

**GENERAL DATA**

Spectral Response	See Curve
Wavelength of Max. Response	6100 ± 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 <sup>2</sup>	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 <sup>4</sup>	
Illumination 2 FC	
Color Temperature 2870°K	9000 Ohms
Dark Resistance <sup>5</sup>	900,000 Ohms Min.

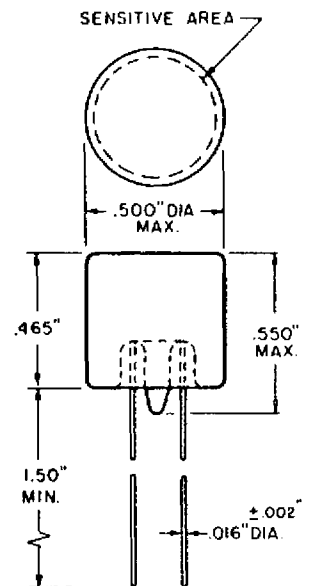
**NOTES:**

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 8143 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 pink<sup>1</sup> if the cell envelope becomes damaged. The 8143 features relatively high resistance (9000 Ohms). It is designed for use in a wide variety of industrial applications, and is particularly suited to direct operation of relays.

**OUTLINE 8143**



**SYLVANIA ELECTRIC PRODUCTS INC.**

Electronic Components Group  
**ELECTRONIC TUBE DIVISION**  
 EMPORIUM, PA.

