

GENERAL DATA

Spectral Response	See Curve
Wavelength of Max. Response	6100 $\pm$ 400 Angstroms
Sensitive Material	Cadmium-Sulfide
Shape of Sensitive Area	Circular
Construction	Hermetically Sealed in Glass Flexible Leads
Outline	See Drawing
Operating Position	Any

ELECTRICAL DATA

RATINGS (Absolute Maximum Values)

Breakdown Voltage ²	400 VAC
Dissipation	
T-amb = 25°C	300 mW
T-amb = 70°C	25 mW
Ambient Temperature Range	-40 to +70 °C
Illumination	Note 3

CHARACTERISTICS

Cell Resistance ¹	
Illumination 2 FC	1500 Ohms
Color Temperature 2870°K	
Dark Resistance ^b	200,000 Ohms Min.

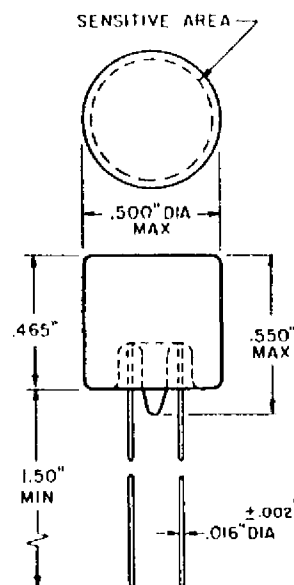
NOTES:

1. Minute increases in relative humidity will produce change in color.
2. Measured with cell in complete darkness at a pulse rate of 120 pps, 50 μ sec. duration. Voltage in excess of the rated value may damage the cell. Maximum DC voltage is limited by maximum dissipation and minimum dark resistance rating.
3. Care should be exercised to prevent localized overheating of the sensitive surface when the cell is used with a lens system.
4. Measured after 60 minutes exposure to approximately 50 FC illumination (ambient room light).
5. Measured in complete darkness, 10 seconds after removal of 2 FC illumination.

QUICK REFERENCE DATA

The Sylvania Type 8142 is a cadmium sulfide photo-conductive cell featuring high sensitivity and hermetically sealed-in-glass construction. The cell is back-filled with gas for a high dissipation safety factor and high voltage capability and includes a blue-dot compound which turns pink¹ if the cell envelope becomes damaged. The 8142 features relatively low resistance (1500 Ohms). It is designed for use in a wide variety of industrial applications, and is particularly suited to direct operation of relays.

OUTLINE 8142



SYLVANIA ELECTRIC
PRODUCTS INC.

Electronic Components Group
ELECTRONIC TUBE DIVISION
EMPORIUM, PA.

