



GENERAL ELECTRODYNAMICS

8865 OXYCON*
MAGNETIC FOCUS AND DEFLECTION
SEPARATE MESH CONNECTION
600 MILLIAMPERE HEATER

The 8865 Oxycon* is an image pickup tube in the vidicon format which employs a special photoconductive target consisting of the oxides of lead and other materials. The Oxycon* combines the desirable properties of high sensitivity, low lag and low dark current. The 8865 is electrically and mechanically interchangeable with the 8507 or 8625. The low lag of the Oxycon* is its most outstanding feature, making it particularly useful in applications where rapid motion is to be observed.

DATA

GENERAL:

Operating Position	Any
Focusing Method	Magnetic
Deflection Method	Magnetic
Maximum Useful Diameter	0.625 in

ELECTRICAL CHARACTERISTICS ABSOLUTE MAXIMUM RATINGS:

Heater Voltage	6.9 V
Heater to Cathode Voltage	
Heater Positive	10 V
Heater Negative	125 V
Grid No. 1	
Positive	0 V
Negative	300 V
Grid No. 2	1000 V
Grid No. 3	1000 V
Grid No. 4	1000 V
Grid 3 to Grid 4 Differential	500 V
Faceplate	
Illumination	1000 ft-c
Operating Temperature	-35° to +50° C
Storage Temperature	-35° to +50° C

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ABSOLUTE MAXIMUM RATINGS (Continued)

Signal Electrode	
Voltage	60 V
Current	0.3 μ A

TYPICAL OPERATION:

Heater	
Voltage	6.3 V
Current	600 mA
Cathode	0 (Ref.)
Grid No. 1 (for Cutoff)	-45 to -100 V
Grid No. 2	300 V
Grid No. 3	265 V
Grid No. 4	400 V
Focus Field	40 Gauss
Signal Electrode	
Potential	45 V
Current (at 1.0 ft-c Faceplate Illumination)	0.2 μ A
Scanned Area	0.375 x 0.500 in
Faceplate Temperature	30° to 35° C
Average Gamma of Transfer Characteristic over Signal	
Output Range from 0.02 to 0.3 μ A	.95

For optimum results it is recommended that the mesh voltage (E_C4) be from 1.1 to 1.5 times the anode voltage (E_C3). Under no circumstances should the mesh be operated at a lower potential than the anode.

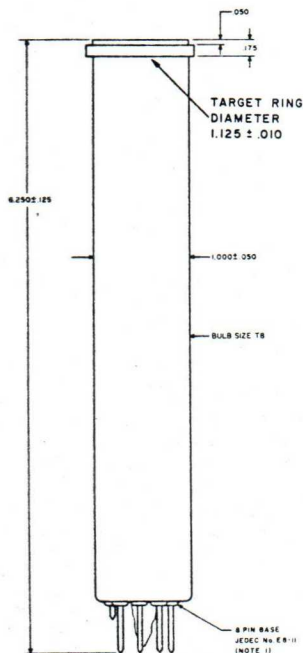


FIG. 1

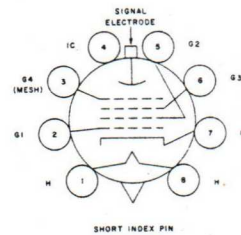


FIG. 2 BOTTOM VIEW

- PIN 1: HEATER
- PIN 2: GRID NO. 1
- PIN 3: GRID NO. 4 (MESH)
- PIN 4: INTERNAL CONNECTION--DO NOT USE
- PIN 5: GRID NO. 2
- PIN 6: GRID NO. 3
- PIN 7: CATHODE
- PIN 8: HEATER
- FLANGE: SIGNAL ELECTRODE
- SHORT INDEX PIN: INTERNAL CONNECTION--DO NOT USE

NOTES

1. Base-pin positions fit .025 inch thick, 10-hole flat-plate gage with holes located as follows: 9 holes, 0.050 (± 0.0005) inch diameter equally spaced, 0.2052 (± 0.0005) inch apart on a circle, 0.6000 (± 0.0005) inch diameter, plus a center hole, 0.300 (± 0.001) inch diameter, concentric with 9-hole circle.

