

## 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	46	mm dia.
Window Material		Borosilicate glass	—
Dynode	Structure	Box and Grid	—
	Number of Stages	10	—
Base		15-pin glass base	—
Suitable Socket		E678-15B (supplied)	—

### MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1500	V dc
	Between Anode and Last Dynode	250	V dc
Average Anode Current		0.1	mA
Ambient Temperature		-80 to +50	°C

### 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 dc, K: Cathode, Dy: Dynode, P: Anode

# PHOTOMULTIPLIER TUBE R669

Figure 1: Typical Spectral Response

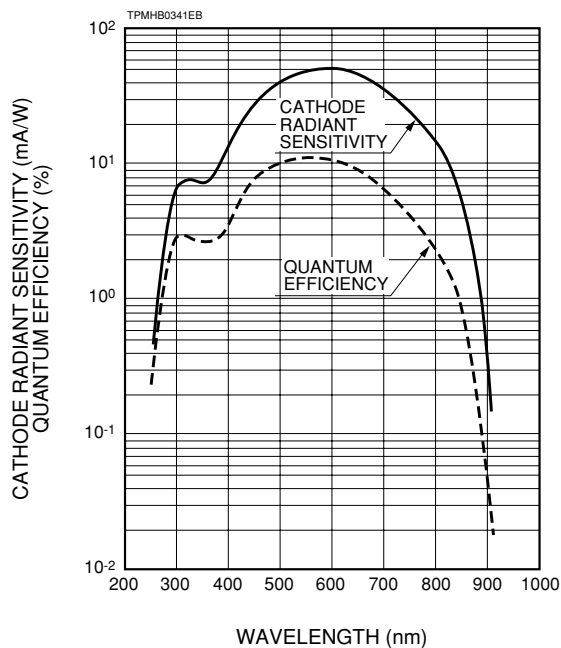


Figure 2: Typical Gain Characteristics

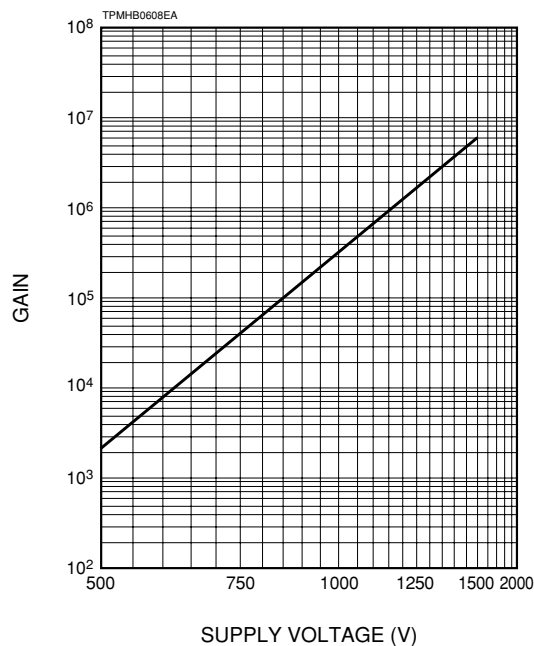
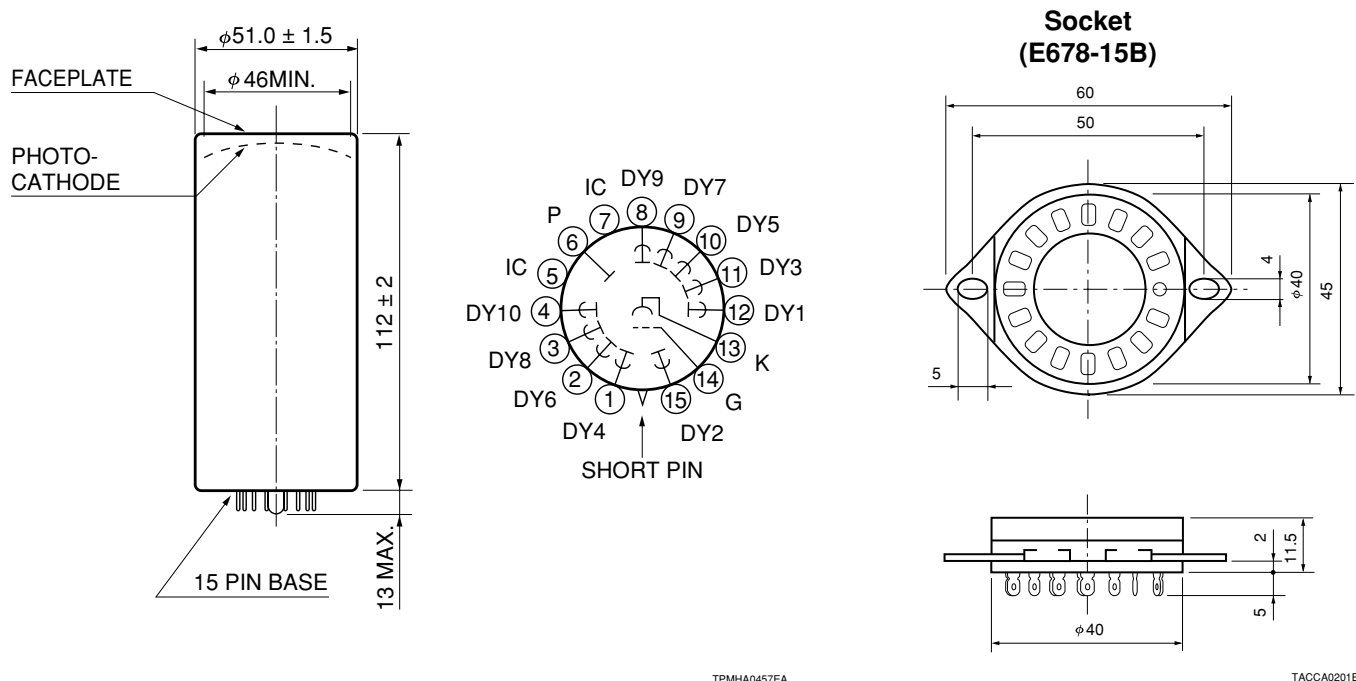


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



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HAMAMATSU PHOTONICS K.K., Electron Tube Center

314-5, Shimokanzo, Toyooka-village, Iwata-gun, Shizuoka-ken, 438-0193, Japan, Telephone: (81)539/62-5248, Fax: (81)539/62-2205

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P. O. Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: [usa@hamamatsu.com](mailto:usa@hamamatsu.com)

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658 E-mail: [info@hamamatsu.de](mailto:info@hamamatsu.de)

France: Hamamatsu Photonics France S.A.R.L.: 8, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: [infos@hamamatsu.fr](mailto:infos@hamamatsu.fr)

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road Welwyn Garden City Hertfordshire AL7 1BW, United Kingdom, Telephone: 44-(0)1707-294888, Fax: 44(0)1707-325777 E-mail: [info@hamamatsu.co.uk](mailto:info@hamamatsu.co.uk)

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 SOLNA, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: [info@hamamatsu.se](mailto:info@hamamatsu.se)

Italy: Hamamatsu Photonics Italia: S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741 E-mail: [info@hamamatsu.it](mailto:info@hamamatsu.it)

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