A Technical Publication

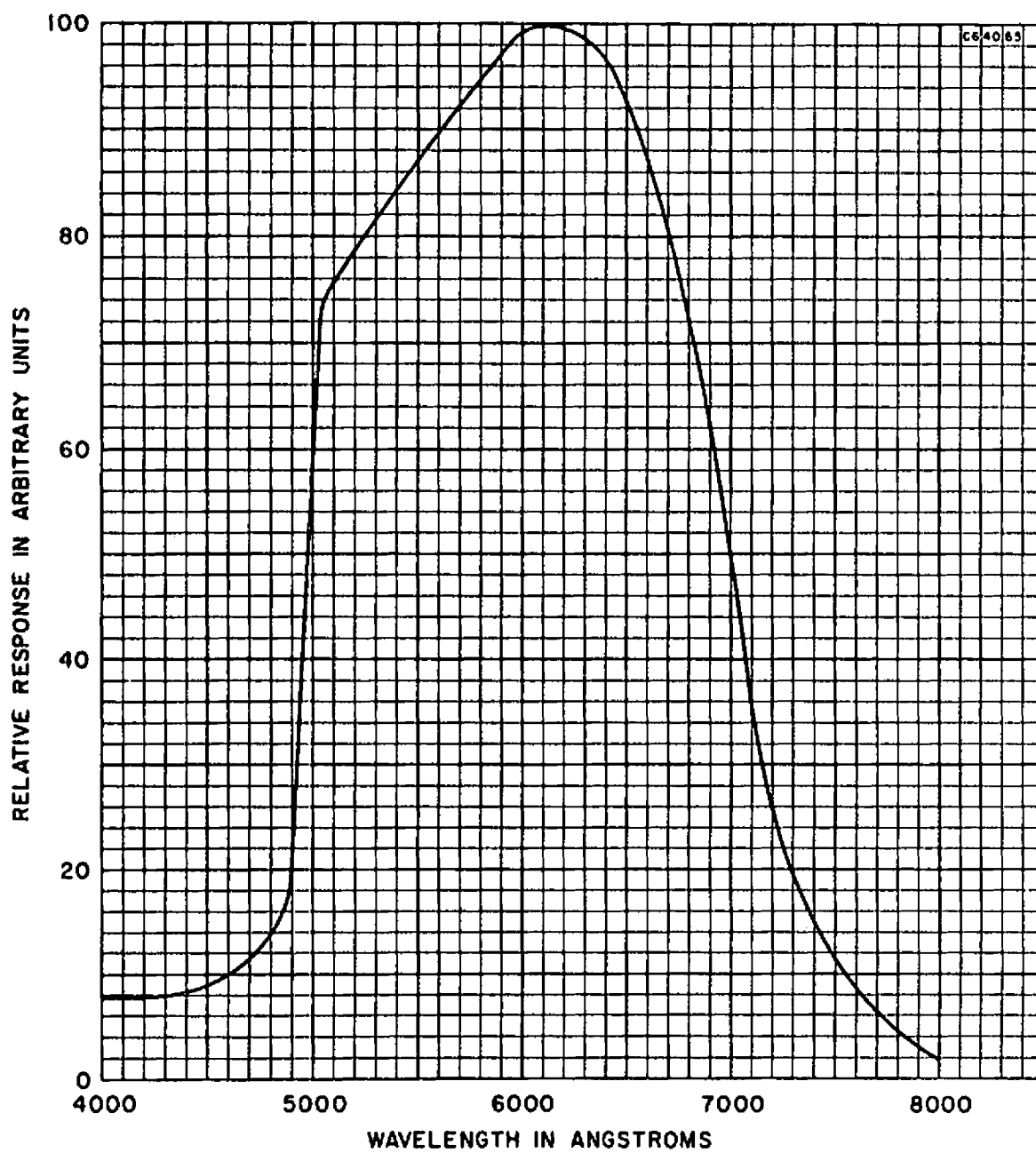
MAY, 1965

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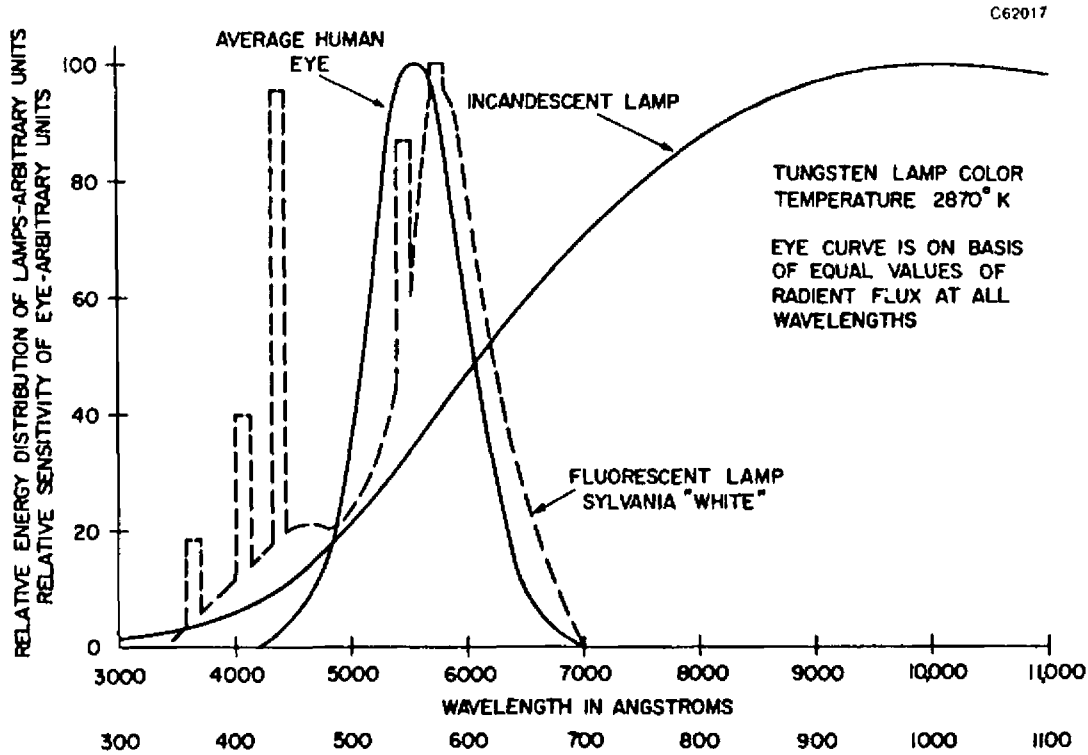
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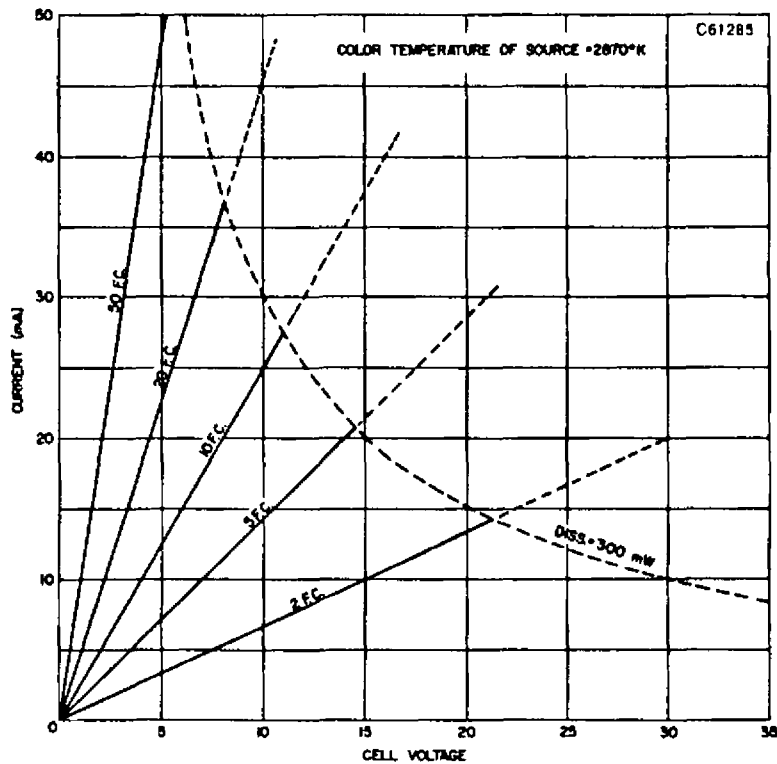
SPECTRAL RESPONSE



