

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 $\mu\text{A/lm}$ Typ. (-01 Type)
 Luminous 500 $\mu\text{A/lm}$ Typ. (-20 Type)
- **Anode Structure**
 1 mm Channel Pitch
 R5900U-L16 Series..... 0.8 mm $\times$ 16 Anodes
 H7260 Series..... 0.8 mm $\times$ 32 Anodes
- **High Speed Response: Rise Time 0.6 ns Typ.**

APPLICATIONS

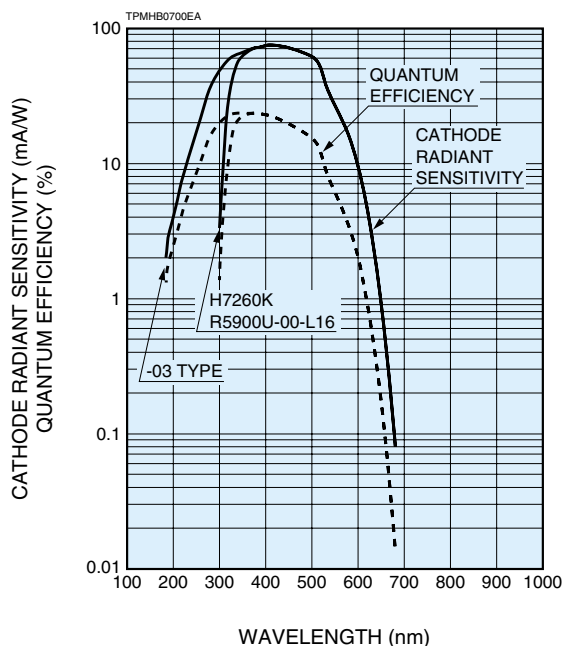
- **Biomedical Fluorescence Detection**
- **Laser Scanning Detection**
- **Spectroscopy**
- **Environmental Monitoring**



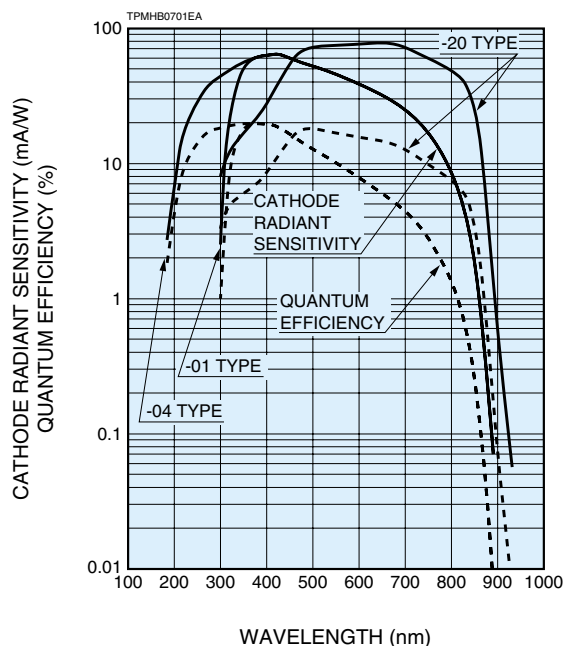
LEFT: R5900U-L16 SERIES RIGHT: H7260 SERIES

Figure 1: Typical Spectral Response

-00 and -03 Types



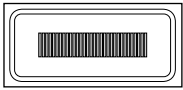
-01, -04 and -20 Types



LINEAR ARRAY MULTIANODE PMT AND ASSEMBLY

R5900U-L16 SERIES, H7260 SERIES

SPECIFICATIONS

Type No.	Anode Type		Outline No.	Effective Area per Channel (mm)	Channel Pitch (mm)	Dynode Structure / No. of Stages ^(A)	Weight (g)	Insulation Cover Material ^(B)
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:

