

CTP)

# HITACHI

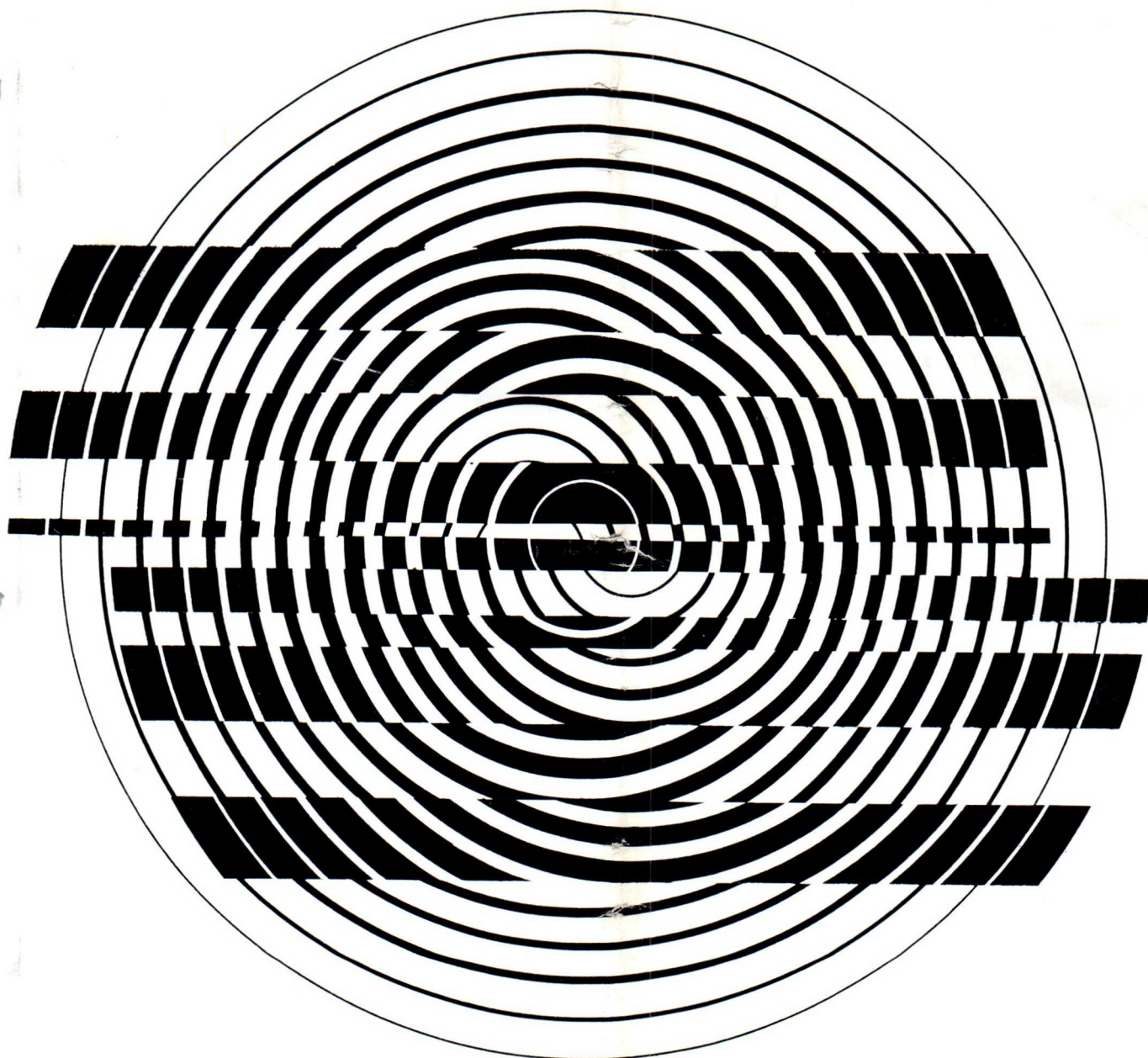
# VIDICONS

7038

7262A

7735A

8051



Aug. '64

# HITACHI VIDICON 7038



For live and film pickup with color or black-and-white TV cameras in industrial closed-circuit systems.

## ■ GENERAL

### Heater, for Unipotential Cathode

Voltage (AC or DC)	6.3±10% V
Current at 6.3 volts	0.6 A
Direct Interelectrode Capacitance	
Target	4.6 pf
All other Electrodes	4.6 pf
Spectral Response	See curve
Focusing Method	Magnetic
Deflection Method	Magnetic
Overall Length	6.25"±0.25"
Greatest Diameter	1.125"±0.010"
Operating Position	Any
Base	Small Button Ditetra 8-pin

## ■ MAXIMUM RATINGS (Absolute-Maximum Values)

For scanned area of 1/2" × 3/8"

Grid No. 4 and Grid No. 3 Voltage	750 V	max.
Grid No. 2 Voltage	750 V	max.
Grid No. 1 Voltage		
Negative bias value	125 V	max.
Positive bias value	0 V	max.
Peak Heater-Cathode Voltage		
Heater negative with respect to cathode	125 V	max.
Heater positive with respect to cathode	10 V	max.
Target (Signal Electrode) Voltage	100 V	max.
Dark Current	0.25 μA	max.
Peak Target Current	0.55 μA	max.
Faceplate		
Illumination	10,000 lx.	max.
Temperature	60 °C	max.

