

**Compact Size (16 mm diameter, 12 mm seated length)  
High Gain, Fast Time Response**

**FEATURES**

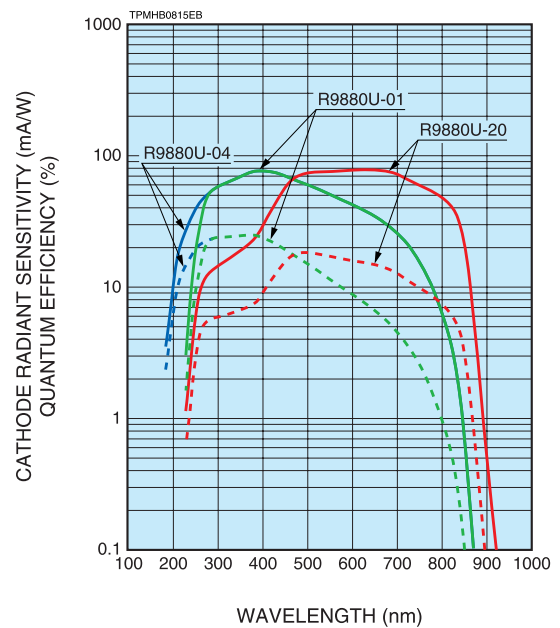
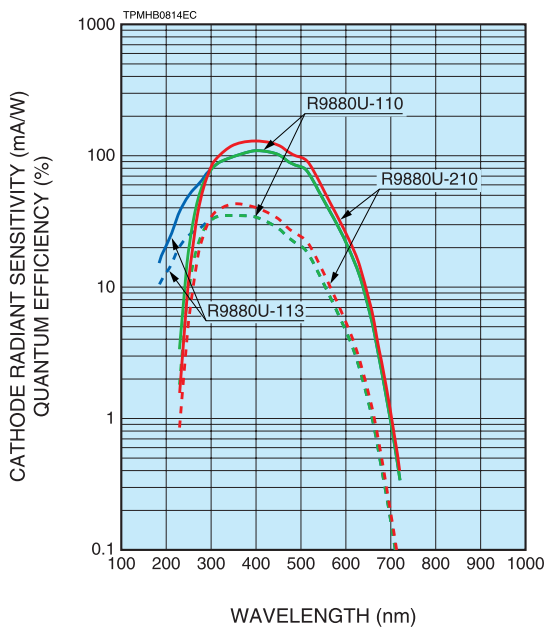
- Compact and Light Weight
- Metal Package (TO-8 Type)
- High Cathode Sensitivity
- High Gain .....  $2 \times 10^6$  (Typ.)

**APPLICATIONS**

- Spectroscopy
- Biotechnology
- Radiation Measurement
- Bacteria Monitor



Figure 1: Typical Spectral Response



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# PHOTOMULTIPLIER TUBE R9880U SERIES

Type No.	Spectral Response		Photo-cathode Material <sup>(A)</sup>	Window Material <sup>(B)</sup>	Dynode Structure / Stages <sup>(C)</sup>	Maximum Ratings		Cathode Characteristics				
	Range (nm)	Peak Wavelength (nm)				Supply Voltage Between Anode and Cathode (V)	Average Anode Output Current in Total (mA)	Luminous		Blue Sensitivity Index (CS 5-58) Typ.	Red/White Ratio (R-68) Typ.	Radiant <sup>(D)</sup>
								Min. ( $\mu\text{A/lm}$ )	Typ. ( $\mu\text{A/lm}$ )			
R9880U-01	230 to 870	400	MA	K	MC/10	1100	0.1	100	200	—	0.2	77
R9880U-04	185 to 870	400	MA	U				100	200	—	0.2	77
R9880U-20	230 to 920	630	MA	K				350	500	—	0.45	78
R9880U-110	230 to 700	400	SBA	K				80	105	13.5	—	110
R9880U-113	185 to 700	400	SBA	U				80	105	13.5	—	110
R9880U-210	230 to 700	400	UBA	K				100	135	15.5	—	130