2. All dimensions are shown in inches.

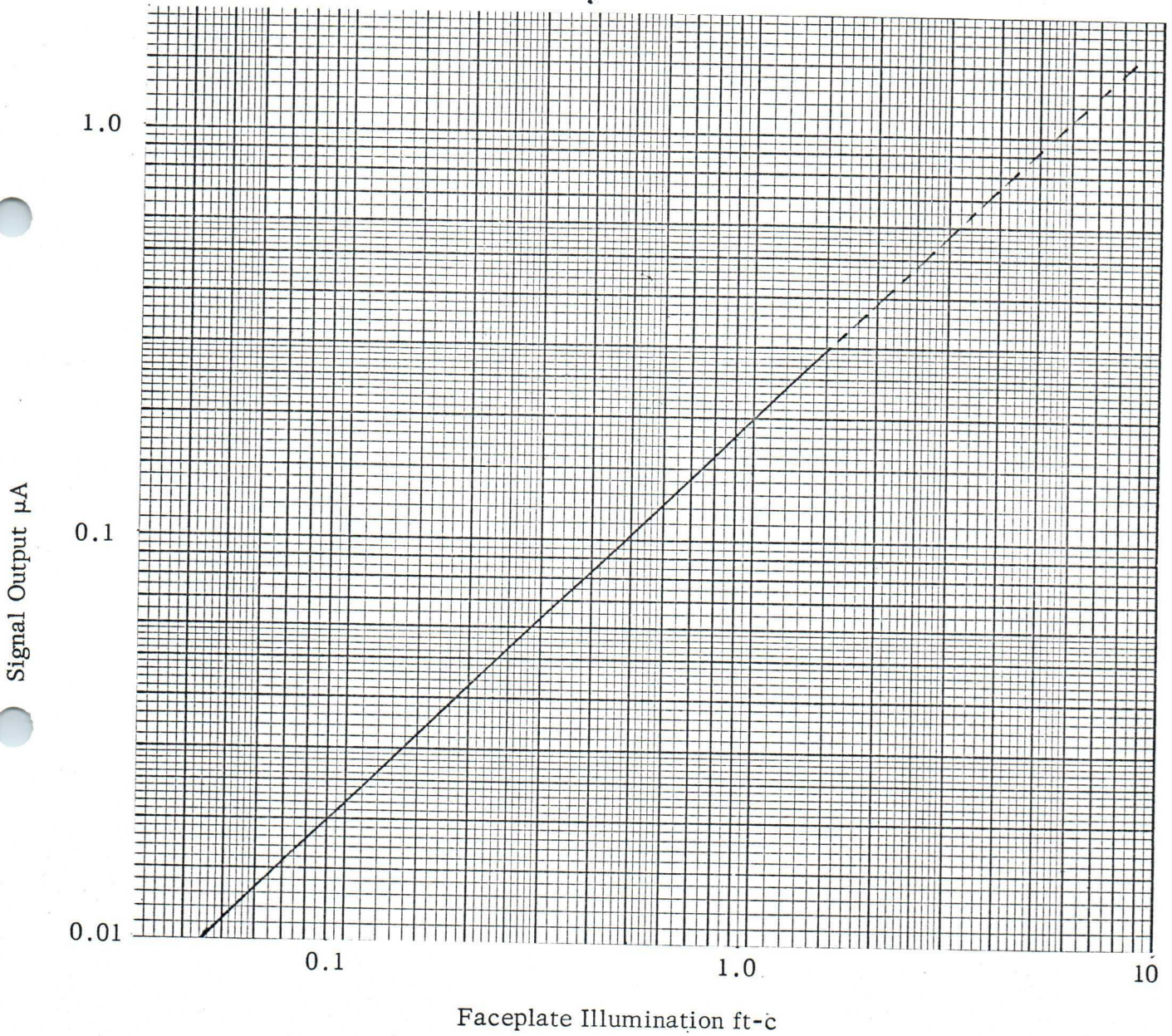