## ■ TYPICAL OPERATION

For scanned area of 1/2" × 3/8"  
Faceplate temperature of 30°C~35°C

Grid No. 4 and Grid No. 3 Voltage	250~300 V
Grid No. 2 Voltage	300 V
Grid No. 1 Voltage for picture cutoff	-45~-100 V
Average "Gamma"	0.65
Visual Equivalent S/N Ratio (Approx.)	300:1
Min. Peak to Peak Blanking Voltage	
When applied to Grid No. 1	75 V
When applied to Cathode	20 V
Field Strength at Center of Focusing Coil	40 gauss
Field Strength of Adjustable Alignment Coil	0~4 gauss
Resolution at center	600~900* TV lines

### Maximum Sensitivity Operation

Faceplate Illumination	20 lx
Target Voltage	50~100 V
Dark Current	0.2 μA
Signal Output Current	0.08~0.1 μA

### Average Sensitivity Operation

Faceplate Illumination	150 lx
Target Voltage	30~50 V
Dark Current	0.02 μA
Signal Output Current	0.1~0.2 μA

### Minimum Lag Operation

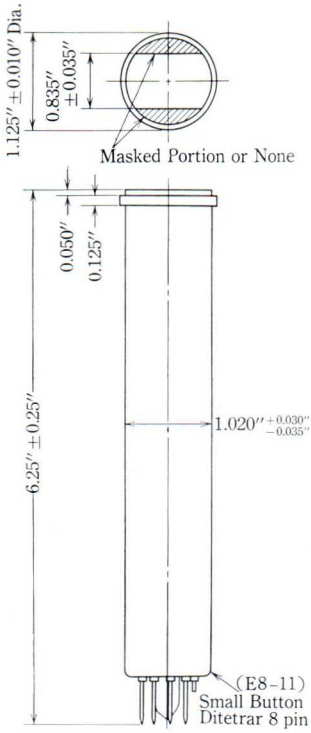
Faceplate Illumination	500~1,000 lx
Target Voltage	20~30 V
Dark Current	0.004 μA
Signal Output Current	0.1~0.2 μA

\* Value when the flux density of the focus coil is 70 gauss.

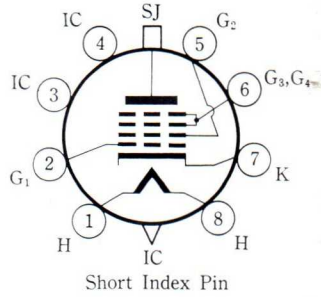


■ **DIMENSIONAL OUTLINE**

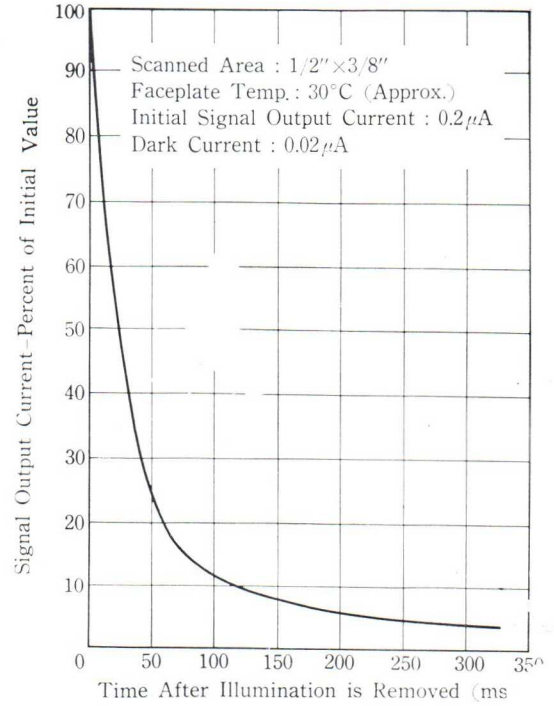
■ **Masked Portion or None**



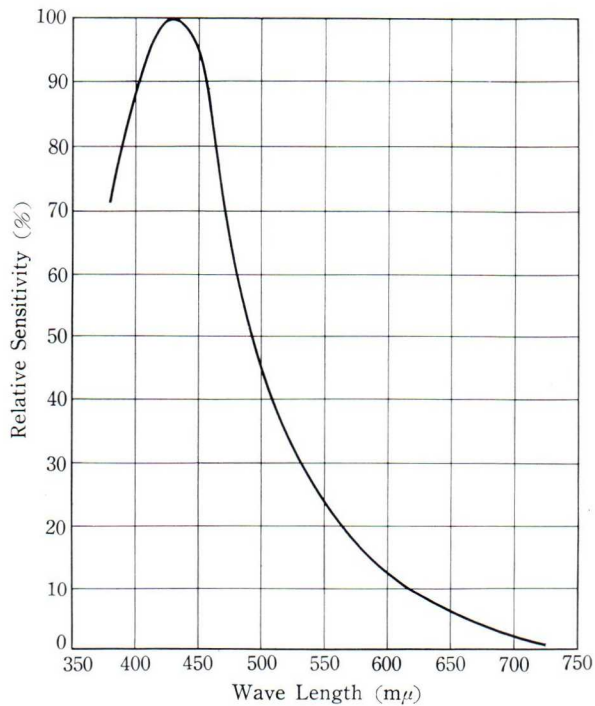
■ **Bottom View**



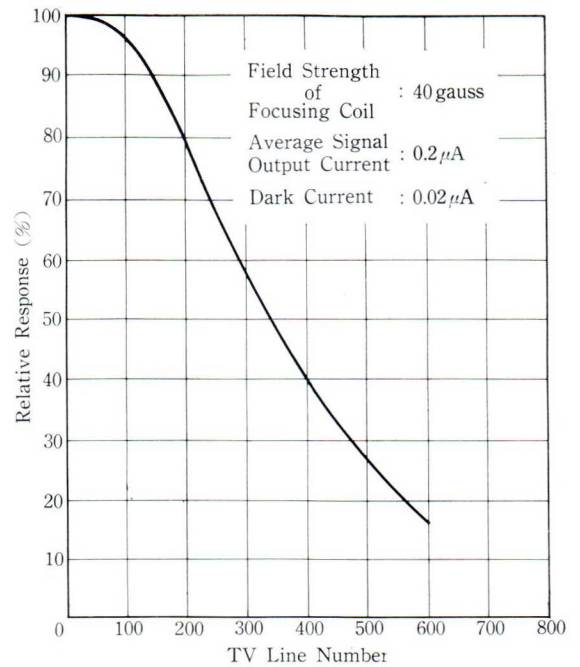
■ **Persistence Characteristics of a Typical 7038**