^(A) MC: Metal Channel

^(B) P.O.M: polyoxymethylene

Type No.	Spectral Response		Photocathode Material	Window Material	Cathode Characteristics					Supply Voltage
	Range	Peak Wavelength			Luminous		Blue Sens. Index (CS 5-58) Typ.	Red /White Ratio (R-68) Typ.	Radiant ①	
					Min. (μA/lm)	Typ. (μA/lm)				
R5900U-00-L16	300 to 650	420	BA	B	50	70	8.5	—	72	-800 ②
R5900U-01-L16	300 to 880	420	MA	B	150	250	—	0.3	65	-800 ②
R5900U-03-L16	185 to 650	420	BA	U	50	70	8.5	—	72	-800 ②
R5900U-04-L16	185 to 880	420	MA	U	150	250	—	0.3	65	-800 ②
R5900U-20-L16	300 to 920	630	MA	B	350	500	—	0.45	78	-800 ②
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:

^(G) BA: Bialkali MA: Multialkali

^(H) B: Borosilicate glass U: UV glass

^(I) Measured at the peak wavelength

(at 25 °C)

Socket / Socket Assembly	Maximum Ratings ④				Type No.
	Supply Voltage (V dc)	Total Average Anode Current (μA) ⑤	Average Anode Current per Channel (μA) ⑤	Voltage Divider Current (mA)	
E678-32B / E6736	-900	100	10	—	R5900U-L16 SERIES
SD-108-T-22* / —	-900	100	6	0.37 ⑥	H7260 SERIES

Notes:

- ④ *: Supplied No mark: Sold separately
 ④ The maximum ambient temperature range
 R5900U-L16 SERIES: -30 °C to +50 °C
 R7260 SERIES: 0 °C to +50 °C
 ⑤ Averaged over any interval of 30 seconds maximum.
 ⑥ 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:

- ④ 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

- ⑧ Anode characteristics are measured with the supply voltage and voltage distribution ratio specified by note ④

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R5900U-L16 SERIES

Figure 2: Cross-Section

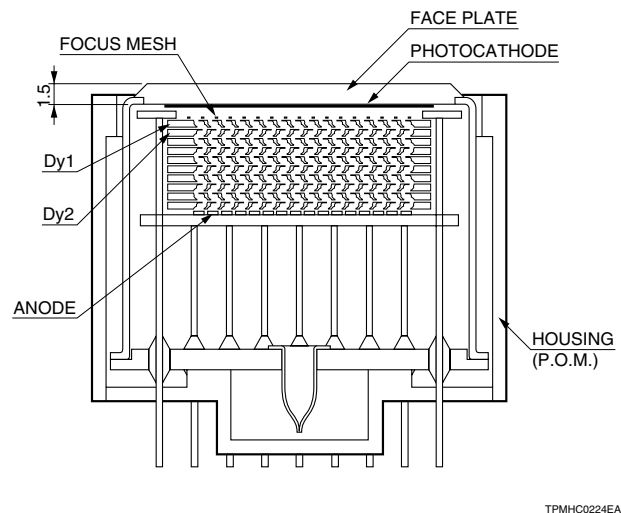


Figure 3: Typical Gain Characteristics

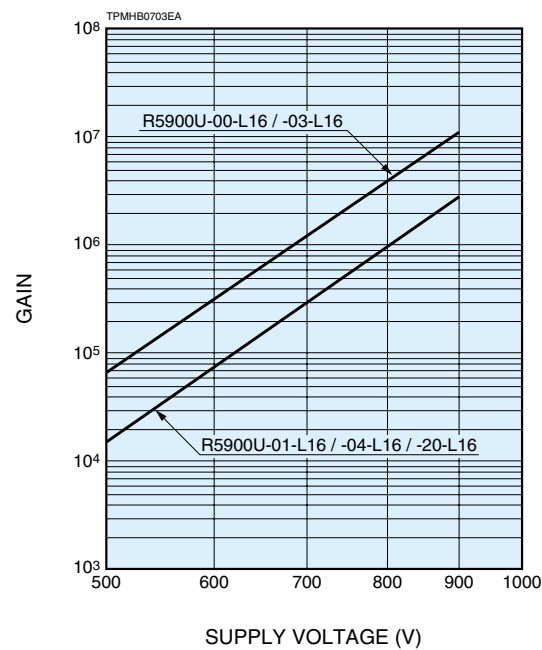


Figure 4: Anode Uniformity (Example)

