HAMAMATSU

LINEAR ARRAY MULTIANODE PMT AND ASSEMBLY
R5900U-L16 SERIES, H7260 SERIES

Multianode 16 Channel Linear Array (R5900U-L16: PMT)
Multianode 32 Channel Linear Array (H7260: PMT ASSEMBLY)

FEATURES

- **High Cathode Sensitivity**
  - **Luminous 250 μA/lm Typ. (-01 Type)**
  - **Luminous 500 μA/lm Typ. (-20 Type)**
- **Anode Structure**
  - **1 mm Channel Pitch**
  - **R5900U-L16 Series..... 0.8 mm × 16 Anodes**
  - **H7260 Series..... 0.8 mm × 32 Anodes**
- **High Speed Response: Rise Time 0.6 ns Typ.**

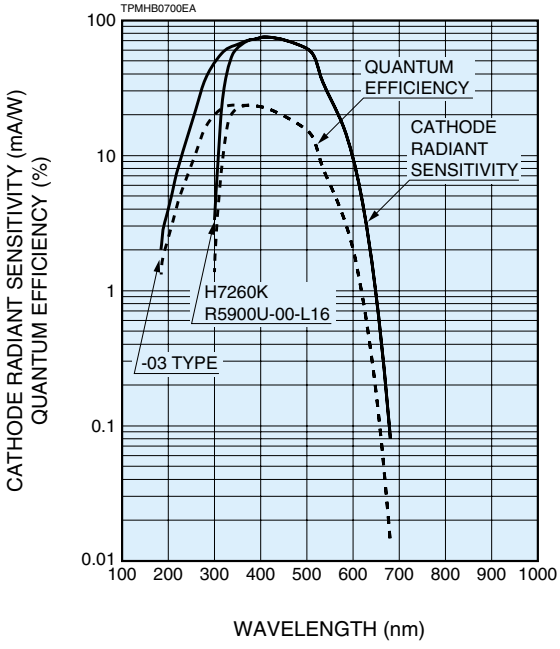
LEFT: R5900U-L16 SERIES RIGHT: H7260 SERIES

APPLICATIONS

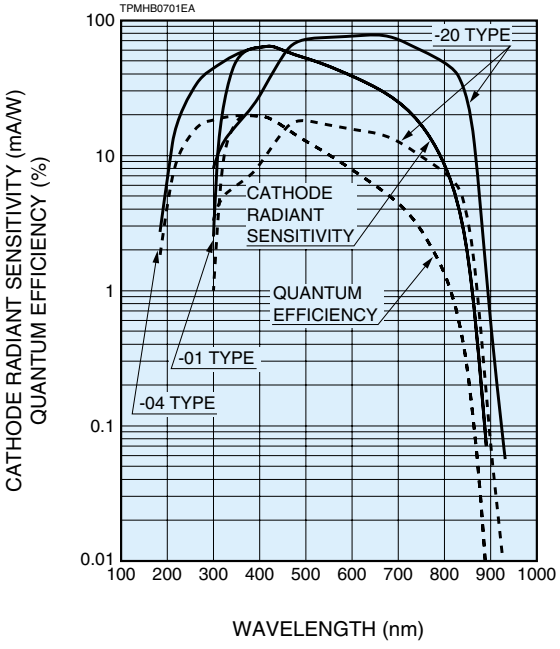
- **Biomedical Fluorescence Detection**
- **Laser Scanning Detection**
- **Spectroscopy**
- **Environmental Monitoring**

Figure 1: Typical Spectral Response

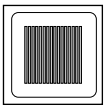
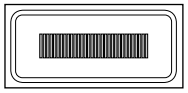
-00 and -03 Types



-01, -04 and -20 Types



SPECIFICATIONS

Type No.	Anode Type		Outline No.	Effective Area per Channel (mm)	Channel Pitch (mm)	Ⓐ Dynode Structure / No. of Stages	Weight (g)	Ⓑ Insulation Cover Material
R5900U-L16 SERIES	16 Channel Linear Array		1 (See Fig.8)	0.8 × 16	1	MC/10	35	P.O.M.
H7260 SERIES	32 Channel Linear Array		2 (See Fig.13)	0.8 × 7	1	MC/10	62	P.O.M.