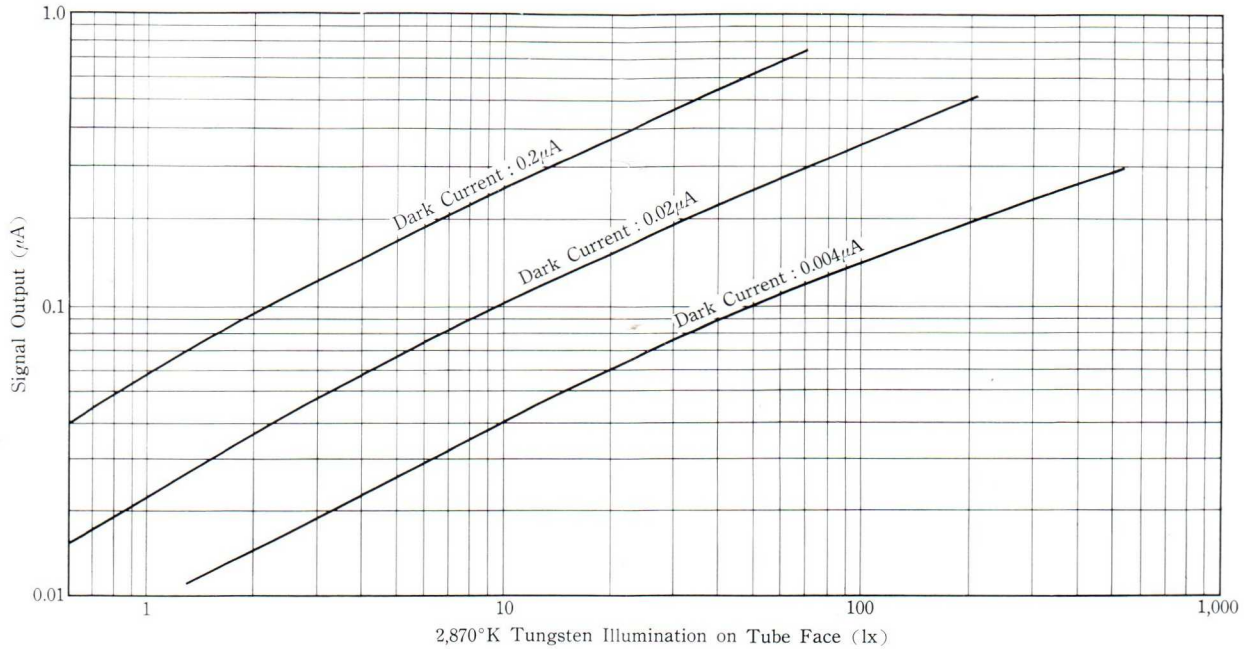
■ **Spectral Sensitivity Characteristics of a Typical 7038**



■ **Uncompensated Horizontal Square Wave Response of a Typical 7038**



■ Light Transfer Characteristics of a Typical 7038



# HITACHI VIDICON 7262A



For live-scene pickup with compact, transistorized TV cameras in industrial closed-circuit systems.

■ GENERAL

Heater, for Unipotential Cathode

Voltage (AC or DC) .....	6.3±10% V
Current at 6.3 volts .....	0.095 A
Direct Interelectrode Capacitance	
Target to All other Electrodes .....	4.6 pf
Spectral Response .....	See curve.
Focusing Method .....	Magnetic
Deflection Method .....	Magnetic
Overall Length .....	5.12"±0.06"
Greatest Diameter .....	1.125"±0.010"
Operating Position .....	Any
Base .....	Small Button Ditetra 8-pin

■ MAXIMUM RATINGS (Absolute-Maximum Values)

For scanned area of 1/2" x 3/8"

Grid No. 4 and Grid No. 3 Voltage .....	750 V max.
Grid No. 2 Voltage .....	750 V max.
Grid No. 1 Voltage	
Negative bias value .....	300 V max.
Positive bias value .....	0 V max.
Peak Heater-Cathode Voltage	
Heater negative with respect to cathode .....	125 V max.
Heater positive with respect to cathode .....	10 V max.
Target (Signal Electrode) Voltage .....	100 V max.
Dark Current .....	0.25 µA max.
Peak Target Current .....	0.55 µA max.
Faceplate	
Illumination .....	10,000 lx max.
Temperature .....	71 °C max.

## ■ TYPICAL OPERATION

For scanned area of  $\frac{1}{2}'' \times \frac{3}{8}''$   
 Faceplate temperature of  $30^{\circ}\text{C} \sim 35^{\circ}\text{C}$

Grid No. 4 and Grid No. 3 Voltage	.....	250~300 V
Grid No. 2 Voltage	.....	300 V
Grid No. 1 Voltage for picture cutoff	.....	-45~-100 V
Average "Gamma"	.....	0.60
Visual Equivalent S/N Ratio (Approx.)	.....	300:1
Min. Peak to Peak Blanking Voltage		
When applied to Grid No. 1	.....	75 V
When applied to Cathode	.....	20 V
Field Strength at Center of Focusing Coil	.....	40 gauss
Field Strength of Adjustable Alignment Coil	.....	0~4 gauss
Resolution at center	.....	600~900* TV lines

## ■ Maximum Sensitivity Operation

Faceplate Illumination	.....	1 lx
Target Voltage	.....	35~70 V
Dark Current	.....	0.2 $\mu\text{A}$
Signal Output Current	.....	0.14 $\mu\text{A}$

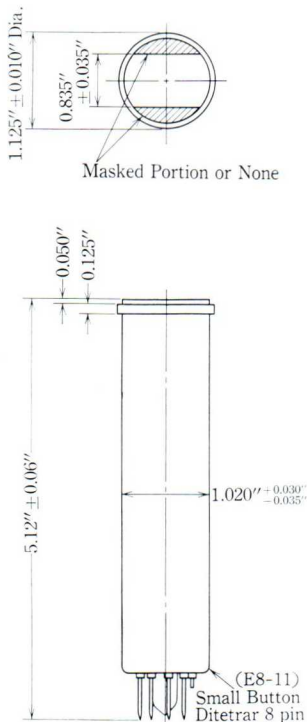
## ■ Average Sensitivity Operation

Faceplate Illumination	.....	10 lx
Target Voltage	.....	20~40 V
Dark Current	.....	0.02 $\mu\text{A}$
Signal Output Current	.....	0.2 $\mu\text{A}$

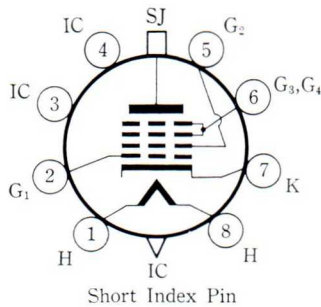
\* Value when the flux density of the focus coil is 70 gauss.

