burn - In High Resolution | 1 | 159 | 28.6 | B |

PbO VIDICON

| | | | | | | |
|---------------|---|---|-----|----------|-----------|---|
| E5040 (R,G,B) | TV Pickup in 3 or 4 Tube Color Cameras | <ul style="list-style-type: none"> High Sensitivity Very Low Dark Current Very Low Lag "Gamma" of nearly unity | 1.2 | 215 max. | 30.6 max. | H |
| *E5055 | TV Pickup in 3 or 4 Tube Color Cameras | <ul style="list-style-type: none"> Extended Red Response (with infra-rad filter on antihalation glass disc) High Resolution Separate Mesh Connection | 1.2 | 215 max. | 30.6 max. | H |
| E5054 | Industrial TV Cameras X-Ray TV Cameras | <ul style="list-style-type: none"> High Sensitivity Low Dark Current Very Low Lag Low Geometric Distorsion | 1.2 | 210 max. | 30.6 max. | H |

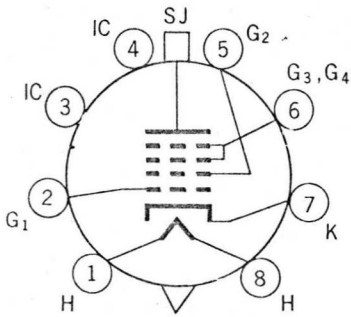

TOSHIBA
VIDICON TUBES

| Cathode | | Focusing Method | Deflection Method | Typical Performance Data | | | | | | Type |
|---------|---------|-----------------|-------------------|---------------------------------------|--------------------|-------------------------|----------------------------------|---------------------------------------|------------------------------------|-------|
| Ef (V) | If (mA) | | | Faceplate Illumination Intensity (lx) | Target Voltage (V) | Dark Current $I_{d(A)}$ | Signal Output Current (μ A) | Limiting Center Resolution (TV Lines) | Amplitude Response at 400 TV lines | |
| 6.3 | 95 | M | M | 0.5 | 6 ~ 10 | 8 | 0.38 | 550C | 15 | E5036 |
| 6.3 | 95 | M | M | 0.5 | 6 ~ 10 | 4 | 0.20 | 400C | 6 | E5052 |
| 6.3 | 95 | M | M | 0.5 | 6 ~ 10 | 8 | 0.38 | 550C | 15 | E5041 |

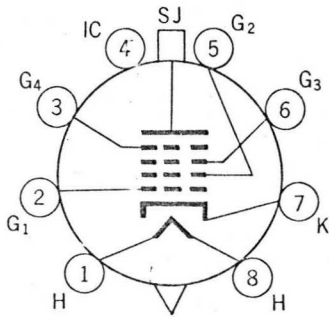
| | | | | | | | | | | |
|-----|----|---|---|-----|---------|---|------|------|-----|-------|
| 6.3 | 95 | M | M | 0.5 | 20 ~ 45 | 1 | 0.16 | 750C | 50b | E5001 |
| 6.3 | 95 | M | M | 1 | 20 ~ 45 | 1 | 0.16 | 700C | 50b | E5022 |
| 6.3 | 95 | S | M | 1 | 20 ~ 45 | 1 | 0.16 | 600C | 15 | E5071 |
| 6.3 | 95 | M | M | 1 | 20 ~ 45 | 1 | 0.16 | 700C | 50b | E5061 |
| 6.3 | 95 | M | M | 0.5 | 20 ~ 45 | 1 | 0.16 | 750C | 50b | E5063 |

| | | | | | | | | | | |
|-----|-----|---|---|----|----|-----|----------------------------------|-----|----------------------------------|-------|
| 6.3 | 300 | M | M | 10 | 45 | 3 ? | (G) 0.4 (R) 0.22 (B) 0.075 | 600 | (G) 35 (R) 23 (B) 40 35 | E5040 |
| 6.3 | 300 | M | M | 10 | 45 | 3 | 0.32 | 600 | 23 | E5055 |
| 6.3 | 300 | M | M | 10 | 45 | 3 | 0.7 | 600 | 23 | E5052 |