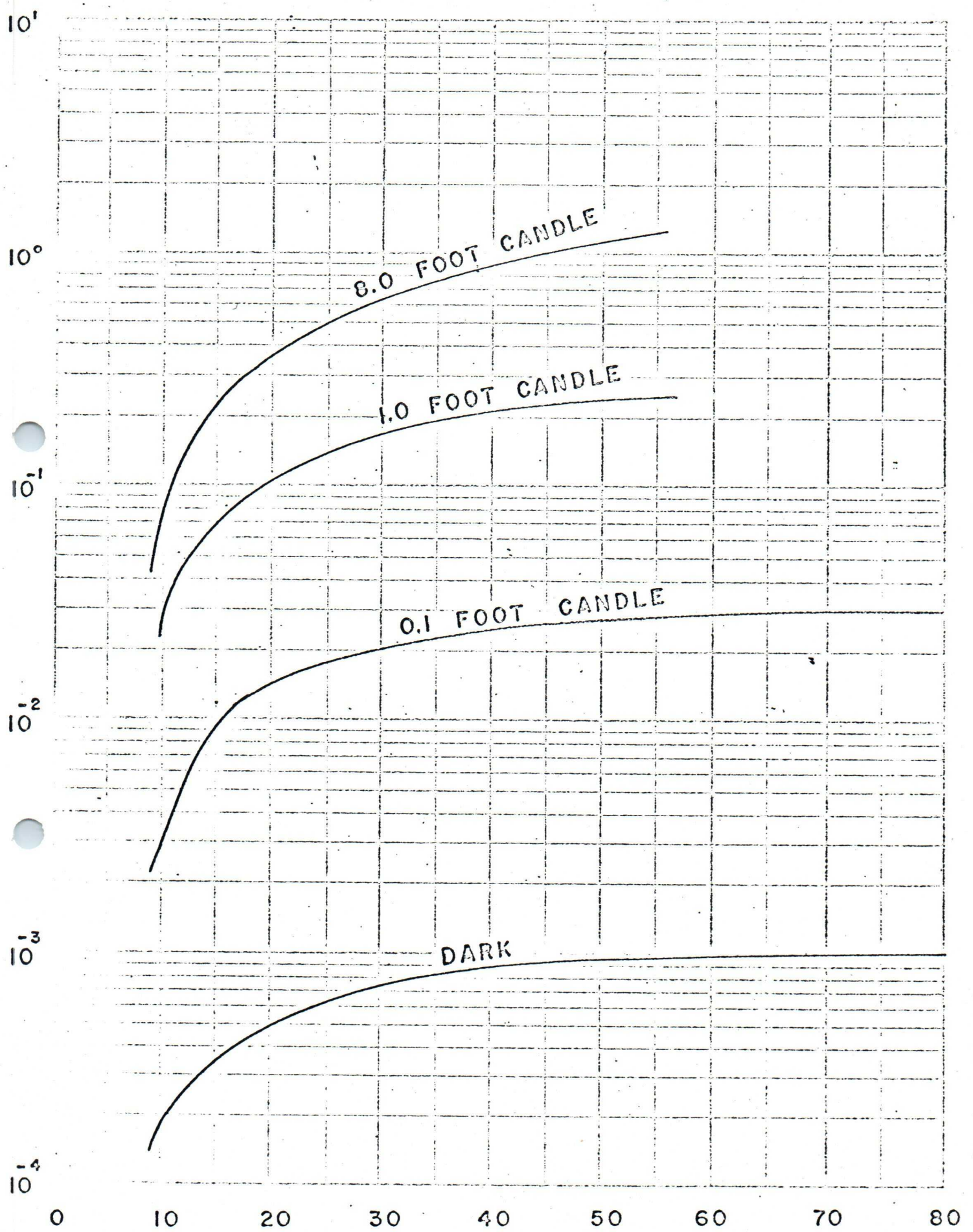