## ■ DIMENSIONAL OUTLINE

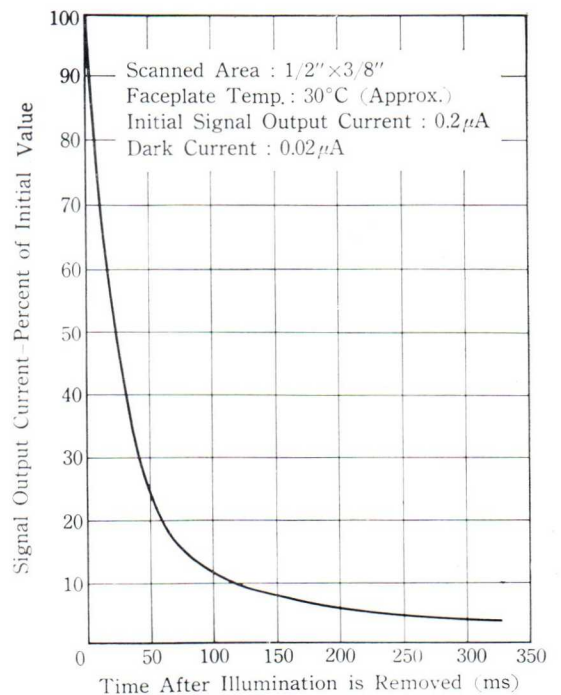
### ■ Masked Portion or None



### ■ Bottom View

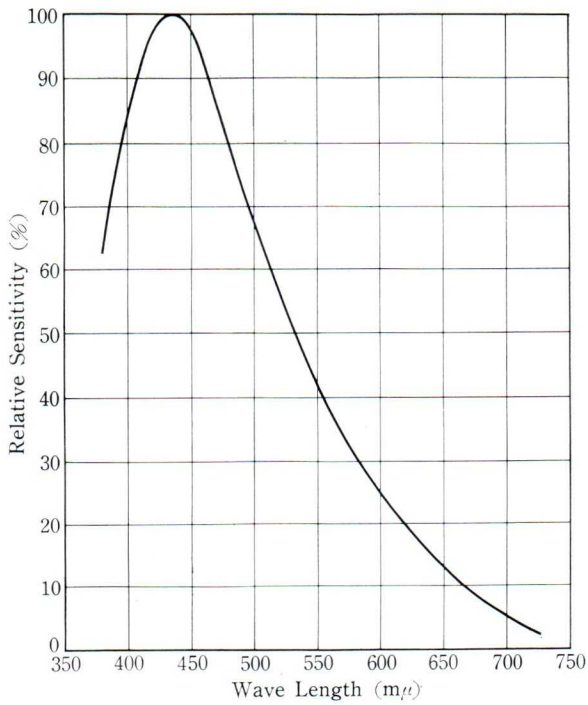


## ■ Persistence Characteristics of a Typical 7262A

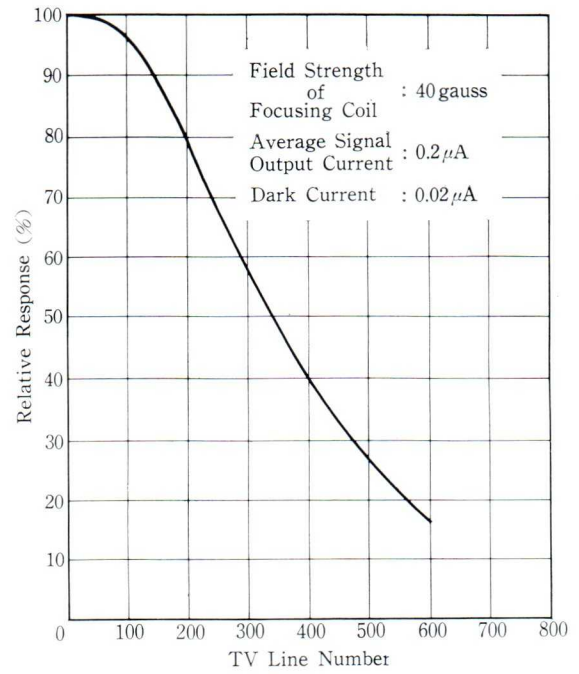




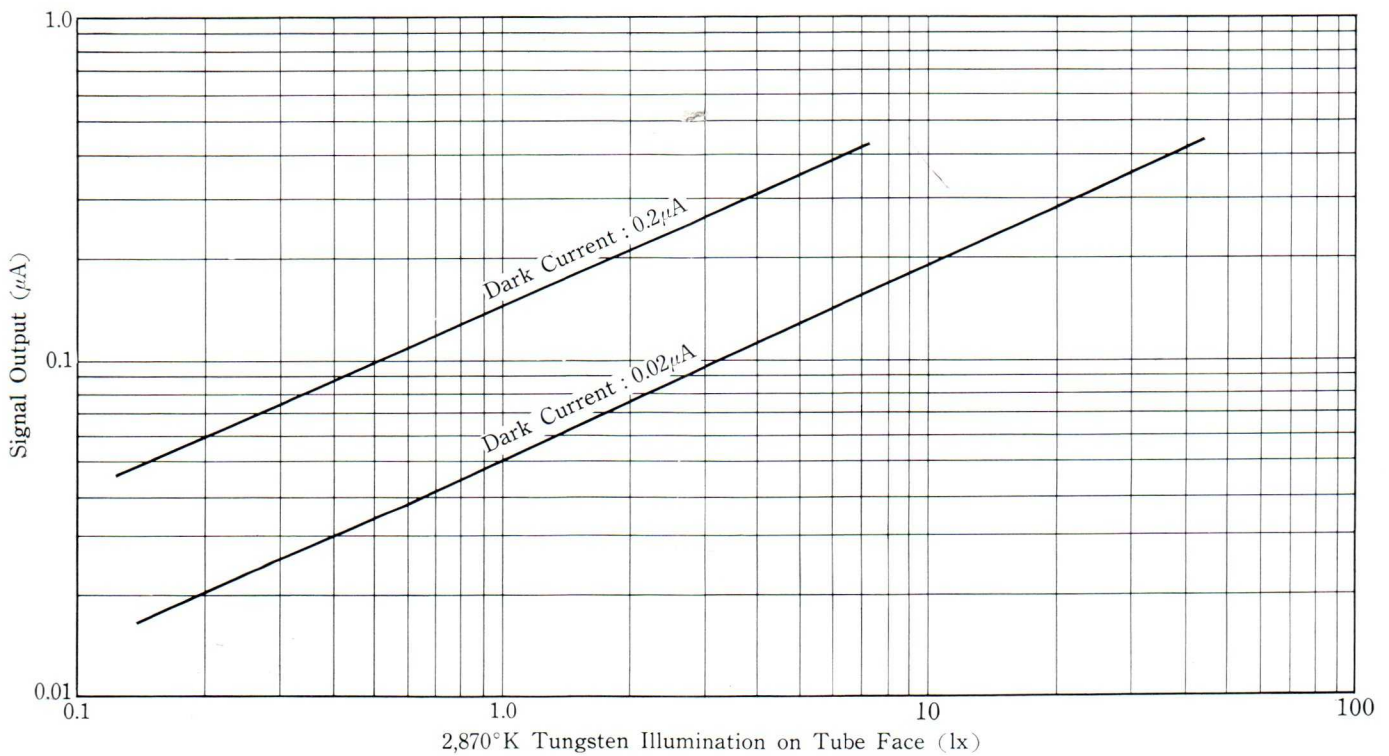
■ **Spectral Sensitivity Characteristics of a Typical 7262A**



■ **Uncompensated Horizontal Square Wave Response of a Typical 7262A**



■ **Light Transfer Characteristics of a Typical 7262A**



# HITACHI VIDICON 7735A



**For live-scene pickup with color or black-and-white TV cameras in industrial closed-circuit systems.**

## ■ GENERAL

### Heater, for Unipotential Cathode

Voltage (AC or DC).....	6.3±10% V
Current at 6.3 volts.....	0.6 A
Direct Interelectrode Capacitance	
Target to All other Electrodes .....	4.6 pf
Spectral Response .....	See curve
Focusing Method .....	Magnetic
Deflection Method .....	Magnetic
Overall Length.....	6.25"±0.25"
Greatest Diameter .....	1.125"±0.010"
Operating Position.....	Any
Base.....	Small Button Ditetra 8-pin

## ■ MAXIMUM RATINGS (Absolute-Maximum Values)

For scanned area of  $\frac{1}{2}'' \times \frac{3}{8}''$

Grid No. 4 and Grid No. 3 Voltage .....	750 V max.
Grid No. 2 Voltage .....	750 V max.
Grid No. 1 Voltage	
Negative bias value.....	300 V max.
Positive bias value .....	0 V max.
Peak Heater-Cathode Voltage	
Heater negative with respect to cathode.....	125 V max.
Heater positive with respect to cathode .....	10 V max.
