

**13 mm (1/2 inch) diameter, 9-stage, High QE multialkali photocathode  
Side-on type, 185 nm to 900 nm spectral response**

**SPECIFICATIONS**

**GENERAL**

Parameter	Description/Value	Unit
Spectral response	185 to 900	nm
Wavelength of maximum response	450	nm
Photocathode	Material	Multialkali
	Minimum effective area	4 × 13
Window material	UV glass	—
Dynode	Structure	Circular-cage
	Number of stages	9
Weight	Approx. 5.4	g
Operating ambient temperature	-30 to +50	°C
Storage temperature	-30 to +50	°C
Suitable socket	E678-11U	—



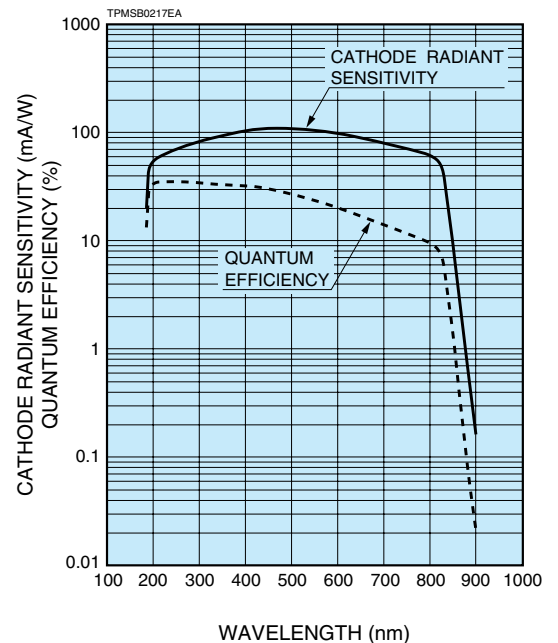
**MAXIMUM RATINGS (Absolute maximum values)**

Parameter	Value	Unit
Supply voltage	Between anode and cathode	1250
	Between anode and last dynode	150
Average anode current	0.01	mA

**CHARACTERISTICS (at 25 °C)**

Parameter	Min.	Typ.	Max.	Unit
Cathode sensitivity	Luminous (2856 K)	620	650	—
	Radiant at 450 nm	—	109	—
	Quantum efficiency at 780 nm	—	10	—
	Blue sensitivity Index (CS 5-58)	—	15.0	—
Anode sensitivity	Luminous (2856 K)	400	2600	—
	Radiant at 450 nm	—	4.3 × 10 <sup>5</sup>	—
Gain	—	4.0 × 10 <sup>6</sup>	—	—
Anode dark current (After 30 min storage in darkness)	—	3	10	nA
Time response	Anode pulse rise time	—	1.4	—
	Electron transit time	—	15	—

Figure 1: Typical spectral response



**VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE**

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	P
Ratio	1	1	1	1	1	1	1	1	1	1	1