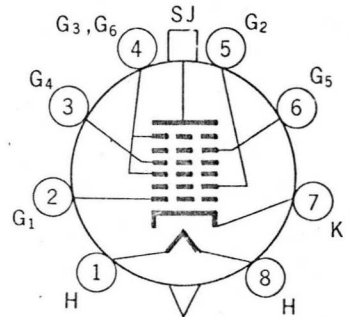
PIN CONNECTION



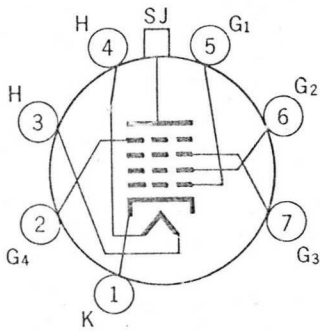
A



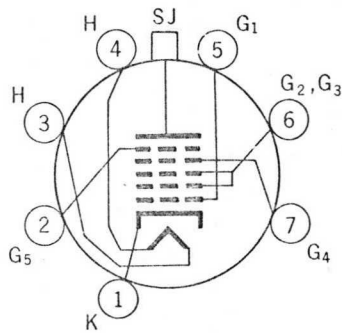
B



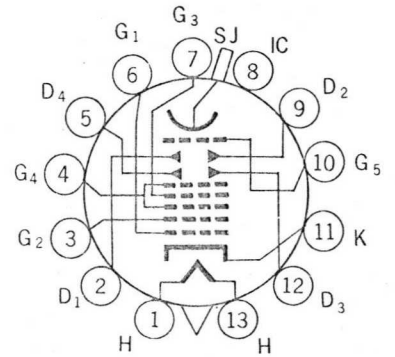
C



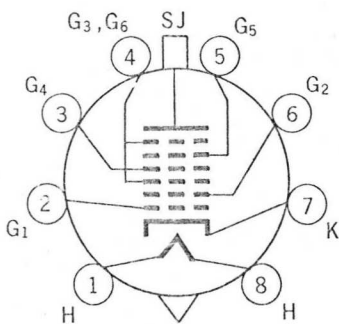
D



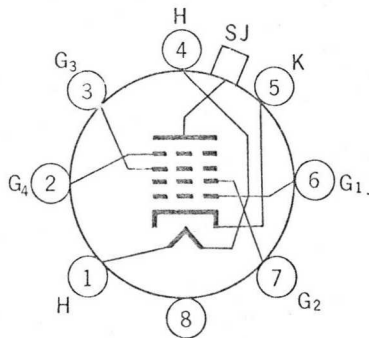
E



F



G

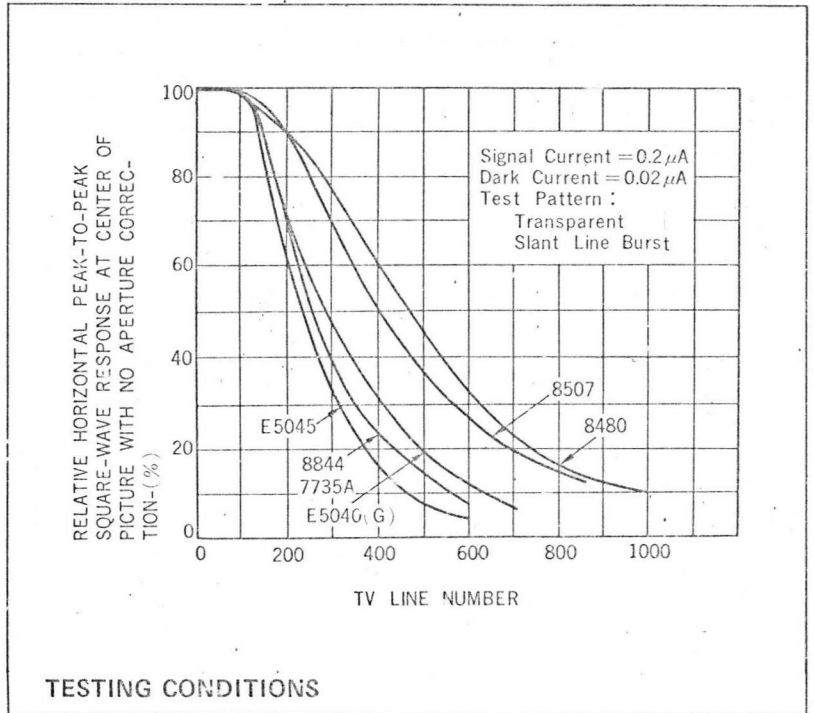


H

HHeater
KCathode
GGrid
SJ.....Signal Electrode
DDeflection Plate
ICInternal Connection
(Do not use)