Target (Signal Electrode) Voltage .....	100 V max.
Dark Current .....	0.25 $\mu$ A max.
Peak Target Current .....	0.55 $\mu$ A max.
Faceplate	
Illumination .....	10,000 lx max.
Temperature .....	71 °C max.

## ■ TYPICAL OPERATION

For scanned area of  $\frac{1}{2}'' \times \frac{3}{8}''$   
Faceplate temperature of 30°C~35°C

Grid No. 4 and Grid No. 3 Voltage.....	250~300 V
Grid No. 2 Voltage .....	300 V
Grid No. 1 Voltage for picture cutoff .....	-45~-100 V
Average "Gamma" .....	0.6
Visual Equivalent S/N Ratio (Approx.).....	300:1
Min. Peak to Peak Blanking Voltage	
When applied to Grid No. 1 .....	75 V
When applied to Cathode .....	20 V
Field Strength at Center of Focusing Coil.....	40 gauss
Field Strength of Adjustable Alignment Coil .....	0~4* gauss
Resolution at center .....	600~900* TV lines

### Maximum Sensitivity Operation

Faceplate Illumination.....	1 lx
Target Voltage.....	30~70 V
Dark Current .....	0.2 $\mu$ A
Signal Output Current .....	0.14 $\mu$ A

### Average Sensitivity Operation

Faceplate Illumination .....	10 lx
Target Voltage.....	20~40 V
Dark Current.....	0.02 $\mu$ A
Signal Output Current .....	0.2 $\mu$ A

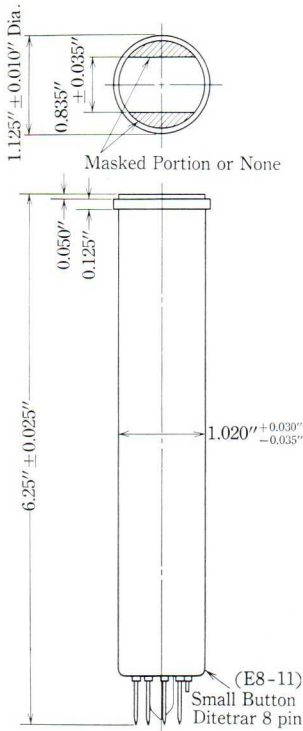
### Minimum Lag Operation

Faceplate Illumination.....	500 lx
Target Voltage.....	10~20 V
Dark Current .....	0.004 $\mu$ A
Signal Output Current .....	0.2 $\mu$ A

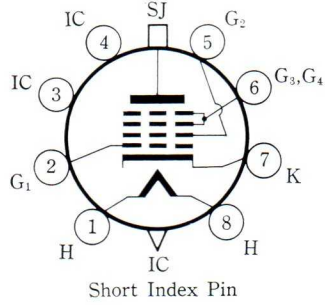
\* Value when the flux density of the focus coil is 70 gauss.