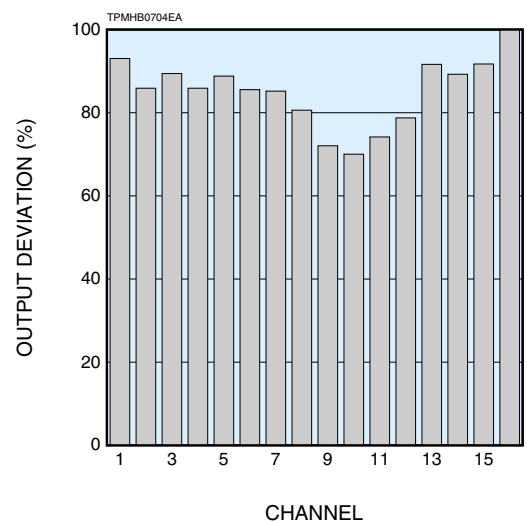


Figure 5: Cross-Talk (Example)

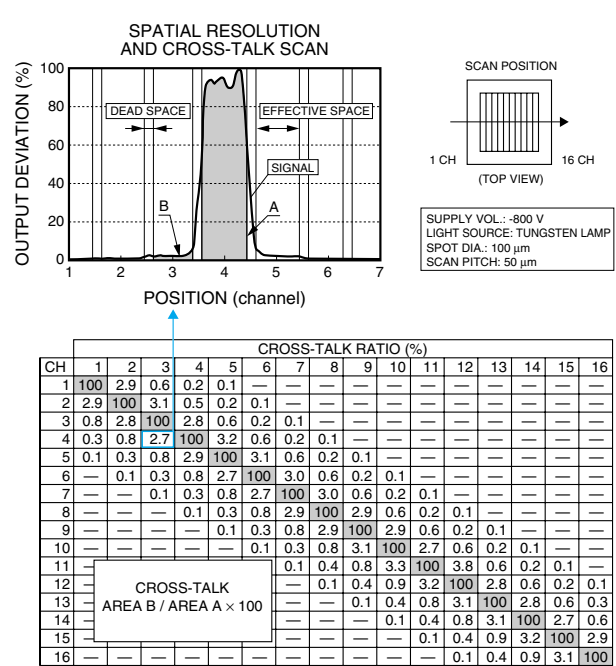
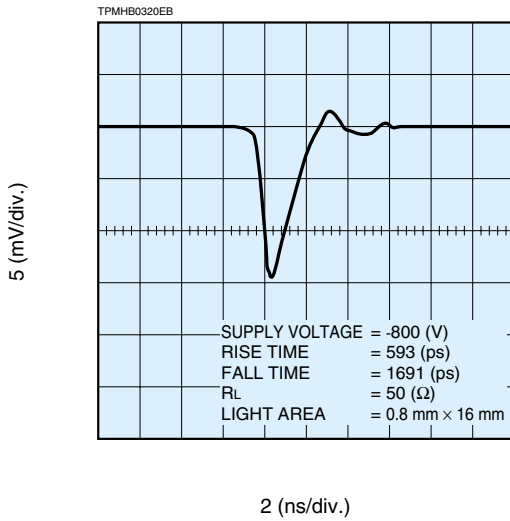
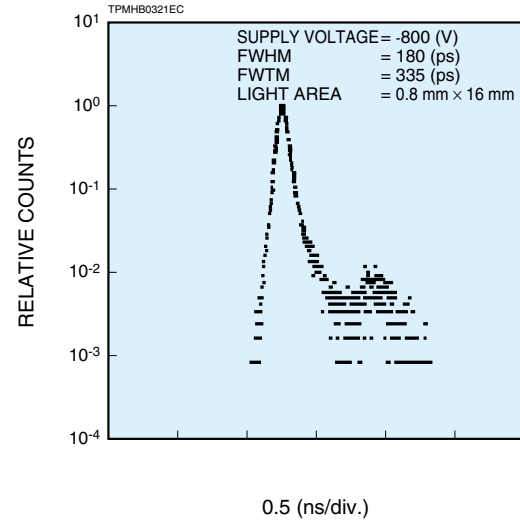