TYPICAL CHARACTERISTICS

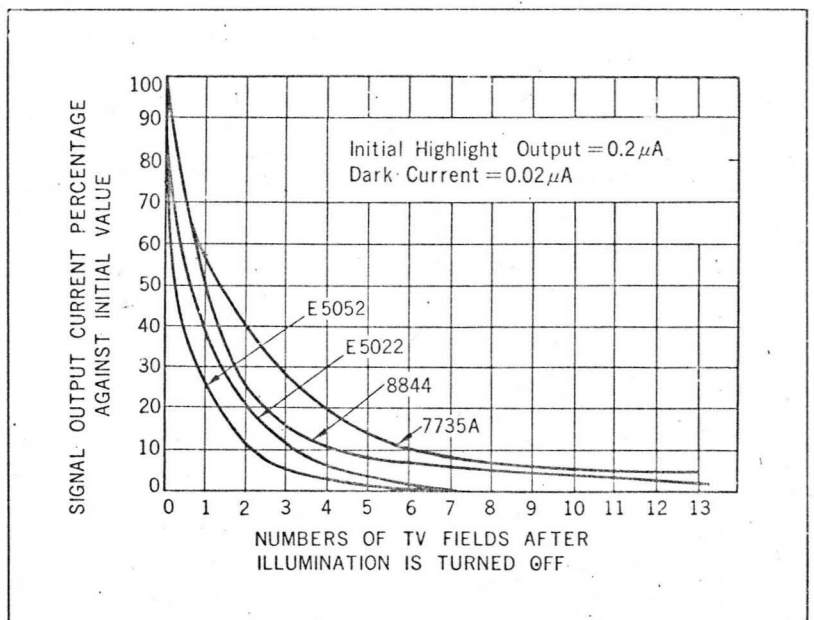
HORIZONTAL SQUARE - WAVE RESPONSE



TESTING CONDITIONS

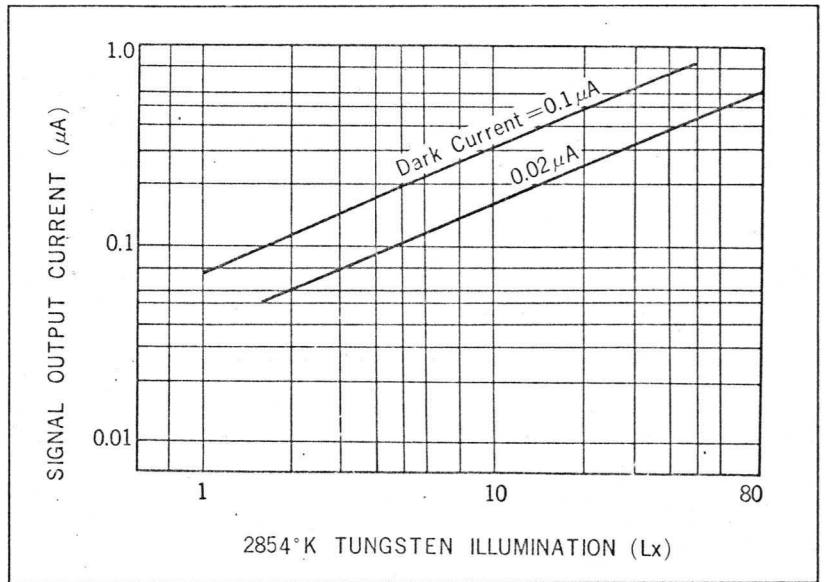
| | Focus Coil | Ec3 | Ec4 | Ec5 | Ec6 |
|----------|------------|------|------|------|-------|
| 8507 | 53G | 450V | 750V | | |
| 7735A | 40G | 280V | | | |
| 8844 | 50G | 300V | 500V | | |
| 8480 | — | | | 840V | 1400V |
| E5045 | — | 300V | | 500V | |
| E5040(G) | 40G | 600V | 670V | | |