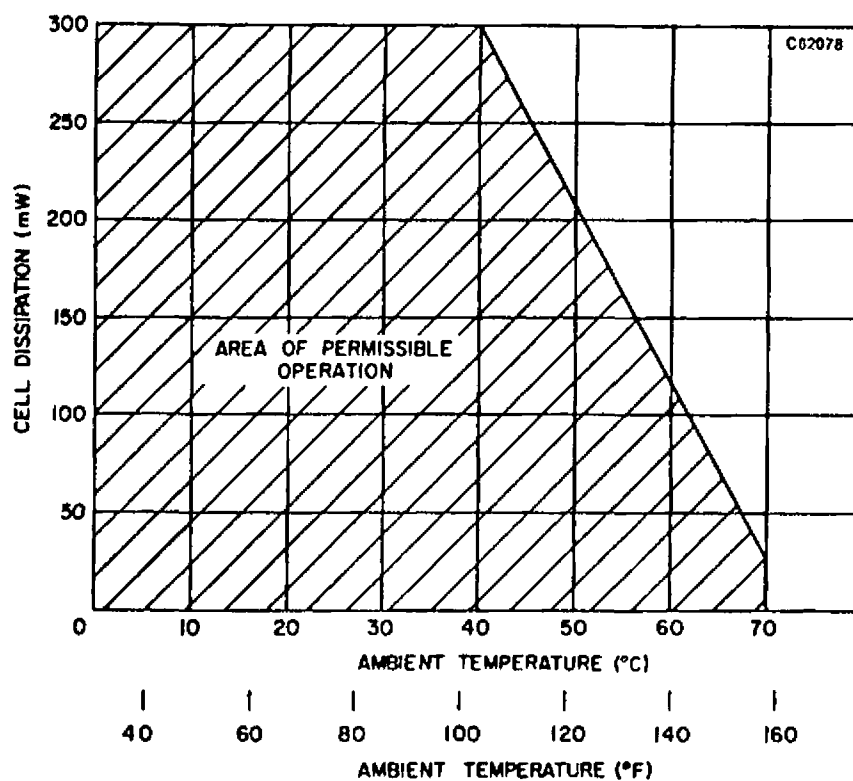
SPECTRAL CHARACTERISTIC OF HUMAN EYE,
TUNGSTEN AND FLUORESCENT LAMPS



AVERAGE CHARACTERISTICS



PERMISSIBLE DISSIPATION AS A FUNCTION OF AMBIENT TEMPERATURE



AVERAGE CHARACTERISTICS