**NOTE:** (A) MA: Multialkali, SBA: Super bialkali, UBA: Ultra bialkali  
 (B) K: Borosilicate glass, U: UV glass  
 (C) MC: Metal channel  
 (D) Measured at peak wavelength

Figure 2: Typical Gain

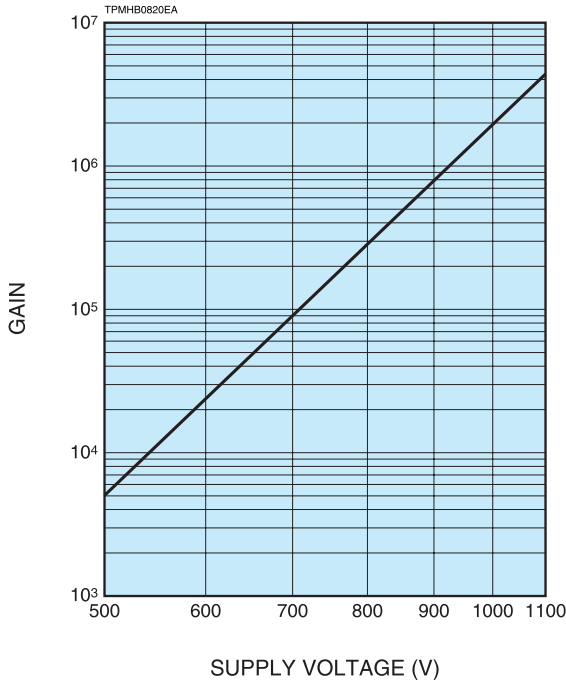
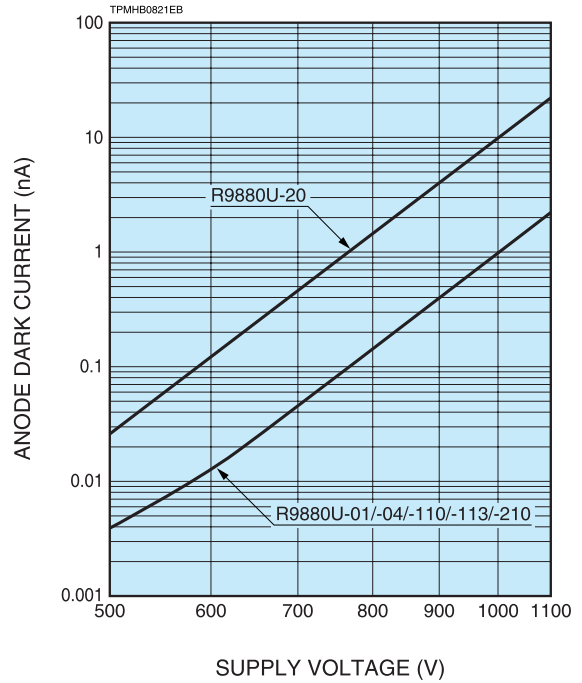


Figure 3: Anode Dark Current (v.s. Supply Voltage)



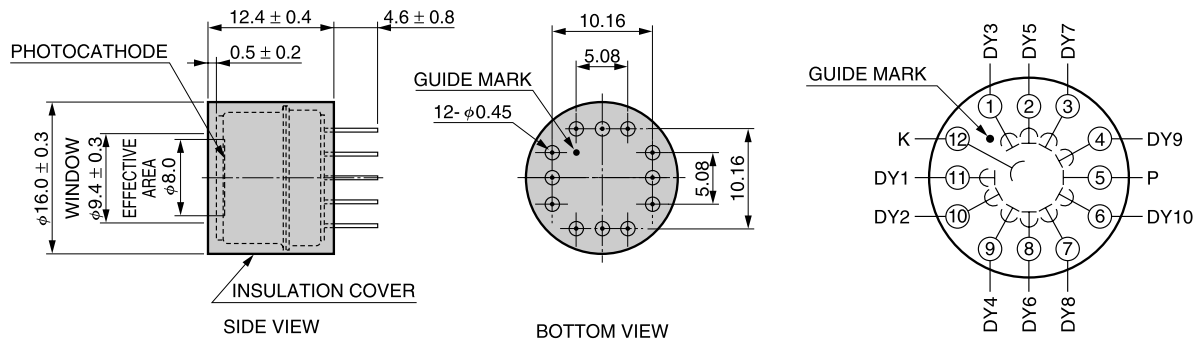
Anode to Cathode Supply Voltage (V)	Anode Characteristics								Operating Ambient Temperature (°C)	Storage Temperature (°C)	Type No.
	Luminous		Gain Typ.	Dark Current (After 30 min)		Time Response					
	Min. (A/lm)	Typ. (A/lm)		Typ. (nA)	Max. (nA)	Rise Time Typ. (ns)	Transit Time Typ. (ns)	TTS Typ. (ns)			
1000	100	400	2.0 × 10 <sup>6</sup>	1	10	0.57	2.7	0.2	-80 to +50	-80 to +50	R9880U-01
	100	400		1	10						R9880U-04
	350	1000		10	100						R9880U-20
	80	210		1	10						R9880U-110
	80	210		1	10						R9880U-113
	100	270		1	10						R9880U-210

### VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Distribution Ratio	1	1	1	1	1	1	1	1	1	1	1	0.5

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

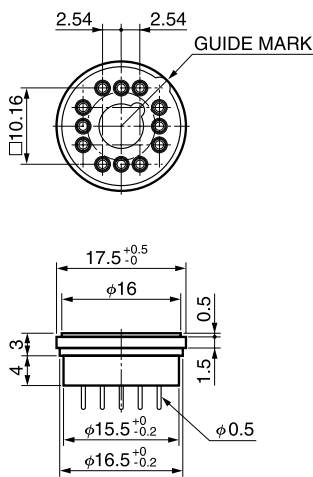
Figure 4: Dimensional Outline and Basing Diagram (Unit: mm)



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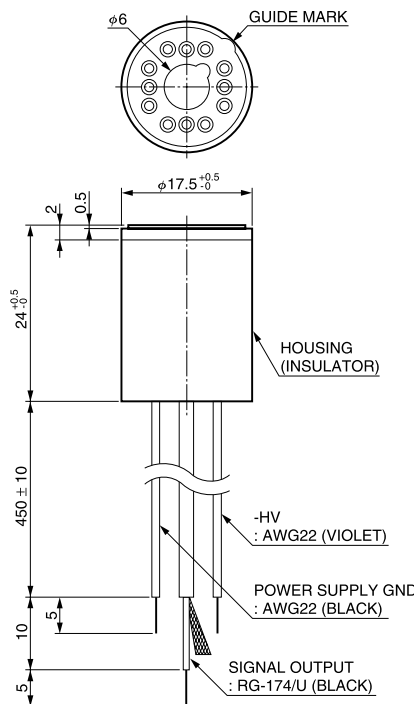
### [ACCESSORIES] (Unit: mm) **SOLD SEPARATELY**

#### ● Socket E678-12-01



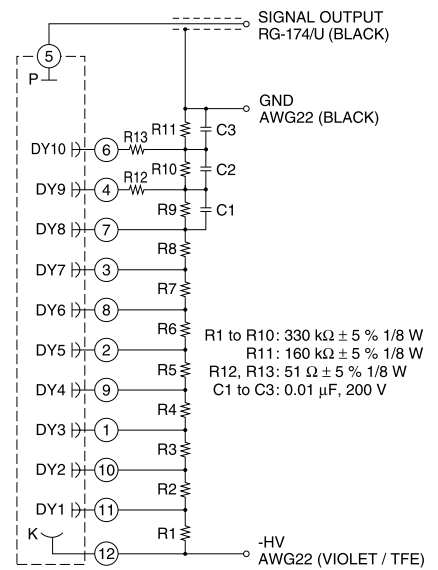
TACCA0304EA

#### ● D Type Socket Assembly E10679-02



\* SHV / BNC connector type (E10679-03) and pin type (E10679-51) are also available.

TACCA0299EC



MAXIMUM HIGH VOLTAGE = -1100 V  
DIVIDER CURRENT = 318 μA

TACCO0165EA