

**51 mm (2 Inch) Diameter, 10-stage, Head-on Type  
Extended Red Multialkali Photocathode**

**GENERAL**

Parameter		Description / Value	Unit
Spectral Response		300 to 900	nm
Wavelength of Maximum Response		600	nm
Photocathode	Material	Extended Red Multialkali	—
	Minimum Effective Area	φ46	mm
Window Material		Borosilicate glass	—
Dynode	Structure	Box and Grid	—
	Number of Stages	10	—
Base		15-pin glass base	—
Operating Ambient Temperature		-30 to +50	°C
Storage Temperature		-80 to +50	°C
Suitable Socket		E678-15C (supplied)	—

**MAXIMUM RATINGS (Absolute Maximum Values)**

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1500	V
	Between Anode and Last Dynode	250	V
Average Anode Current		0.1	mA

**CHARACTERISTICS (at 25 °C)**

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	140	230	—	μA/lm
	Radiant at 420 nm	—	50	—	mA/W
	Red / White Ratio (R-68)	—	0.35	—	—
Anode Sensitivity	Luminous (2856 K)	20	75	—	A/lm
	Radiant at 420 nm	—	$1.7 \times 10^4$	—	A/W
Gain		—	$3.3 \times 10^5$	—	—
Anode Dark Current (after 30 min storage in darkness)		—	7	15	nA
Time Response	Anode Pulse Rise Time	—	9.0	—	ns
	Electron Transit Time	—	70	—	ns

**NOTE:** Anode characteristics are measured with the voltage distribution ratio shown below.

**VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE**

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

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

# PHOTOMULTIPLIER TUBE R669

Figure 1: Typical Spectral Response

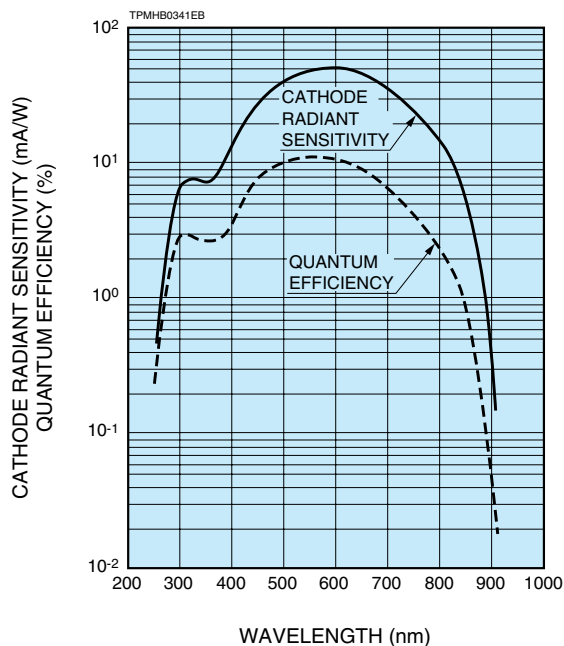


Figure 2: Typical Gain Characteristics

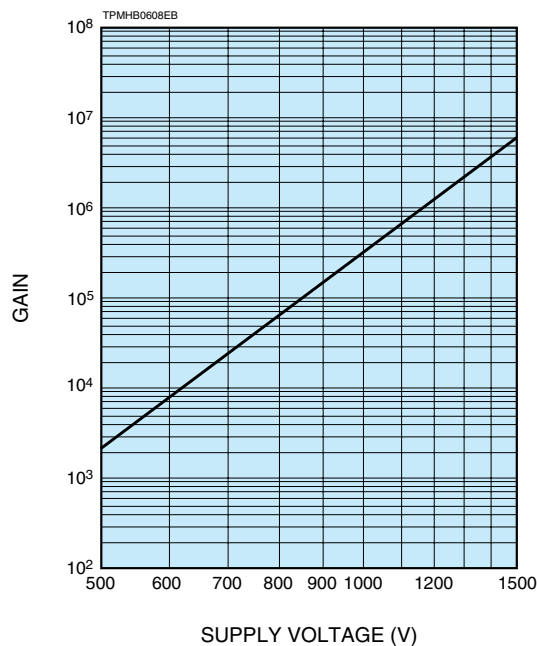


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)

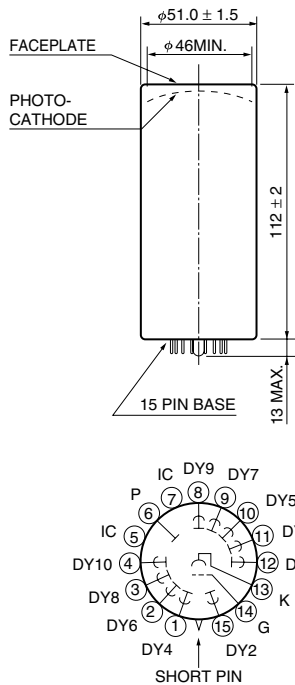
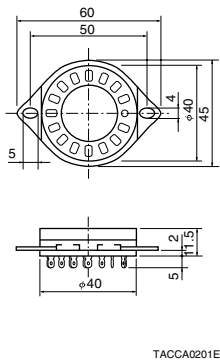
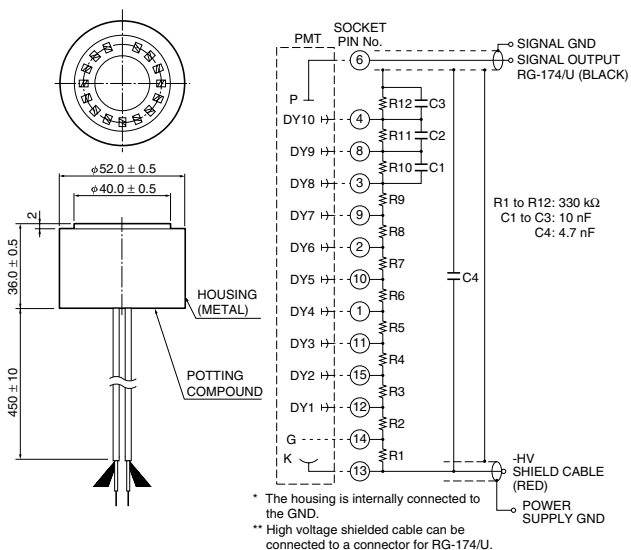


Figure 4: Accessories (Unit: mm)

Socket (supplied)  
E678-15C



D Type Socket Assembly (sold separately)  
E1435-02



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\* HAMAMATSU also provides C11152 series high voltage power supply modules.