Figure 3
Typical Light Transfer Characteristic

TARGET CURRENT - MICROAMPERES



TARGET POTENTIAL - VOLTS

FIG. 4 - TYPICAL VOLTAGE-CURRENT CHARACTERISTIC

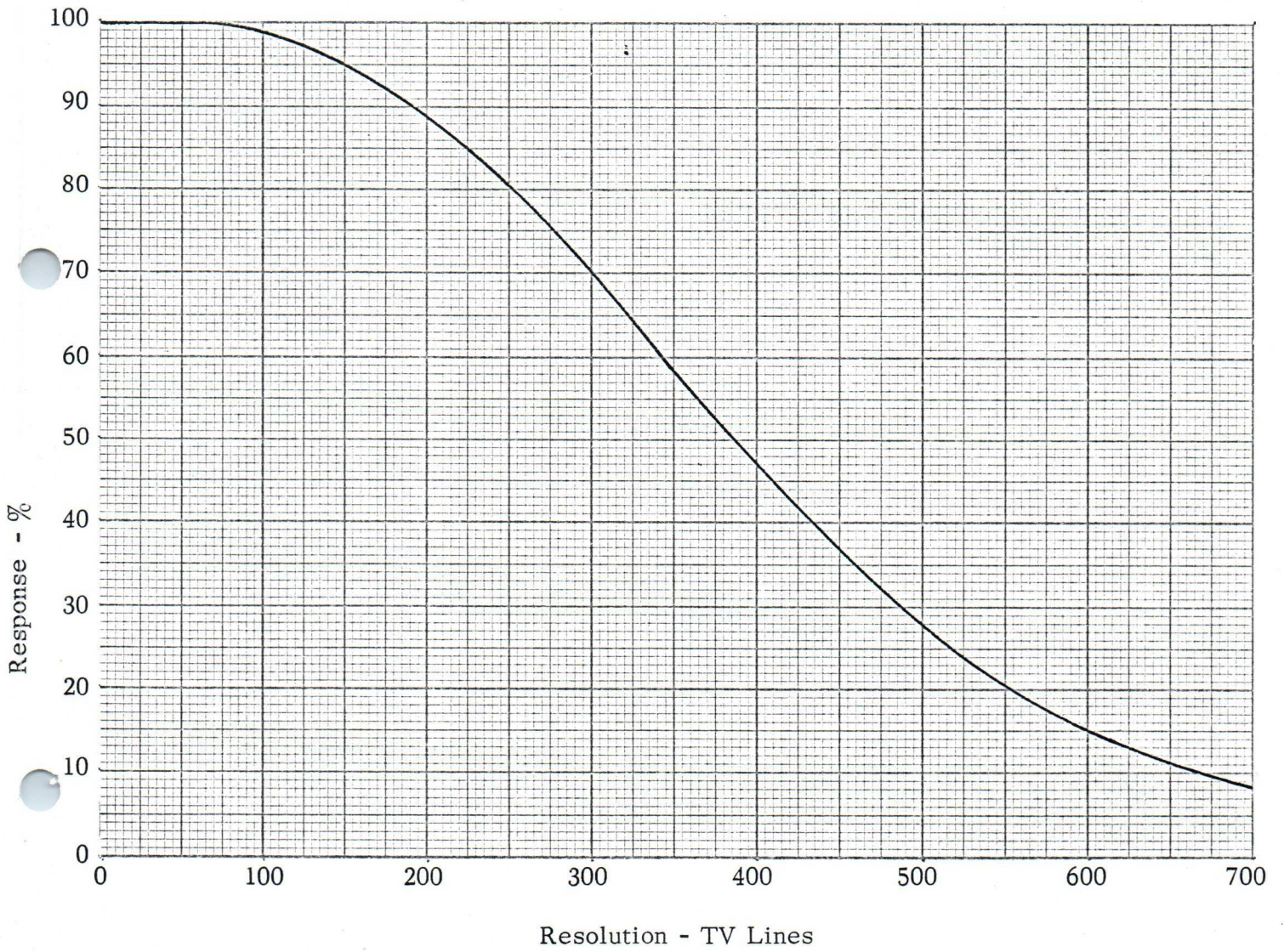


Figure 5

Typical Uncompensated Horizontal Response
to a Square Wave Input at Center of Tube