Notes:
Ⓐ MC: Metal Channel
Ⓑ P.O.M: polyoxymethylene

Type No.	Spectral Response		Ⓖ Photocathode Material	Ⓗ Window Material	Cathode Characteristics					Supply Voltage (V dc)
	Range (nm)	Peak Wavelength (nm)			Luminous Min. (μA/lm)	Luminous Typ. (μA/lm)	Blue Sens. Index (CS 5-58) Typ.	Red /White Ratio (R-68) Typ.	Ⓘ Radiant Typ. (mA/W)	
R5900U-00-L16	300 to 650	420	BA	B	50	70	8.5	—	72	-800 Ⓙ
R5900U-01-L16	300 to 880	420	MA	B	150	250	—	0.3	65	-800 Ⓙ
R5900U-03-L16	185 to 650	420	BA	U	50	70	8.5	—	72	-800 Ⓙ
R5900U-04-L16	185 to 880	420	MA	U	150	250	—	0.3	65	-800 Ⓙ
R5900U-20-L16	300 to 920	630	MA	B	350	500	—	0.45	78	-800 Ⓙ
H7260K	300 to 650	420	BA	B	50	70	8.5	—	72	-800
H7260-01	300 to 880	420	MA	B	150	250	—	0.3	65	-800
H7260-03	185 to 650	420	BA	U	50	70	8.5	—	72	-800
H7260-04	185 to 880	420	MA	U	150	250	—	0.3	65	-800
H7260-20	300 to 920	630	MA	B	350	500	—	0.45	78	-800

Notes:
Ⓖ BA: Bialkali MA: Multialkali
Ⓗ B: Borosilicate glass U: UV glass
Ⓘ Measured at the peak wavelength

(at 25 °C)

Ⓒ Socket / Socket Assembly	Maximum Ratings Ⓓ				Type No.
	Supply Voltage (V dc)	Ⓔ Total Average Anode Current (μA)	Ⓔ Average Anode Current per Channel (μA)	Voltage Divider Current (mA)	
E678-32B / E6736	-900	100	10	—	R5900U-L16 SERIES
SD-108-T-22* / —	-900	100	6	0.37 Ⓕ	H7260 SERIES

Notes:
Ⓒ *: Supplied No mark: Sold separately
Ⓓ The maximum ambient temperature range
R5900U-L16 SERIES: -30 °C to +50 °C
R7260 SERIES: 0 °C to +50 °C
Ⓔ Averaged over any interval of 30 seconds maximum.
Ⓕ Measured with the maximum supply voltage.

(at 25 °C)

Anode Characteristics Ⓚ							Pulse Linearity per Channel (±2 % deviation) (mA)	Cross-talk (%)	Uniformity Between Each Anode		Type No.
Luminous		Gain	Dark Current per Channel (After 30 min.)		Time Response						
					Rise Time	Transit Time Spread (FWHM)					
Min. (A/lm)	Typ. (A/lm)	Typ.	Typ. (nA)	Max. (nA)	Typ. (ns)	(ns)			Typ.	Max.	
50	280	4×10^6	0.2	2	0.6	0.18	0.8	3	1: 1.5	1: 2	R5900U-00-L16
75	250	1×10^6	0.5	5	0.6	0.18	0.8	3	1: 1.7	1: 2.5	R5900U-01-L16
50	280	4×10^6	0.2	2	0.6	0.18	0.8	3	1: 1.5	1: 2	R5900U-03-L16
75	250	1×10^6	0.5	5	0.6	0.18	0.8	3	1: 1.7	1: 2.5	R5900U-04-L16
175	500	1×10^6	1	10	0.6	0.18	0.8	3	1: 1.7	1: 2.5	R5900U-20-L16
50	140	2×10^6	0.2	2	0.6	0.18	0.6	3	1: 1.5	1: 2	H7260K
75	250	1×10^6	0.5	5	0.6	0.18	0.6	3	1: 1.7	1: 2.5	H7260-01
50	140	2×10^6	0.2	2	0.6	0.18	0.6	3	1: 1.5	1: 2	H7260-03
75	250	1×10^6	0.5	5	0.6	0.18	0.6	3	1: 1.7	1: 2.5	H7260-04
175	500	1×10^6	1	10	0.6	0.18	0.6	3	1: 1.7	1: 2.5	H7260-20

