

## Extremely Improved Solar Blind Photocathode for Aerospace and General Photometric Applications, 25mm (1 Inch) Diameter, Ruggedized Low Profile Tube, Cs-Te Photocathode, 10-Stage, Head-on

### FEATURES

High Quantum Efficiency ..... 14% at 254nm Typ.  
Ruggedized, Low Profile Structure ..... 20g's vibration  
43mm in bulb length

### GENERAL

Parameter		Description/Value	Unit
Spectral Response		160 to 320	nm
Wavelength of Maximum Response		240	nm
Photocathode	Material	Cs-Te	—
	Minimum Useful Diameter	21	mm dia.
Window Material		Fused silica	—
Dynode	Structure	Circular cage	—
	Number of Stages	10	—
Base (temporary)		12-pin base JEDEC No. B12-13	—
Suitable Socket		E678-12A (supplied)	—

### MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	2000	Vdc
	Between Anode and Last Dynode	300	Vdc
Average Anode Current		0.015	mA

### CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Radiant at 254nm	20	29	—	mA/W
	Radiant at 365nm	2.0 × 10 <sup>3</sup>	1.5 × 10 <sup>4</sup>	—	A/W
Anode Sensitivity	Radiant at 254nm	—	1.5	—	A/W
	Radiant at 550nm	—	1.6 × 10 <sup>-2</sup>	—	A/W
Gain		1.0 × 10 <sup>5</sup>	5.0 × 10 <sup>5</sup>	—	—
Anode Dark Current (after 30 min. storage in darkness)		—	15	100	pA
Time Response	Anode Pulse Rise Time	—	1.5	—	ns
	Electron Transit Time	—	14	—	ns

### VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	3	1	1	1	1	1	1	1	1	1	1	1

Supply Voltage: 1500Vdc, K: Cathode, Dy: Dynode, P: Anode

# PHOTOMULTIPLIER TUBE R2078

Figure 1: Typical Spectral Response

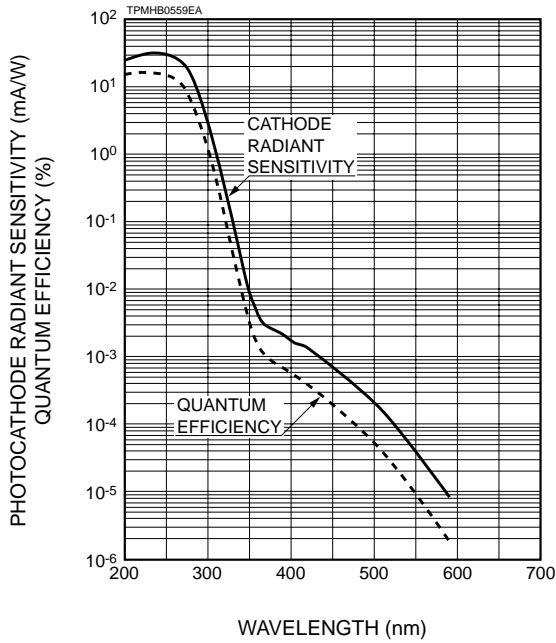


Figure 2: Typical Gain Characteristics

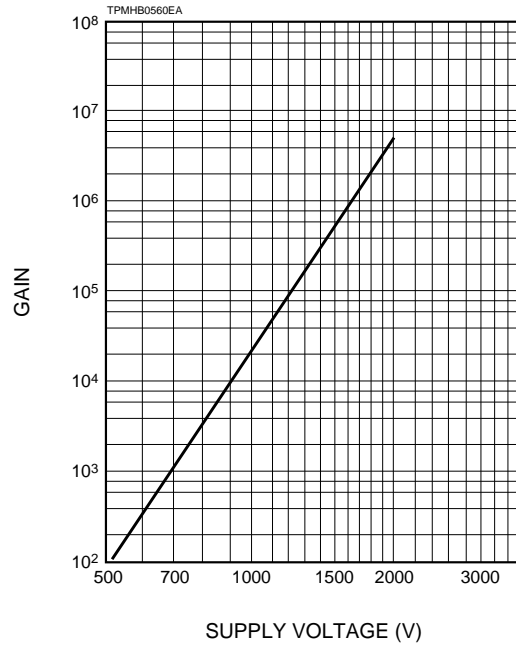
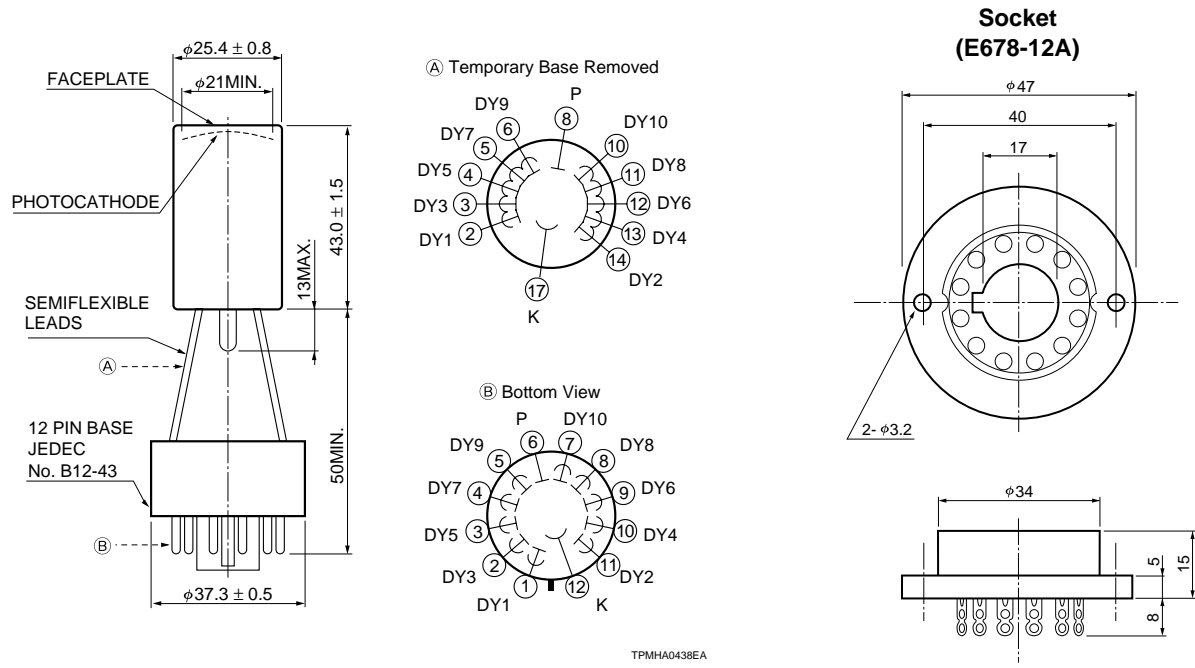


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



# HAMAMATSU

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

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658

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

United Kingdom: Hamamatsu Photonics UK Limited: Lough Point, 2 Gladbeck Way, Windmill Hill, Enfield, Middlesex EN2 7JA, United Kingdom, Telephone: (44)181-367-3560, Fax: (44)181-367-6384

North Europe: Hamamatsu Photonics Norden AB: Färögatan 7, S-164-40 Kista Sweden, Telephone: (46)8-703-29-50, Fax: (46)8-750-58-95

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

TPMH1226E01  
AUG. 1998