*A Technical Publication*

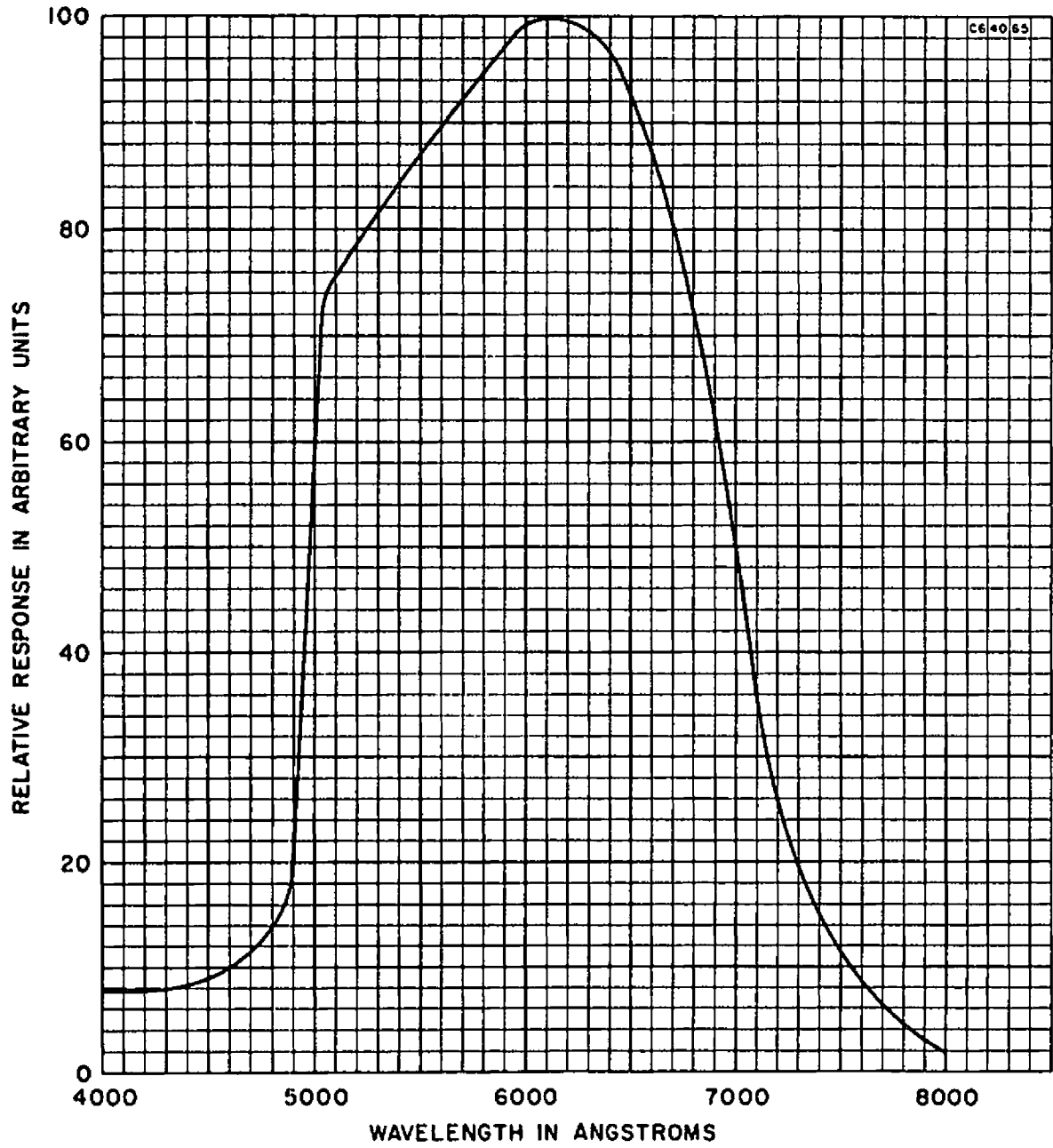
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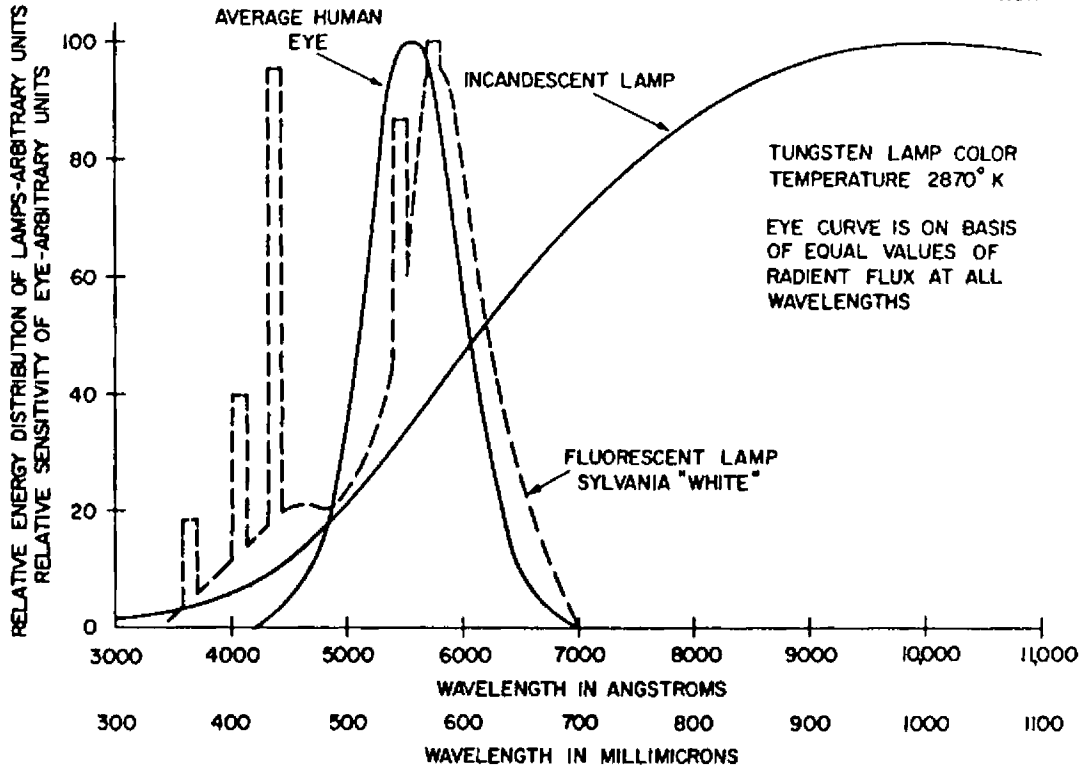
**PHOTOCONDUCTORS**

