

FEATURES

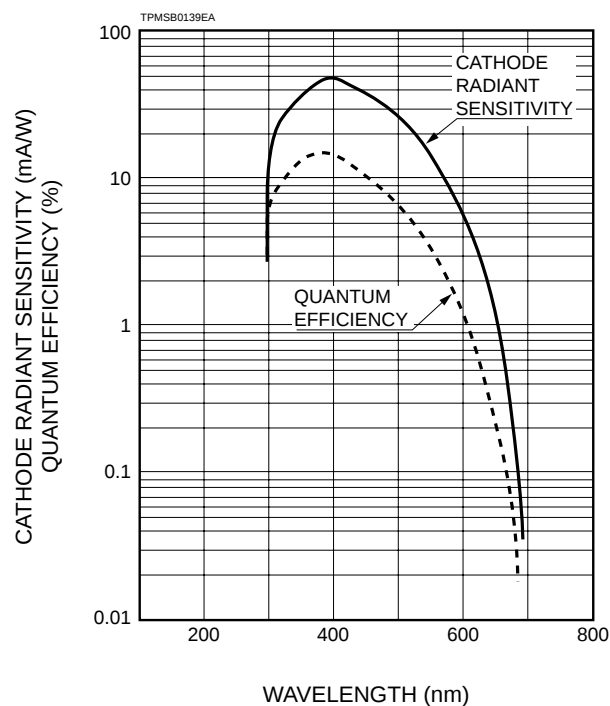
- 28mm (1-1/8 Inch) Diameter Side-on
- 300 to 650nm Spectral Response
- High Gain and Low Dark Current Variant of 931A



GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		400	nm
Photo-cathode	Material	Sb-Cs	—
	Minimum Useful Size	8 × 24	mm
Window Material		Borosilicate glass	—
Dynode	Structure	Circular-cage	—
	Number of Stages	9	—
Direct Interelectrode Capacitances	Anode to Last Dynode	4	pF
	Anode to All Other Electrodes	6	pF
Base		JEDEC No. B11-88	—
Suitable Socket		E678-11A	—

Figure 1: Typical Spectral Response



PHOTOMULTIPLIER TUBE R105

MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1250	Vdc
	Between Anode and Last Dynode	250	Vdc
Average Anode Current		0.1	mA
Ambient Temperature		-80 to +50	°C

CHARACTERISTICS (at 25°C)

Parameter		Min.	Typ.	Max.	Unit
Anode Sensitivity	Luminous (2856K)	50	400	—	A/lm
	Radiant at 400nm	—	4.8×10^5	—	A/W
Cathode Sensitivity	Luminous (2856K)	25	40	—	μA/lm
	Radiant at 400nm	—	48	—	mA/W
	Quantum Efficiency	—	13 at 350nm	—	%
Gain		—	1.0×10^7	—	—
Anode Dark Current	after 5 seconds	—	10	50	nA
	after 30 minute	—	1	10	nA
Time Response	Anode Pulse Rise Time	—	2.2	—	ns
	Electron Transit Time	—	22	—	ns

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: 1000Vdc, K: Cathode, Dy: Dynode, P: Anode

Figure 2: Typical Gain Characteristics

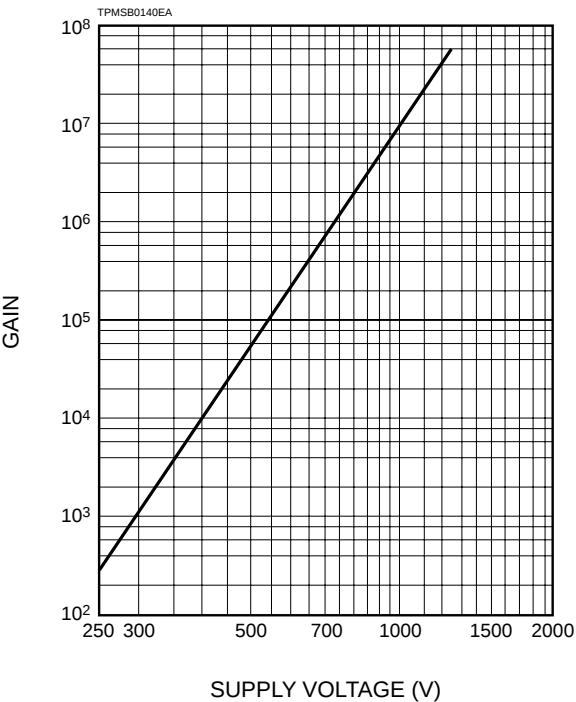
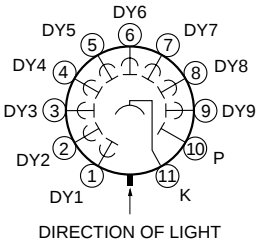
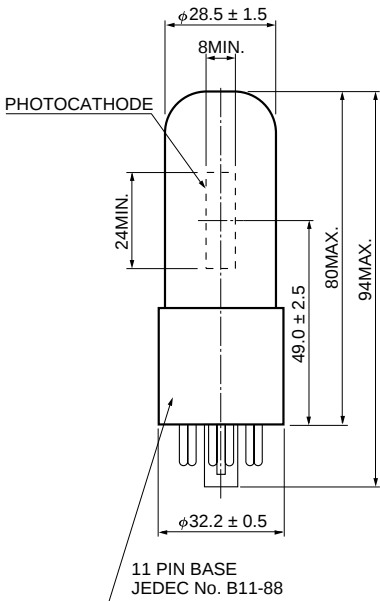
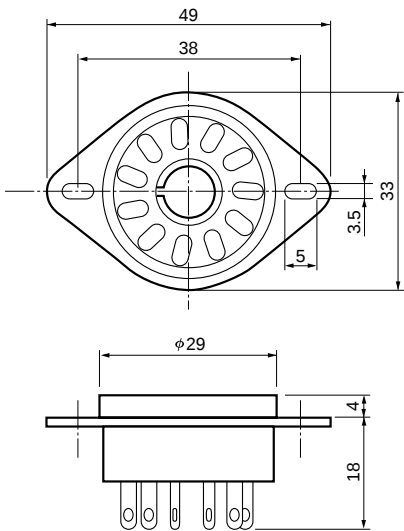


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)



TPMSA0001EA

Socket (Option) (E678-11A)



TACCA0064EA

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 Trappu, 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.: Via Della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39)2-935 81 733, Fax: (39)2-935 81 741

TPMS1039E01
JUN. 1998