Notes:
Ⓙ Refer to the "voltage distribution ratio and voltage" shown below

Electrodes	K	Dy1	Dy2	• • •	Dy10	P
Distribution	1	1	1	• • •	1	

Supply Voltage: 800 V, K: Cathode, Dy: Dynode, P: Anode
Ⓚ Anode characteristics are measured with the supply voltage and voltage distribution ratio specified by note Ⓙ

R5900U-L16 SERIES

Figure 2: Cross-Section

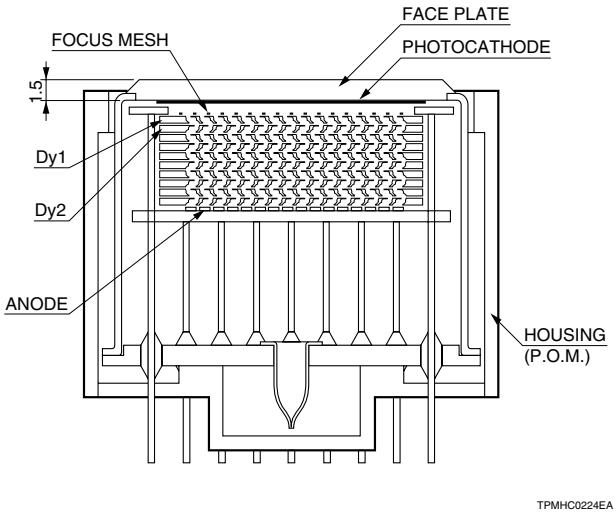


Figure 3: Typical Gain Characteristics

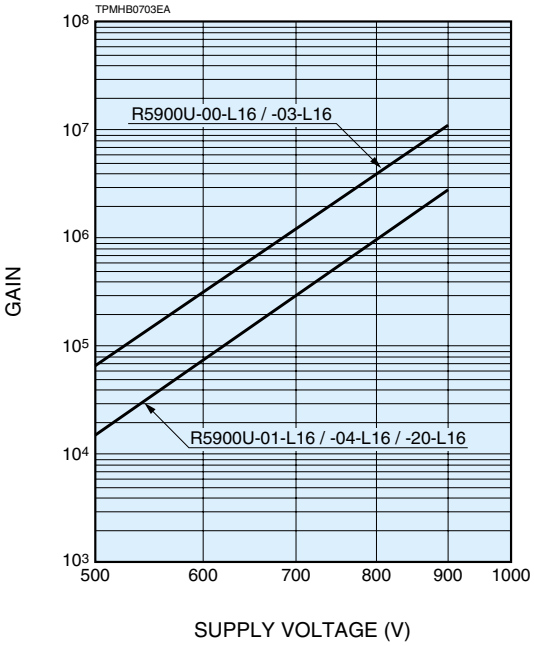


Figure 4: Anode Uniformity (Example)

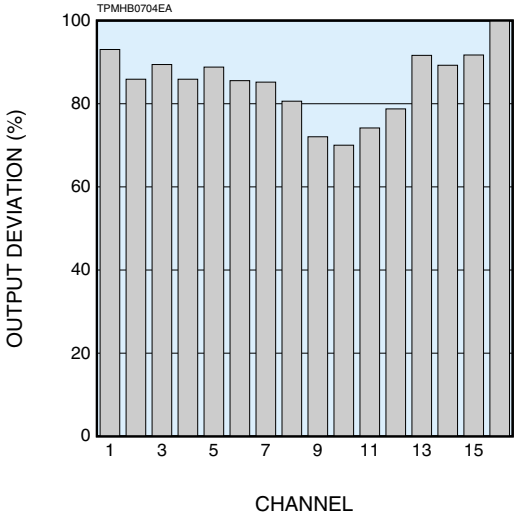
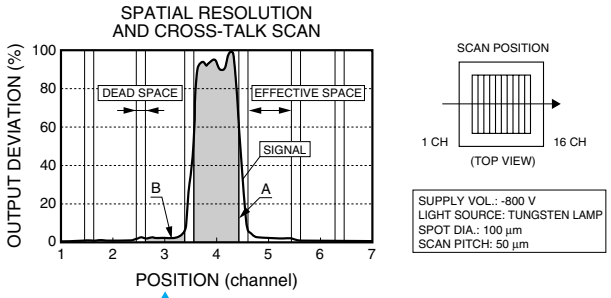