■ **DIMENSIONAL OUTLINE**

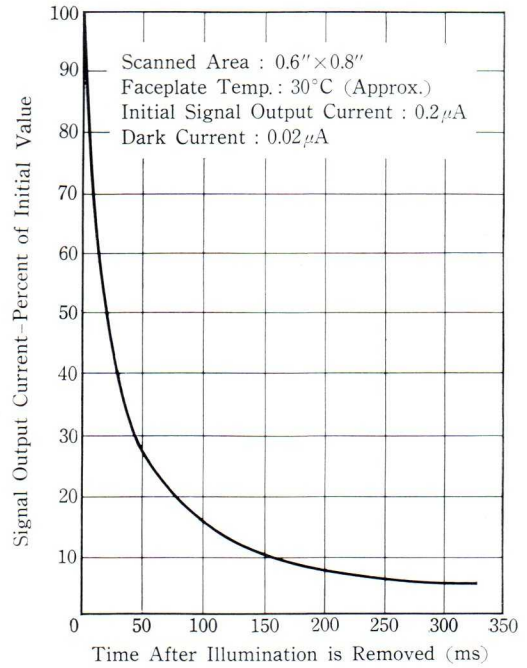
■ **Masked Portion or None**



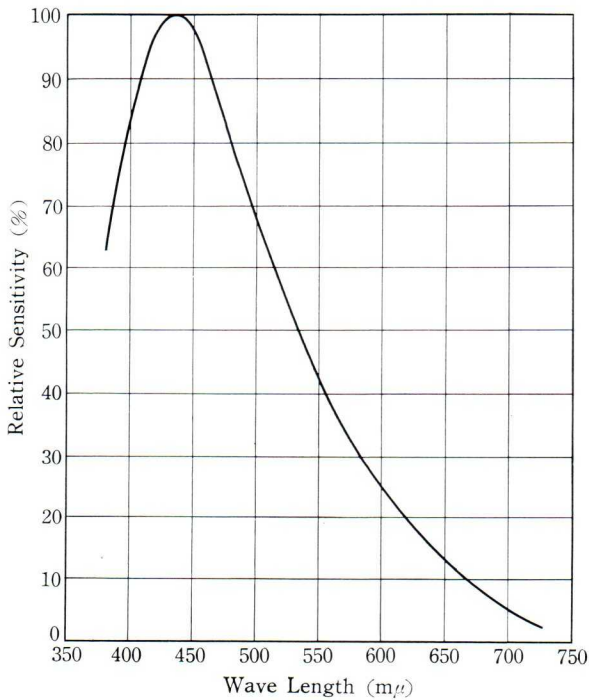
■ **Bottom View**



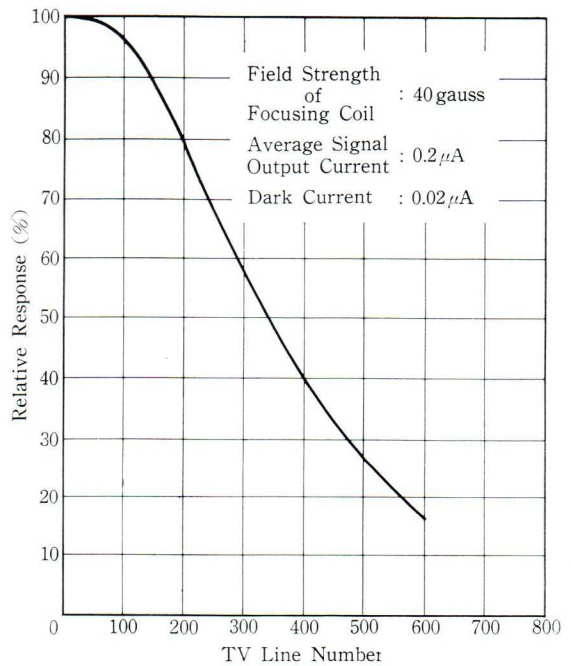
■ **Persistence Characteristics of a Typical 7735A**



■ **Spectral Sensitivity Characteristics of a Typical 7735A**

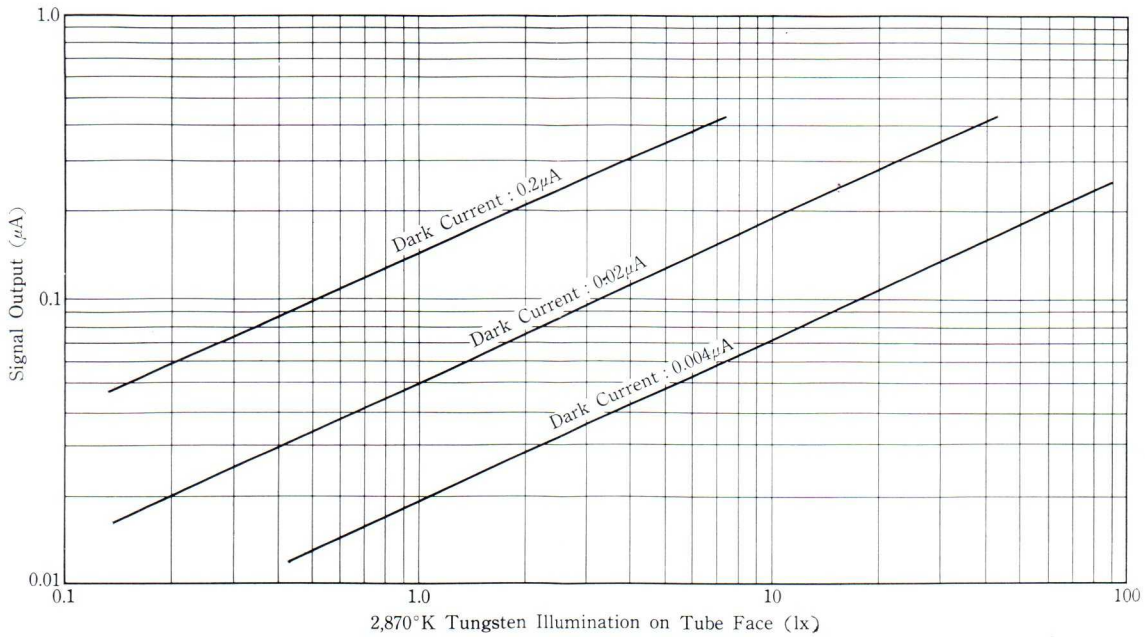


■ **Uncompensated Horizontal Square Wave Response of a Typical 7735A**





■ Light Transfer Characteristics of a Typical 7735A



# HITACHI VIDICON 8051



For broadcast film-pickup or data transmission with color or black-and-white TV cameras.