Figure 6: Typical Time Response



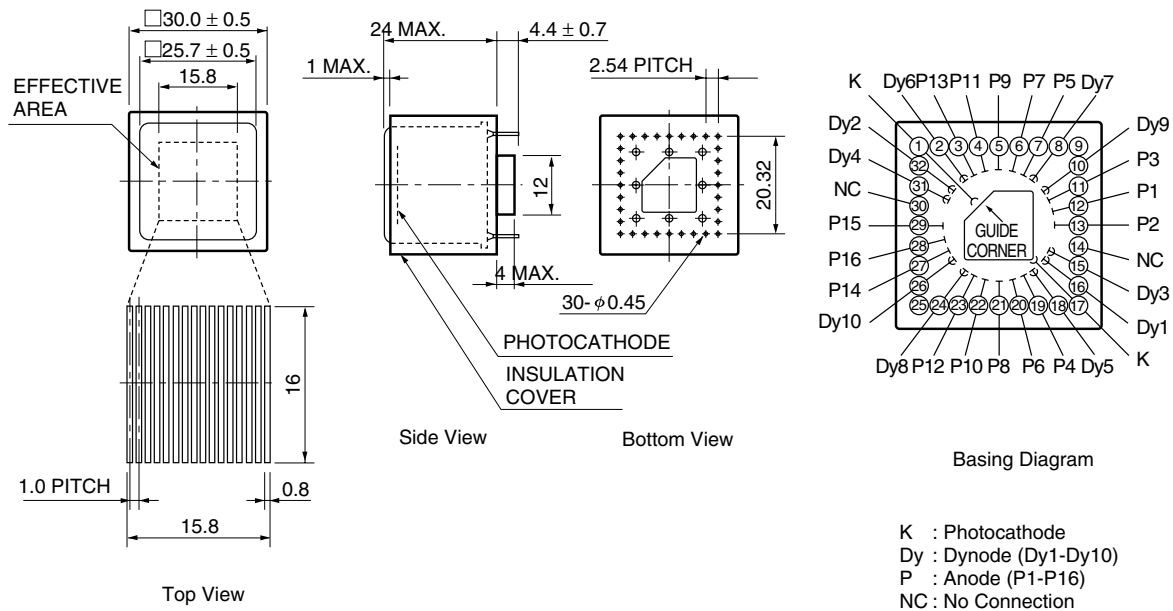
Light is irradiated to only one channel at this measurement.

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)