Figure 5: Cross-Talk (Example)

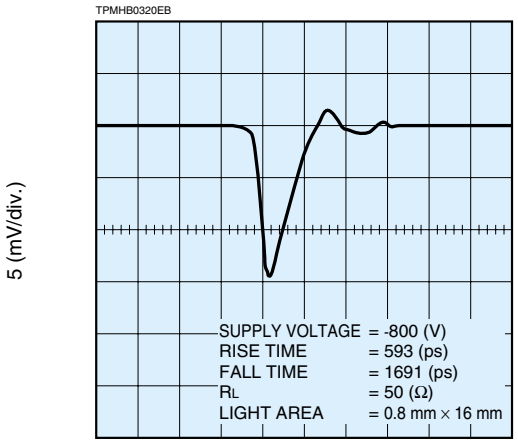


CH	CROSS-TALK RATIO (%)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	100	2.9	0.6	0.2	0.1	—	—	—	—	—	—	—	—	—	—	—
2	2.9	100	3.1	0.5	0.2	0.1	—	—	—	—	—	—	—	—	—	—
3	0.8	2.8	100	2.8	0.6	0.2	0.1	—	—	—	—	—	—	—	—	—
4	0.3	0.8	2.7	100	3.2	0.6	0.2	0.1	—	—	—	—	—	—	—	—
5	0.1	0.3	0.8	2.9	100	3.1	0.6	0.2	0.1	—	—	—	—	—	—	—
6	—	0.1	0.3	0.8	2.7	100	3.0	0.6	0.2	0.1	—	—	—	—	—	—
7	—	—	0.1	0.3	0.8	2.7	100	3.0	0.6	0.2	0.1	—	—	—	—	—
8	—	—	—	0.1	0.3	0.8	2.9	100	2.9	0.6	0.2	0.1	—	—	—	—
9	—	—	—	—	0.1	0.3	0.8	2.9	100	2.9	0.6	0.2	0.1	—	—	—
10	—	—	—	—	—	0.1	0.3	0.8	3.1	100	2.7	0.6	0.2	0.1	—	—
11	—	—	—	—	—	—	0.1	0.4	0.8	3.3	100	3.8	0.6	0.2	0.1	—
12	—	—	—	—	—	—	—	0.1	0.4	0.9	3.2	100	2.8	0.6	0.2	0.1
13	—	—	—	—	—	—	—	—	0.1	0.4	0.8	3.1	100	2.8	0.6	0.3
14	—	—	—	—	—	—	—	—	—	0.1	0.4	0.8	3.1	100	2.7	0.6
15	—	—	—	—	—	—	—	—	—	—	0.1	0.4	0.9	3.2	100	2.9
16	—	—	—	—	—	—	—	—	—	—	—	0.1	0.4	0.9	3.1	100