■ GENERAL

Heater, for Unipotential Cathode

Voltage (AC or DC) .....	6.3+10% V
Current at 6.3 volts .....	0.6 A
Direct Interelectrode Capacitance	
Target to All other Electrodes .....	8.0 pf
Spectral Response .....	See curve
Focusing Method .....	Magnetic
Deflection Method .....	Magnetic
Overall Length .....	7.75" ± 0.25"
Greatest Diameter .....	1.59" ± 0.01"
Operating Position .....	Any
Base .....	Small Button Superdinettr 8-pin

■ MAXIMUM RATINGS (Absolute-Maximum Values)

For scanned area of 0.6" × 0.8"

Grid No. 4 Voltage .....	1,500 V max.
Grid No. 3 Voltage .....	1,500 V max.
Grid No. 2 Voltage .....	550 V max.
Grid No. 1 Voltage	
Negative bias value .....	300 V max.
Positive bias Value .....	0 V max.
Peak Heater-Cathode Voltage	
Heater negative with respect to cathode .....	125 V max.
Heater positive with respect to cathode .....	10 V max.
Target (Signal Electrode) Voltage .....	125 V max.
Dark Current .....	0.25 μA max.
Peak Target current .....	0.6 μA max.
Faceplate	
Illumination .....	10,000 lx max.
Temperature .....	70 °C max.

■ TYPICAL OPERATON

For scanned area of 0.6" × 0.8"  
Faceplate temperature of 30°C ~ 35°C

(Cont'd)

Grid No. 4 Voltage .....	1,400 V
Grid No. 3 Voltage .....	800~1,000 V
Grid No. 2 Voltage .....	300 V
Grid No. 1 Voltage for picture cutoff .....	-45~-100 V
Average "Gamma" .....	0.65
Visual Equivalent S/N Ratio (Approx.)	
Min. Peak to Peak Blanking Voltage	
When applied to Grid No. 1 .....	75 V
When applied to Cathode .....	20 V
Field Strength at Center of Focusing Coil .....	46 gauss
Field Strength at Adjustable Alignment Coil .....	0~4 gauss
Resolution at center .....	1,200 TV lines

**Maximum Sensitivity Operation**

Faceplate Illumination .....	10~20 lx
Target Voltage .....	40~60 V
Dark Current .....	0.05 $\mu$ A
Signal Output Current .....	0.2 $\mu$ A

**Average Sensitivity Operation**

Faceplate Illumination .....	80 lx
Target Voltage .....	20~50 V
Dark Current .....	0.02 $\mu$ A
Signal Output Current .....	0.3 $\mu$ A

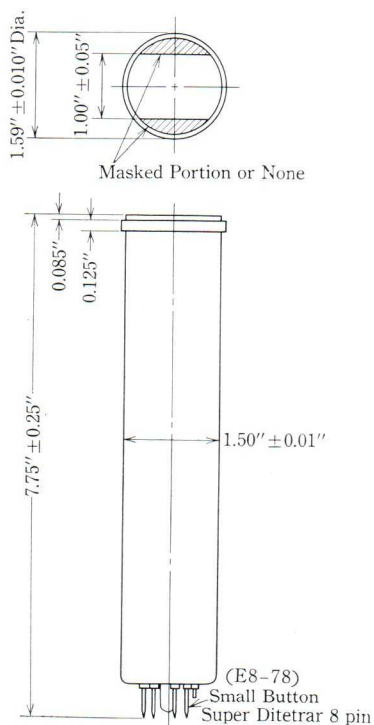
**Minimum Lag Operation**

Faceplate Illumination .....	360 lx
Target Voltage .....	10~30 V
Dark Current .....	0.005 $\mu$ A
Signal Output Current .....	0.3 $\mu$ A

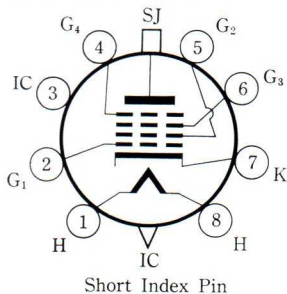
\* For minimum dark current uniformity, grid No. 4 voltage should be adjusted to approximately 1.6 times the grid No. 3 voltage value. Beam focus obtained by the combined effect of grid No. 3 voltage, which should be adjusted over indicated range, and a focusing coil having an averaged field of strength of 46 gauss.