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H7260 SERIES

Figure 9: Cross-Section

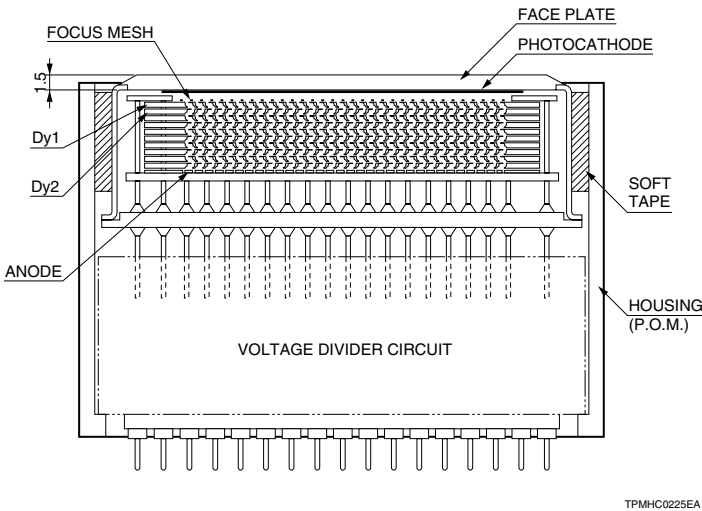


Figure 10: Typical Gain Characteristics

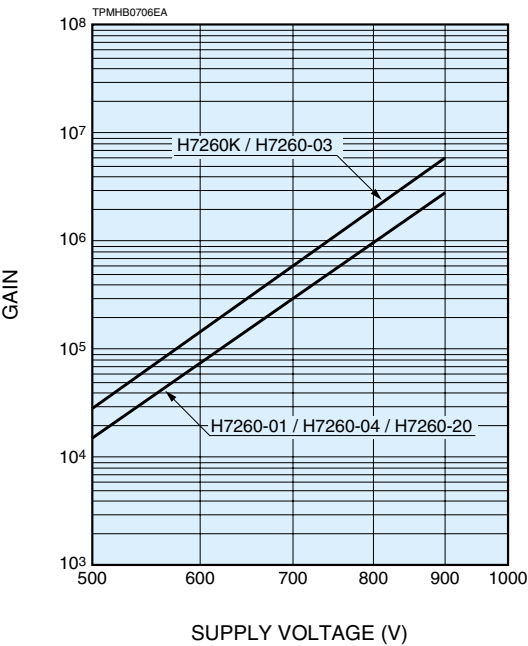


Figure 11: Anode Uniformity (Example)