CROSS-TALK
AREA B / AREA A × 100

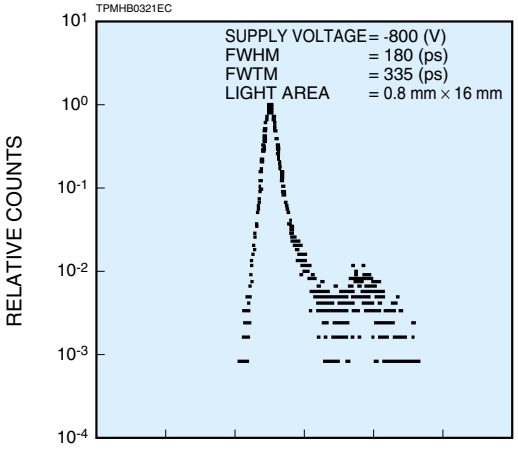
TPMHB0705EA

Figure 6: Typical Time Response



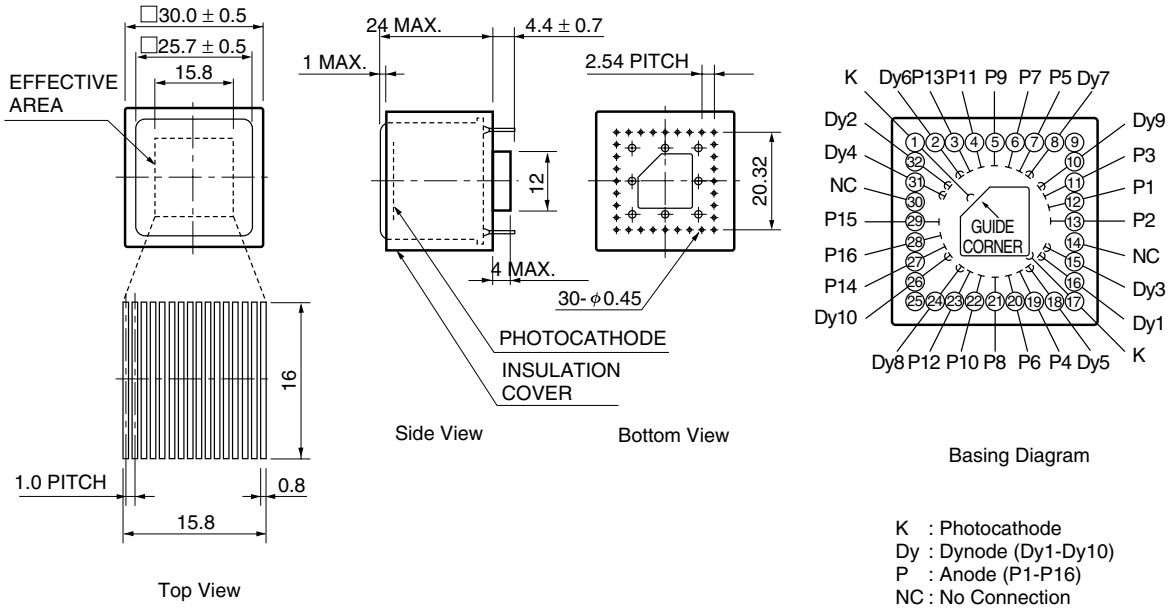
Light is irradiated to only one channel at this measurement.

Figure 7: Typical Transit Time Spread Characteristics



Light is irradiated to only one channel at this measurement.

Figure 8: Dimensional Outline and Basing Diagram (Unit: mm)



K : Photocathode
Dy : Dynode (Dy1-Dy10)
P : Anode (P1-P16)
NC : No Connection

TPMHA0298EE

H7260 SERIES

Figure 9: Cross-Section

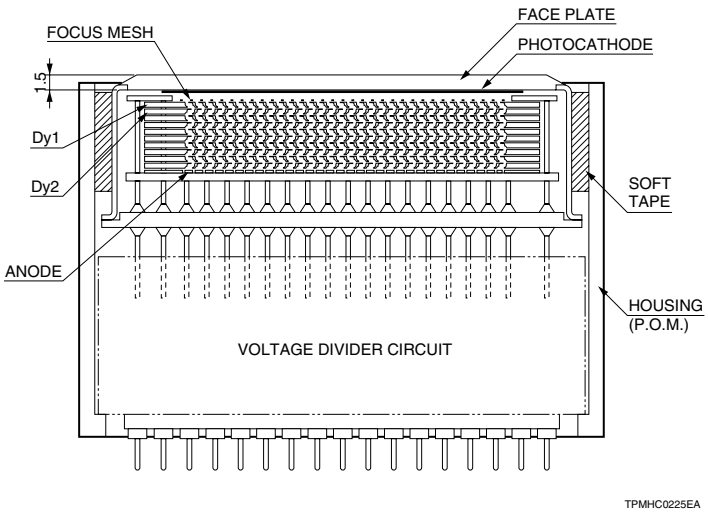


Figure 10: Typical Gain Characteristics

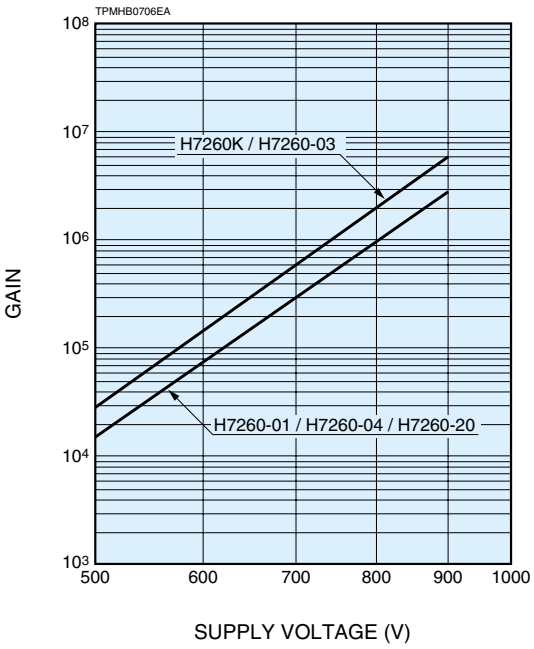


Figure 11: Anode Uniformity (Example)