SPECTRAL RESPONSE

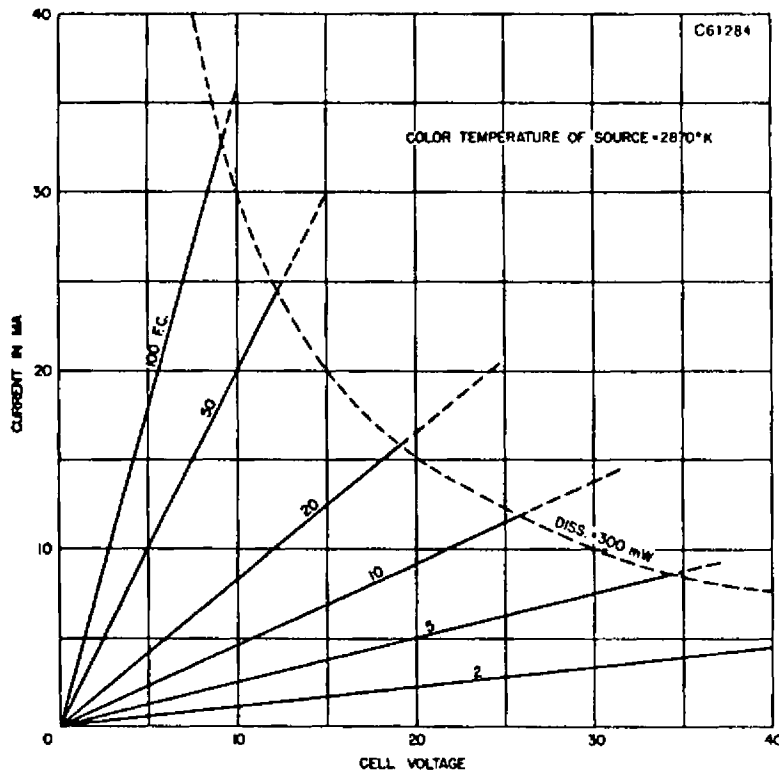


### SPECTRAL CHARACTERISTIC OF HUMAN EYE, TUNGSTEN AND FLUORESCENT LAMPS

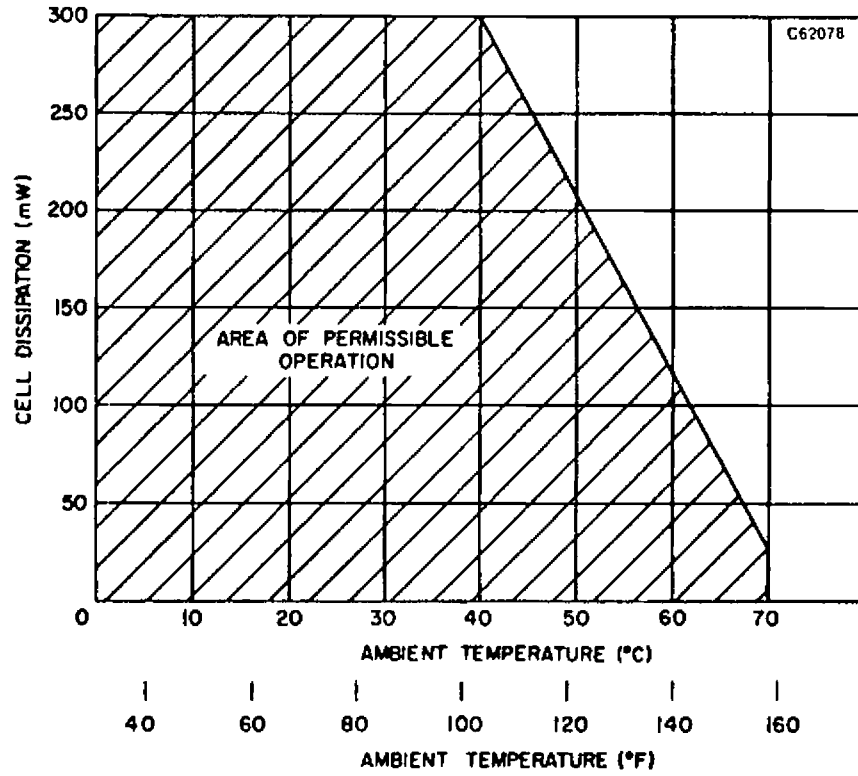
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### AVERAGE CHARACTERISTICS



PERMISSIBLE DISSIPATION AS A FUNCTION OF AMBIENT TEMPERATURE



AVERAGE CHARACTERISTICS