Supply voltage: 1000 V, K: Cathode, Dy: Dynode, P: Anode

# PHOTOMULTIPLIER TUBE R12857

Figure 2: Typical gain characteristics

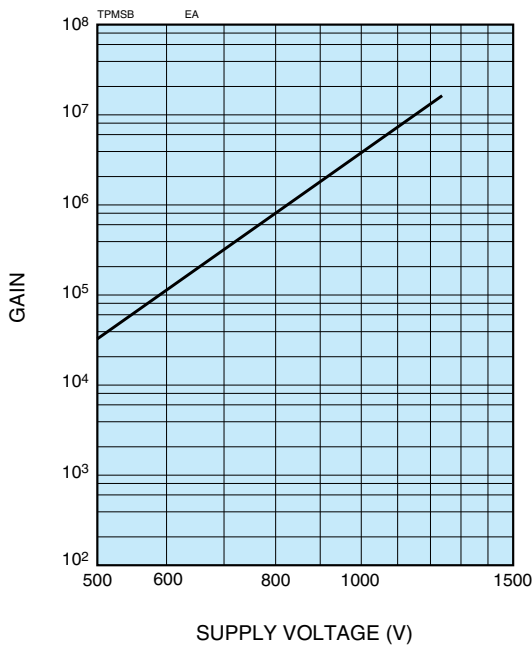
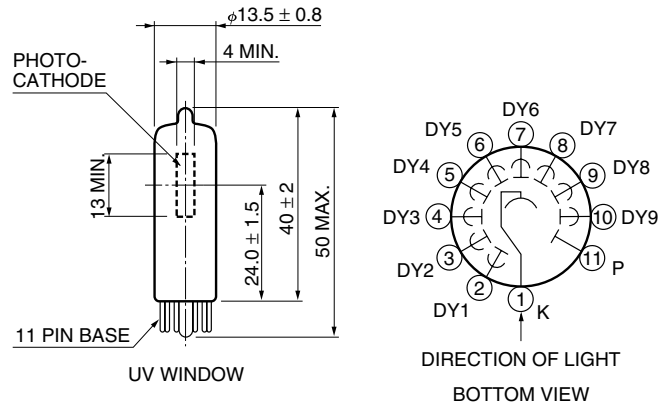


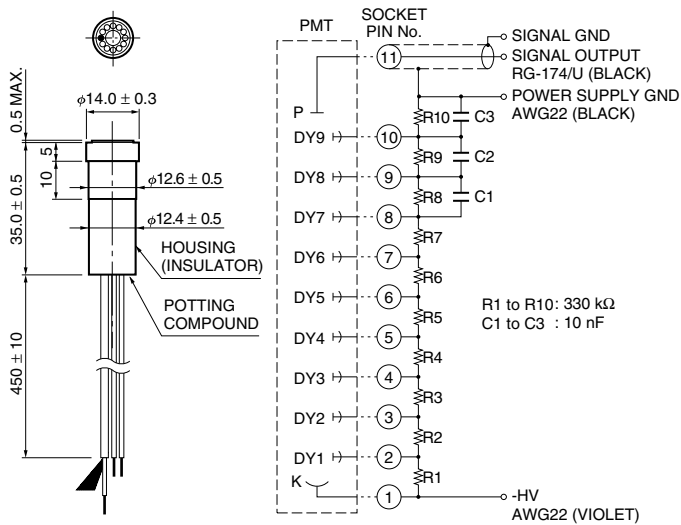
Figure 3: Dimensional outline and basing diagram (Unit: mm)



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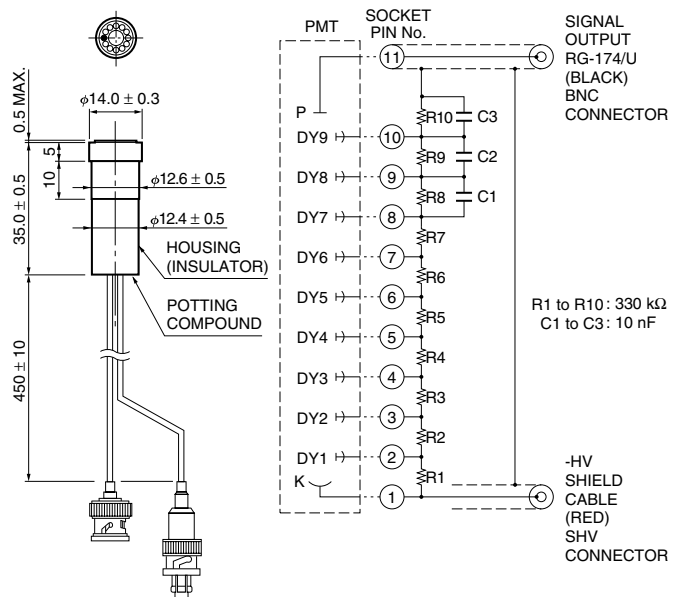
Figure 4: Accessories (Unit: mm) Sold separately

## D type socket assembly E850-13



TACCA0096EC

## D type socket assembly E850-22



TACCA0240EB

**Warning—Personal Safety Hazards**  
Electrical Shock—Operating voltages applied to this device present a shock hazard.

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