TYPICAL PERSISTENCE CHARACTERISTICS

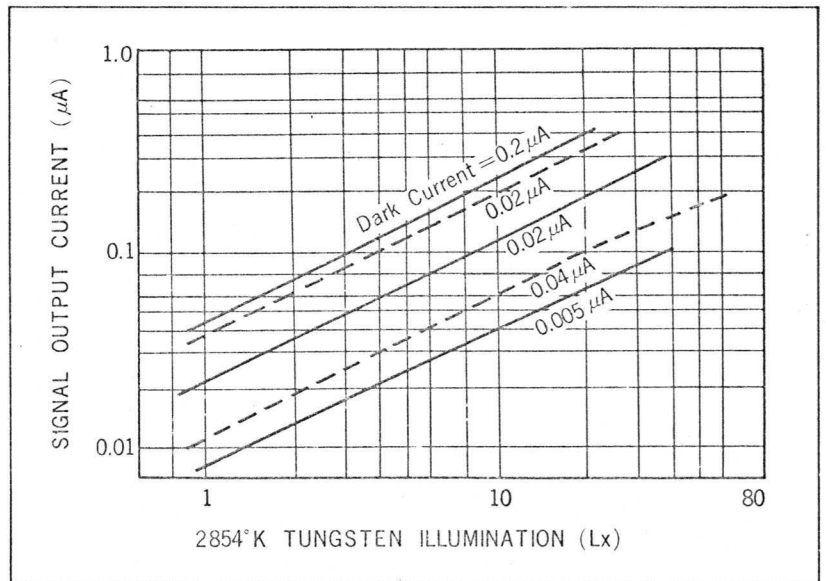


LIGHT TRANSFER
CHARACTERISTICS

7262A, 7735A, 8507, 8541



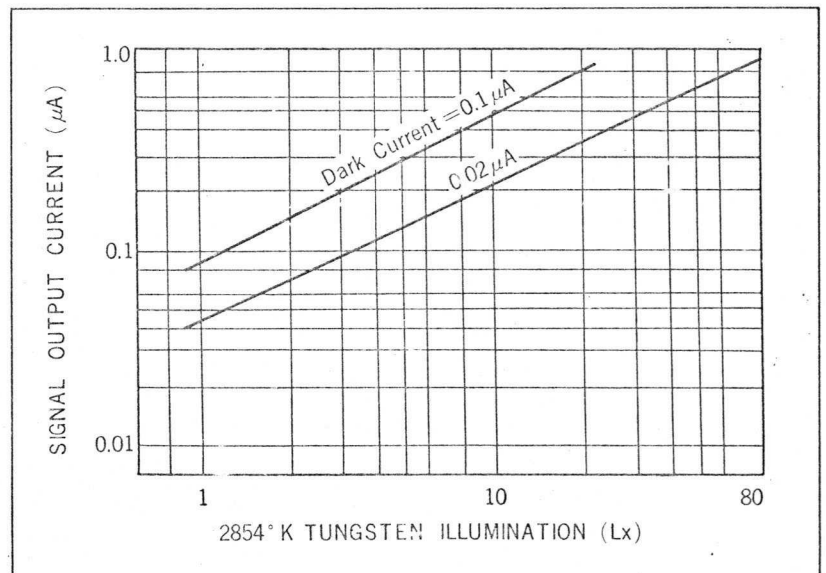
8480, 8134



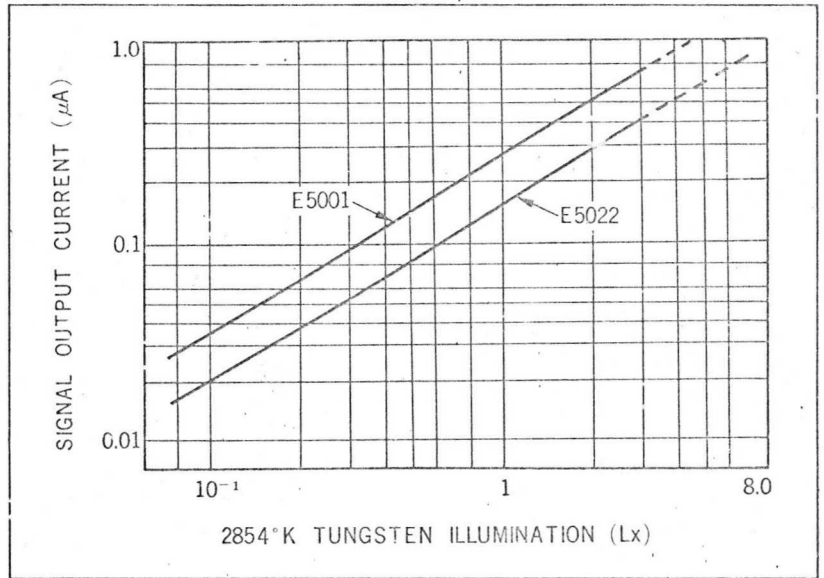