**■ DIMENSIONAL OUTLINE**

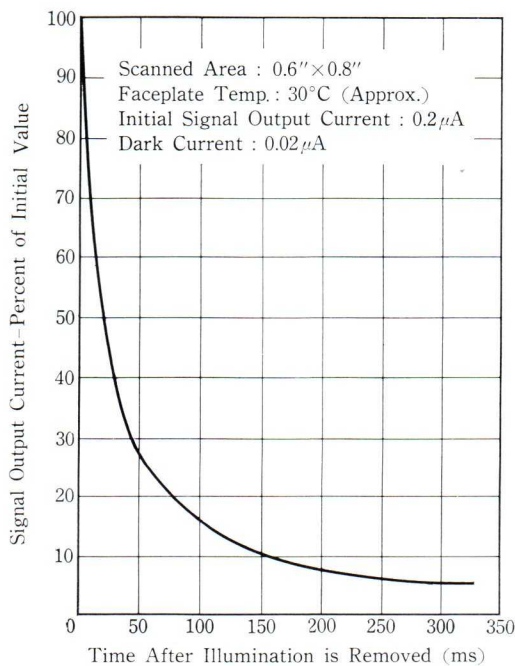
**■ Masked Portion or None**



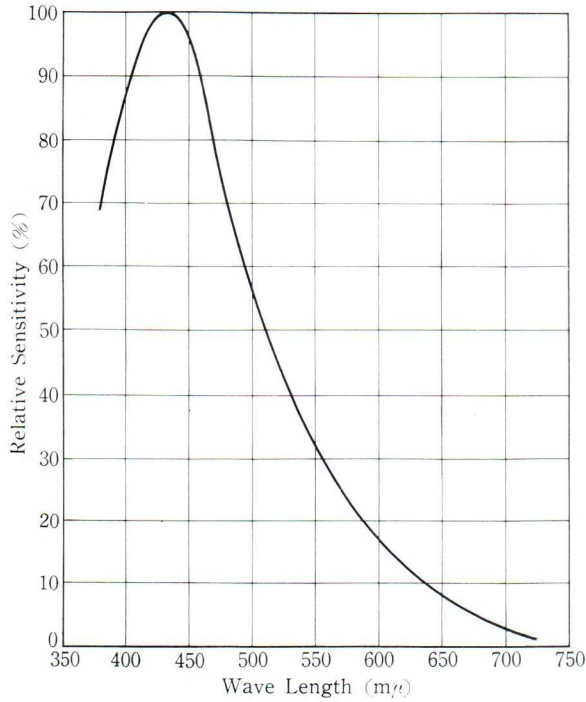
**■ Bottom View**



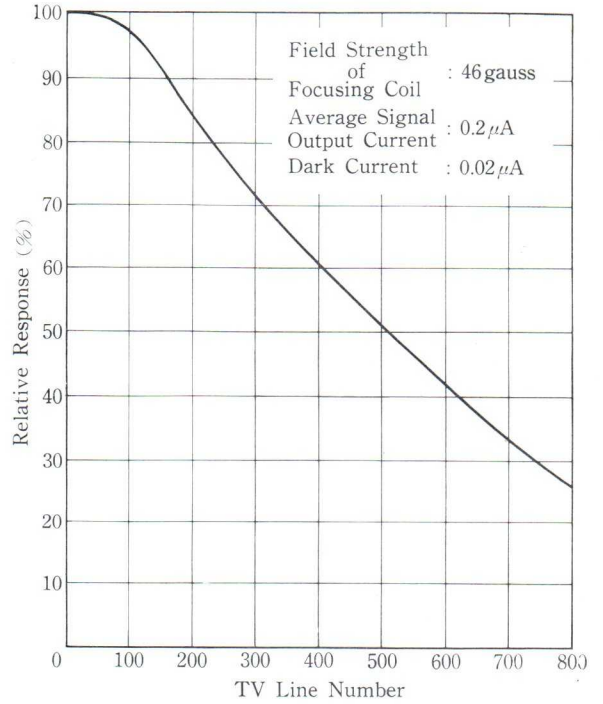
**■ Persistence Characteristics of a Typical 8051**



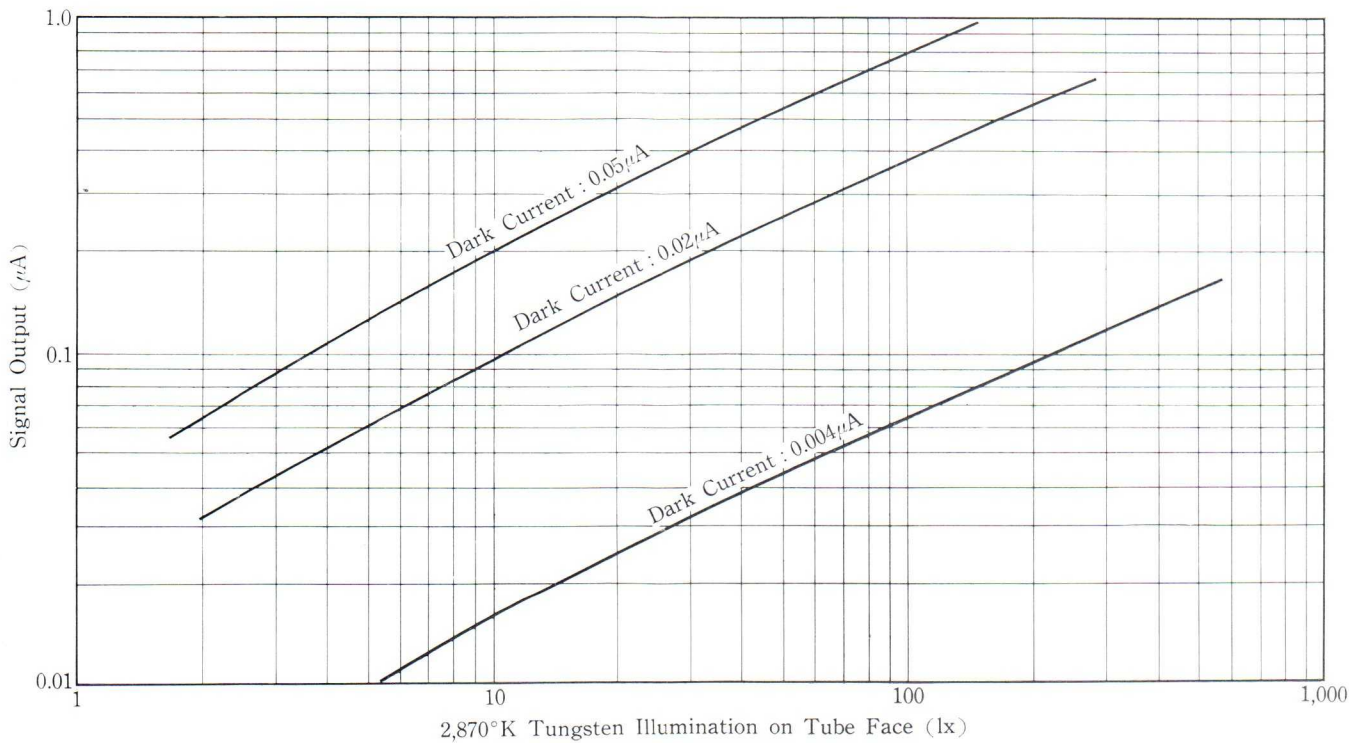
■ Spectral Sensitivity Characteristics of a Typical 8051



■ Uncompensated Horizontal Square Wave Response of a Typical 8051



■ Light Transfer Characteristics of a Typical 8051







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