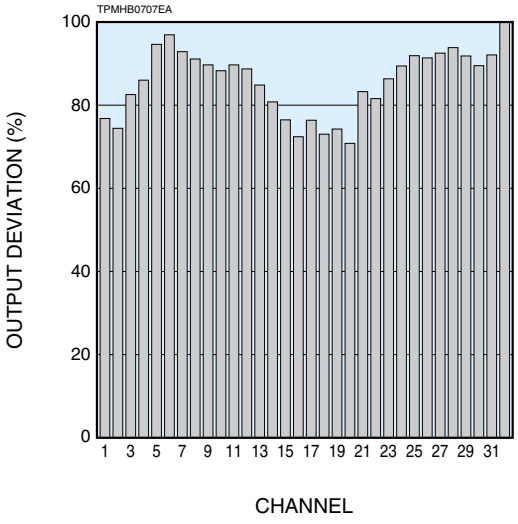


Figure 12: Socket

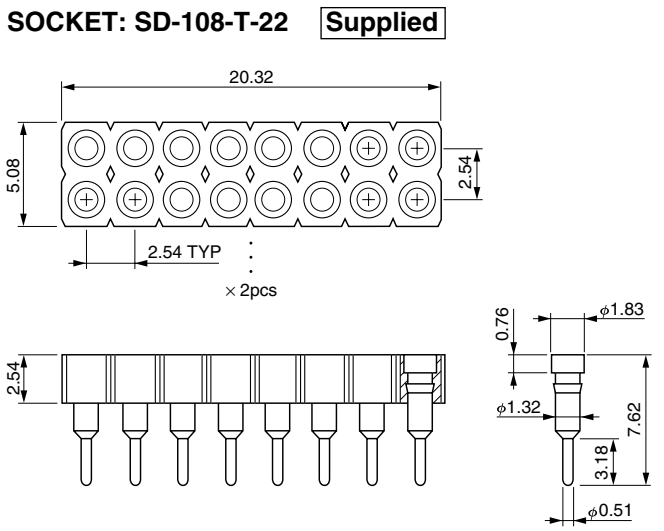
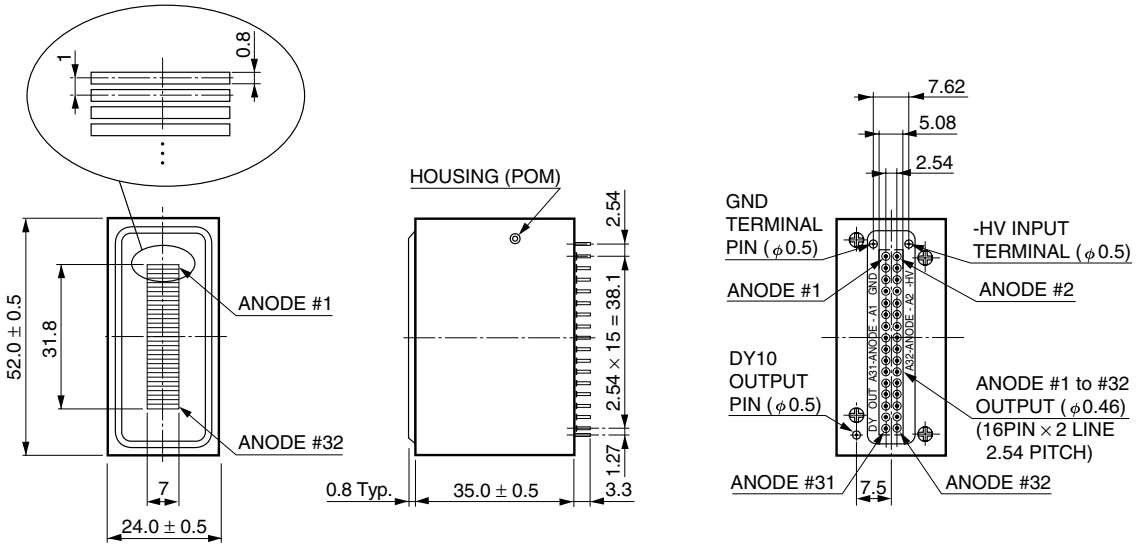
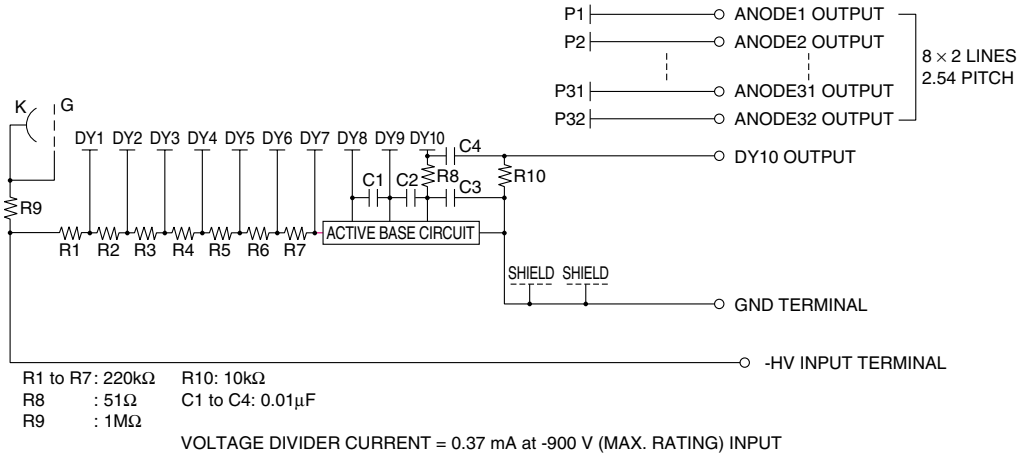


