

CTP)

# HITACHI

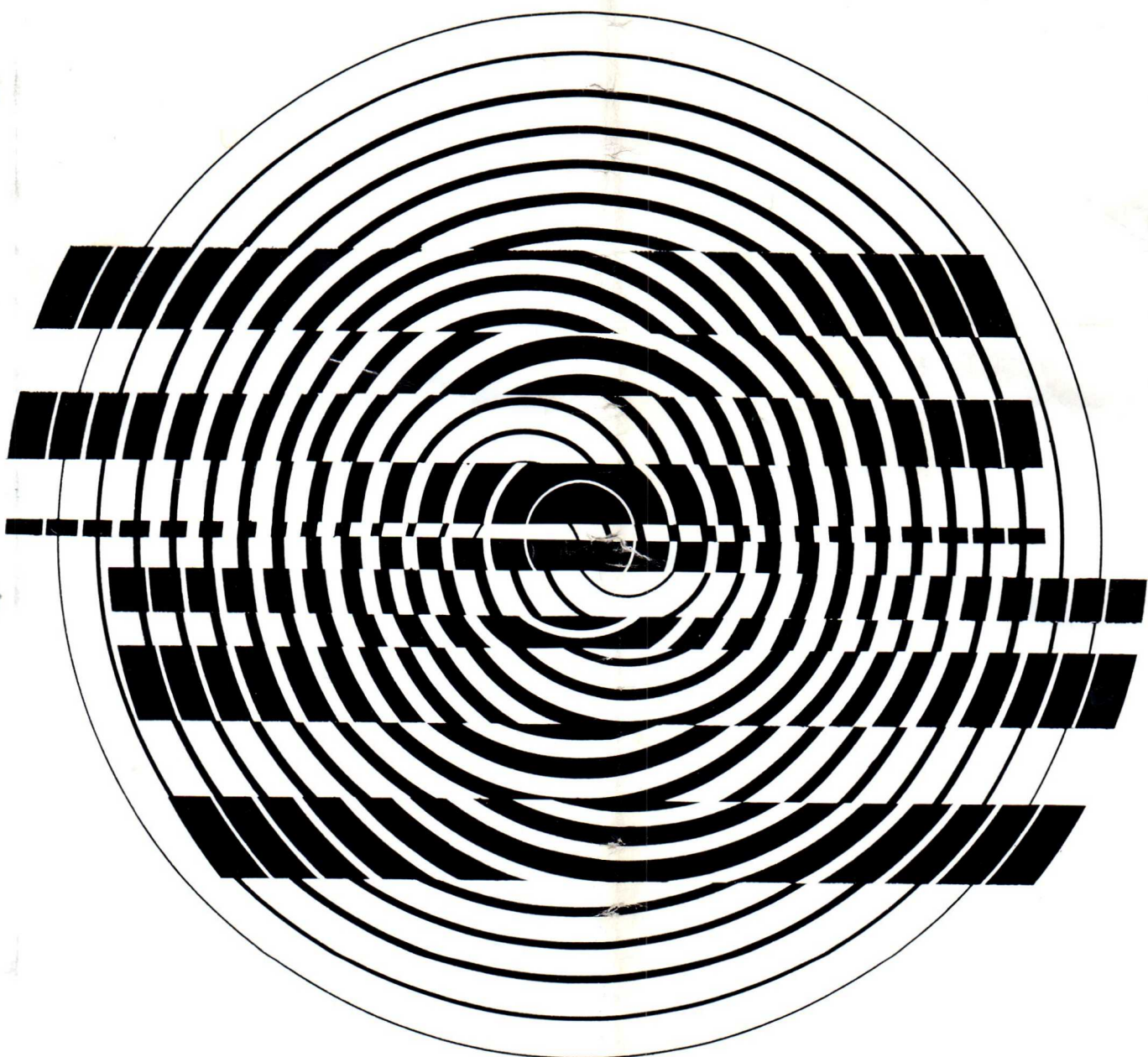
# VIDICONS

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

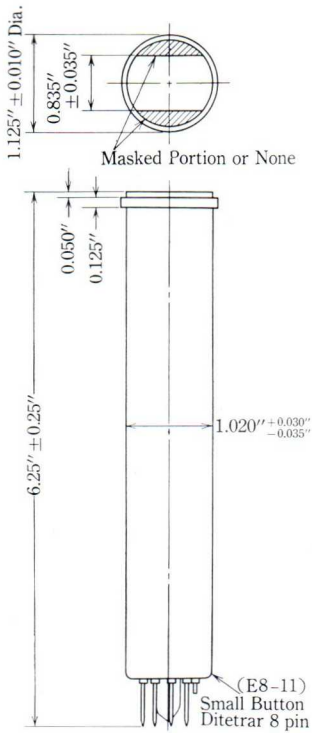
### Minimum Lag Operation

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

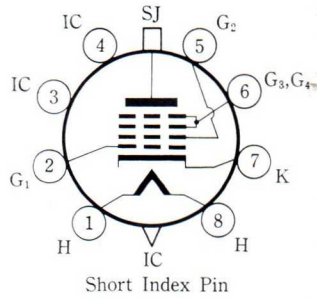
\* Value when the flux density of the focus coil is 70 gauss.