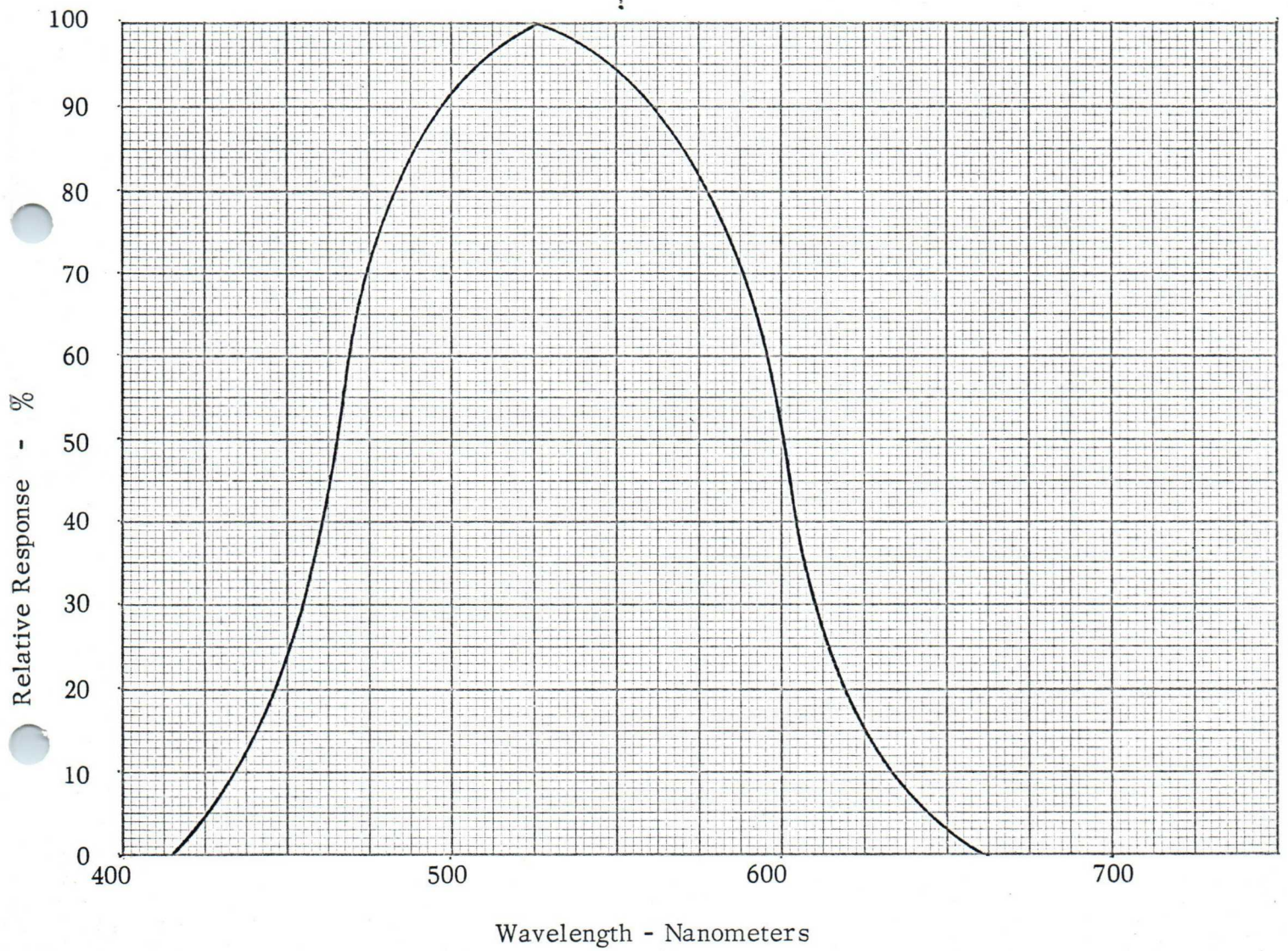


Figure 6
Typical Spectral Response