Figure 13: Dimensional Outline and Circuit Diagram of H7260 (Unit: mm)



TPMHA0455EC

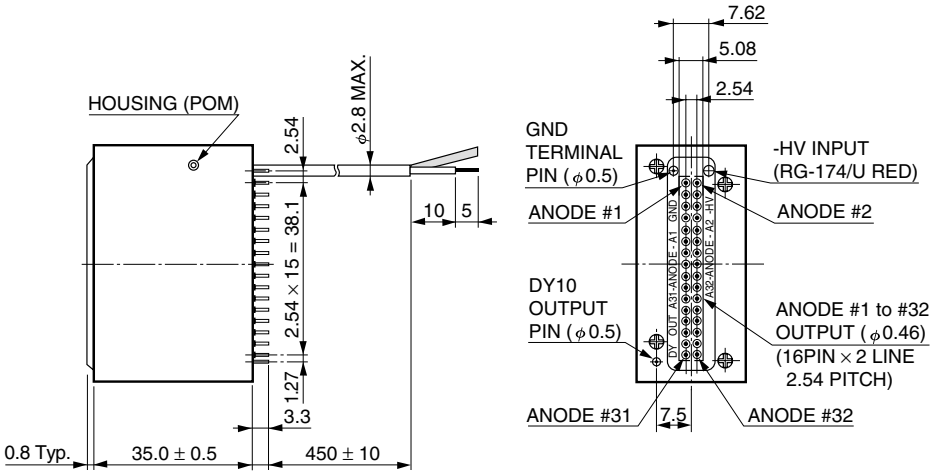


R1 to R7: 220kΩ R10: 10kΩ
R8 : 51Ω C1 to C4: 0.01μF
R9 : 1MΩ

VOLTAGE DIVIDER CURRENT = 0.37 mA at -900 V (MAX. RATING) INPUT

TPMHC0192EA

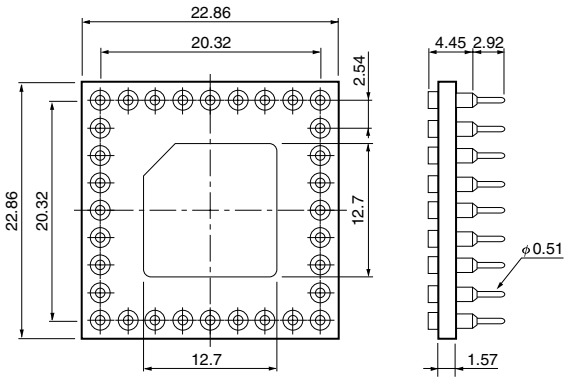
H7260A -HV input cable type is available