■ **DIMENSIONAL OUTLINE**

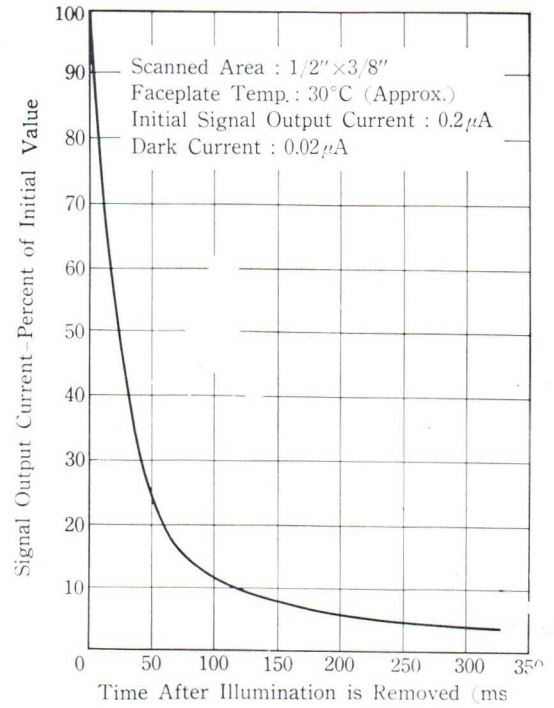
■ **Masked Portion or None**



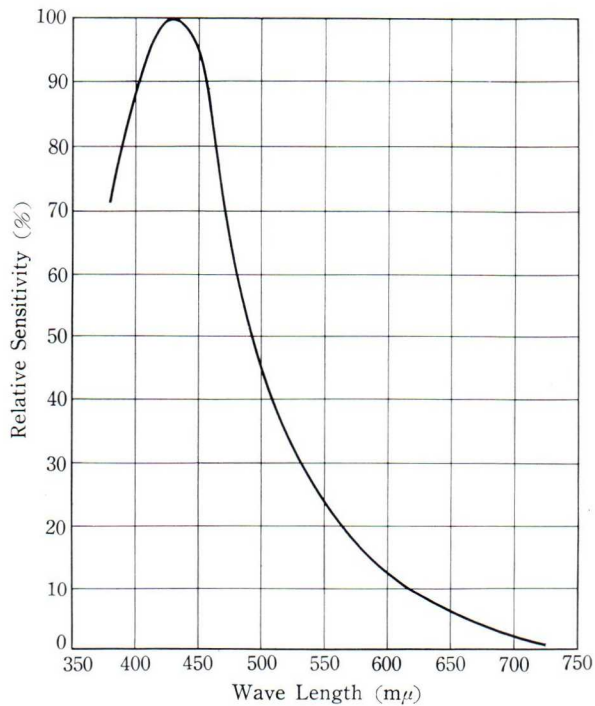
■ **Bottom View**



■ **Persistence Characteristics of a Typical 7038**



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



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