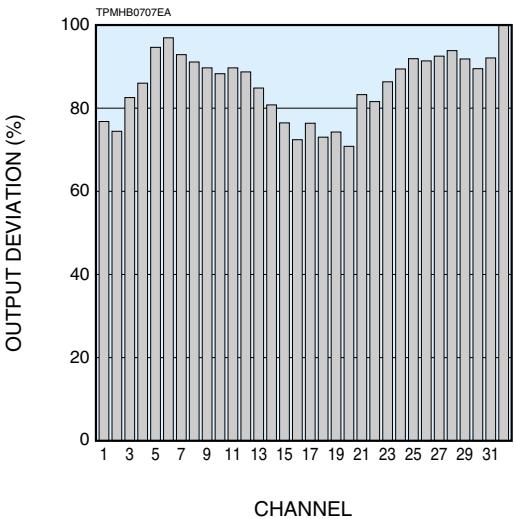


Figure 12: Socket

SOCKET: SD-108-T-22 **Supplied**

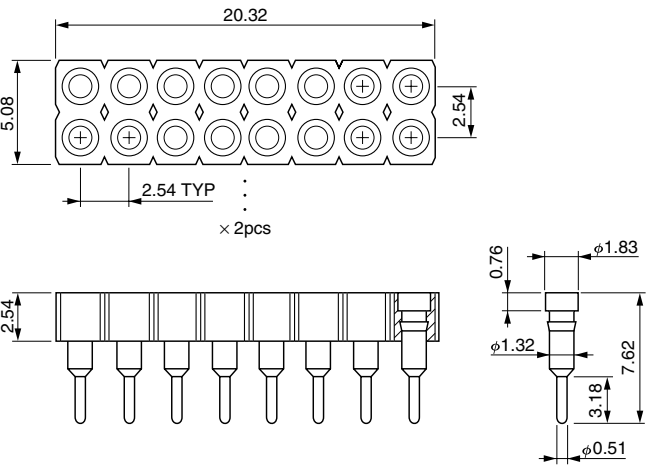
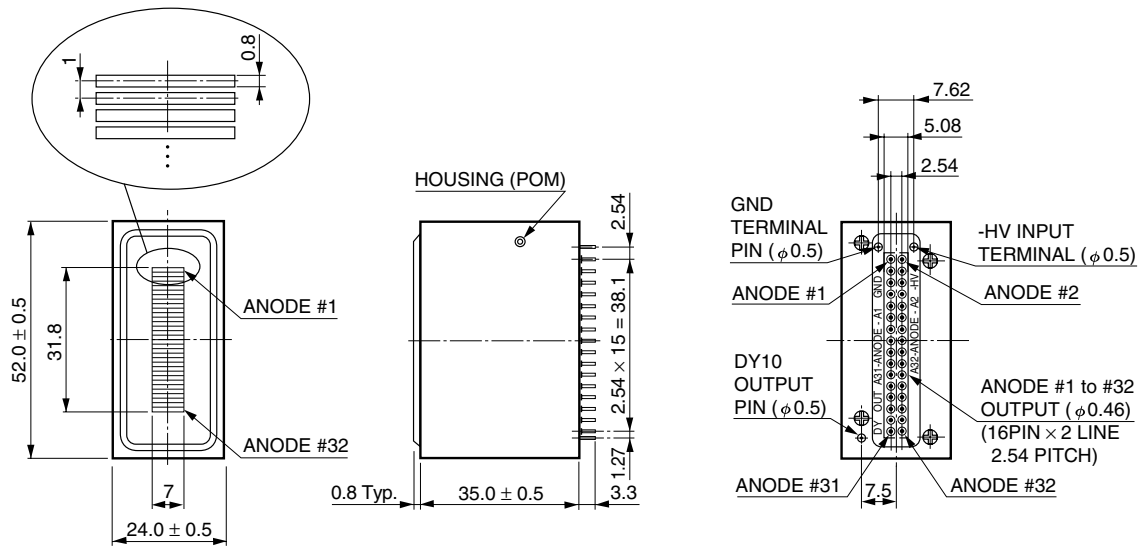
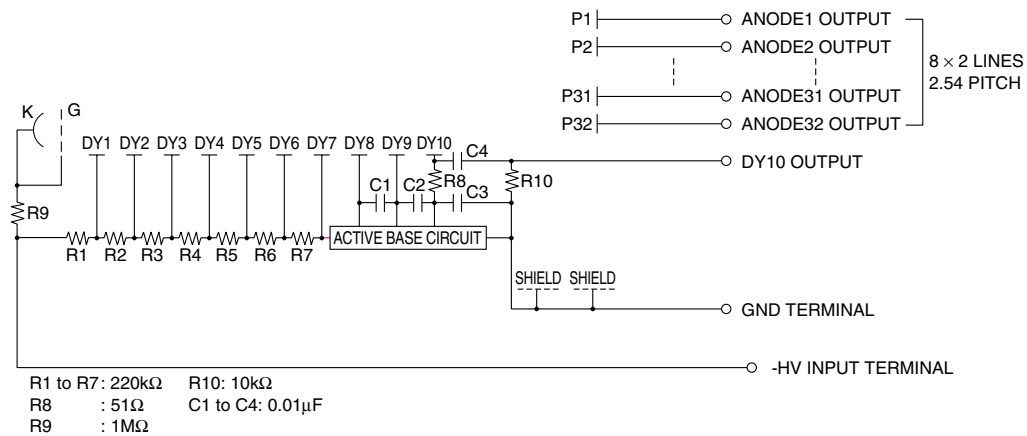


Figure 13: Dimensional Outline and Circuit Diagram of H7260 (Unit: mm)