TPMHA0456EC

[ACCESSORIES FOR R5900U-L16 SERIES]

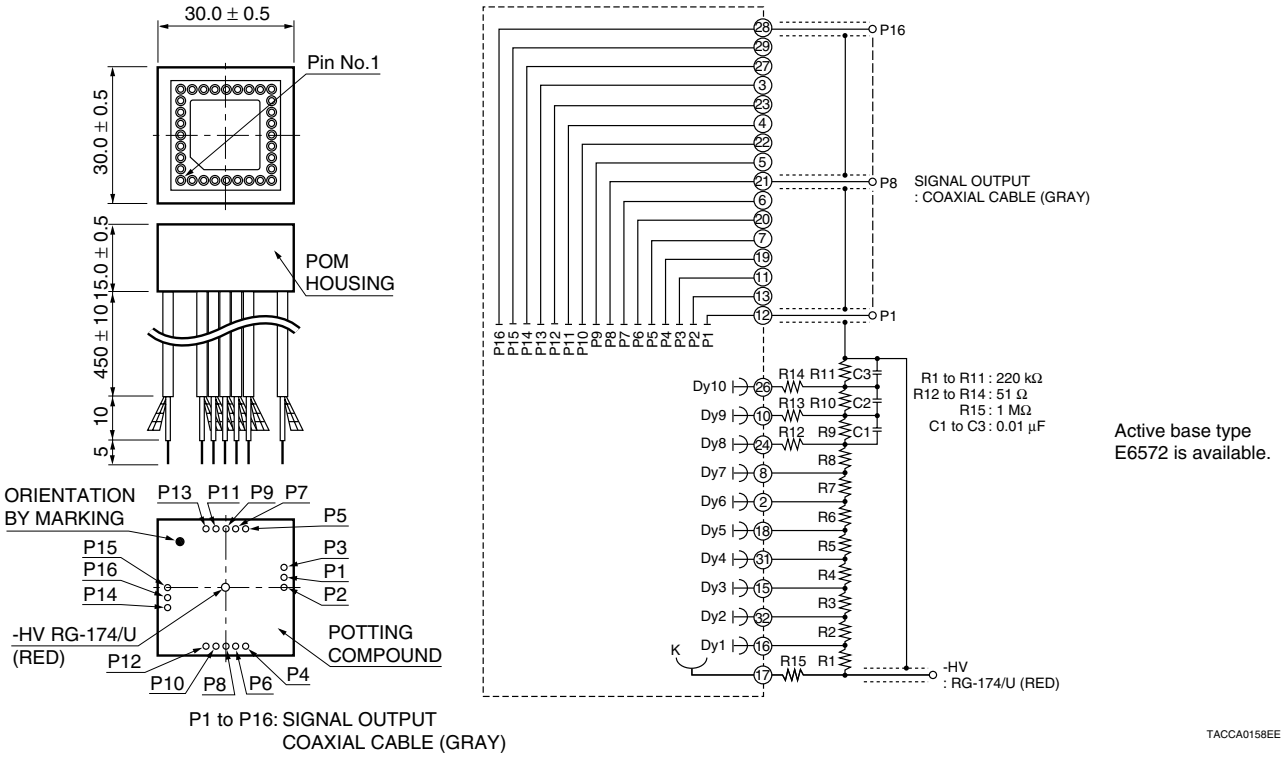
● Socket E678-32B SOLD SEPARATELY



MATERIAL: Glass Epoxy

TACCA0094ED

● D Type Socket Assembly E6736 SOLD SEPARATELY



Active base type
E6572 is available.

P1 to P16: SIGNAL OUTPUT
COAXIAL CABLE (GRAY)

TACCA0158EE

⚠ WARNING ~ High Voltage ~

The product is operated at high voltage potential. Further, the metal housing of the product is connected to the photocathode (potential) so that it becomes a high voltage potential when the product is operated at a negative high voltage (anode grounded). Accordingly, extreme safety care must be taken for the electrical shock hazard to the operator or the damage to the other instruments.

HAMAMATSU WEB SITE http://www.hamamatsu.com
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
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
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
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
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
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

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