————— 8480

- - - - - 8134

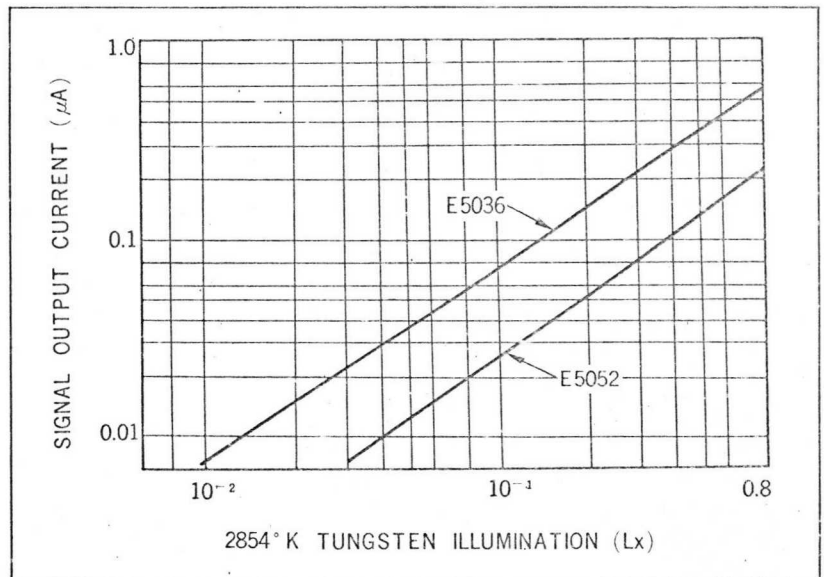
8844



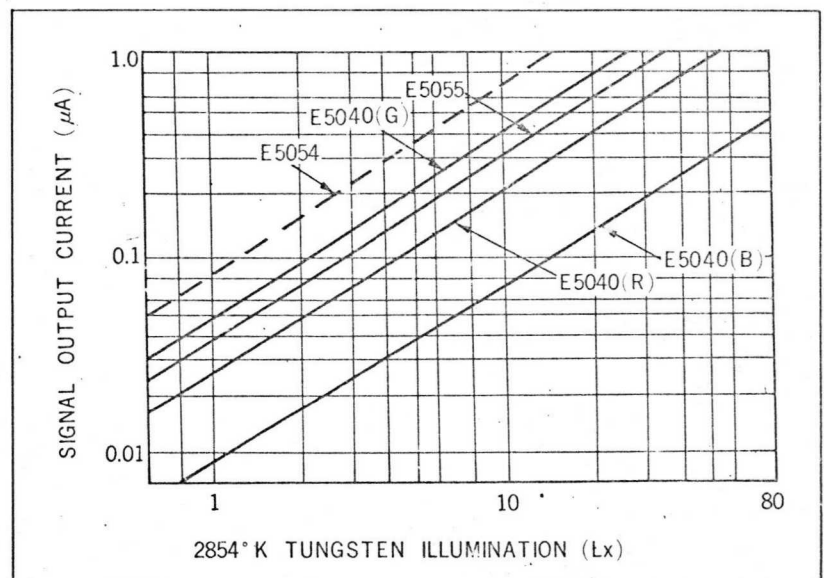
CHALNICON E5001, E5022



Si-VIDICON E5036, E5052



PbO VIDICON E5040, E5054



February, 1973.