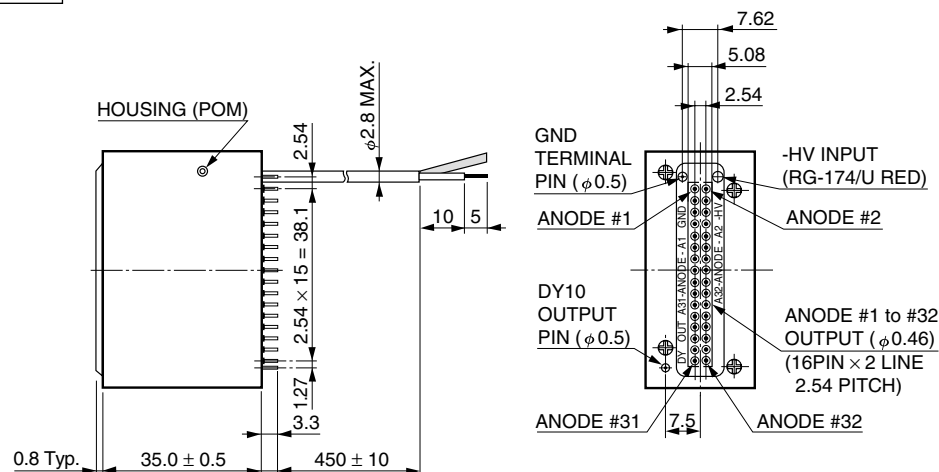


TPMHA0455EC



TPMHC0192EA

H7260A -HV input cable type is available

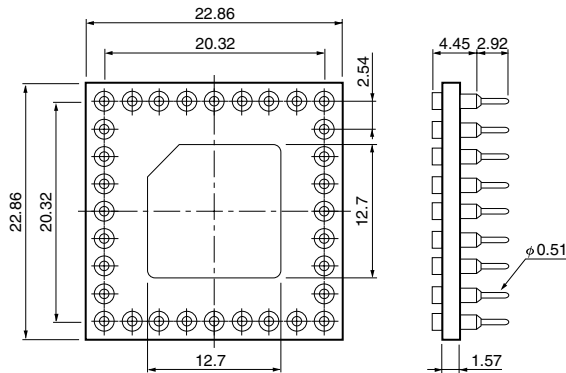


TPMHA0456EC

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

[ACCESSORIES FOR R5900U-L16 SERIES]

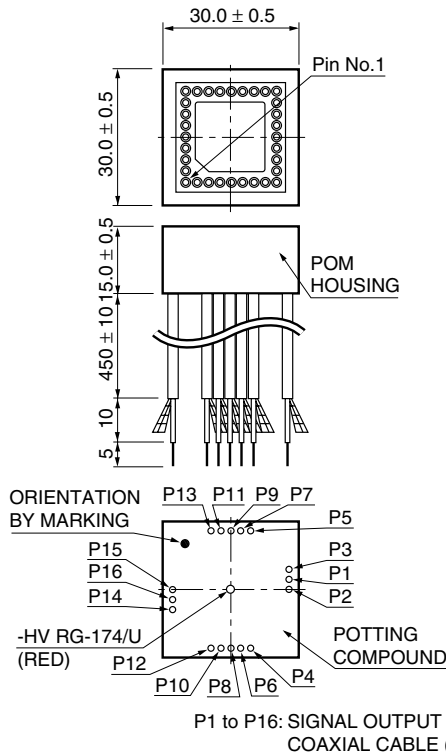
● Socket E678-32B **SOLD SEPARATELY**



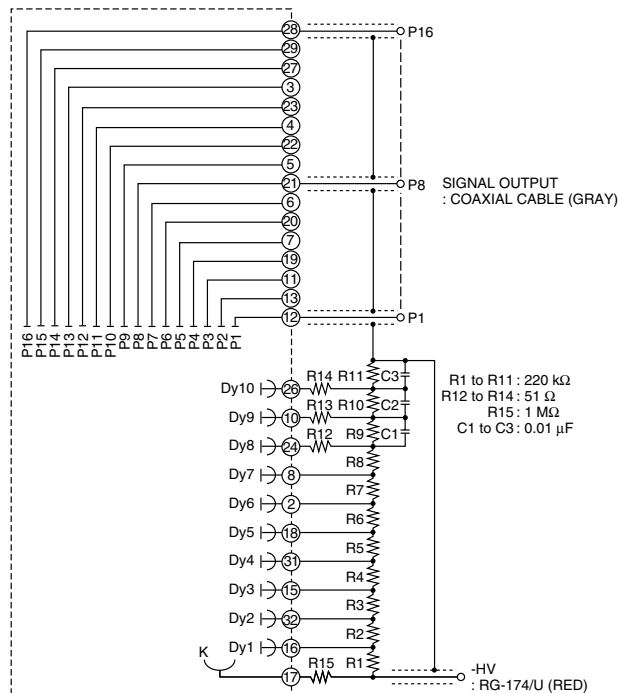
MATERIAL: Glass Epoxy

TACCA0094ED

● D Type Socket Assembly E6736 **SOLD SEPARATELY**



P1 to P16: SIGNAL OUTPUT
COAXIAL CABLE (GRAY)



SIGNAL OUTPUT
: COAXIAL CABLE (GRAY)

R1 to R11: 220 k Ω
R12 to R14: 51 Ω
R15: 1 M Ω
C1 to C3: 0.01 μ F

Active base type
E6572 is available.

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.

* PATENT: USA Pat. No. 5410211

PATENT PENDING: JAPAN 12, USA 8, EUROPE 9

HAMAMATSU

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TPMH1285E01

MAY 2003 IP

Printed in Japan (500)