

FEATURES

- Wide effective area: 23 mm × 23 mm
- 2 × 2 multianode
- High sensitivity
- High speed response
- Compact

APPLICATIONS

- High energy physics
- Scintillation counting
- Flash LiDAR
- SEM



Left: R11265U-M4 series, Right: H13226A series

Figure 1: Typical spectral response

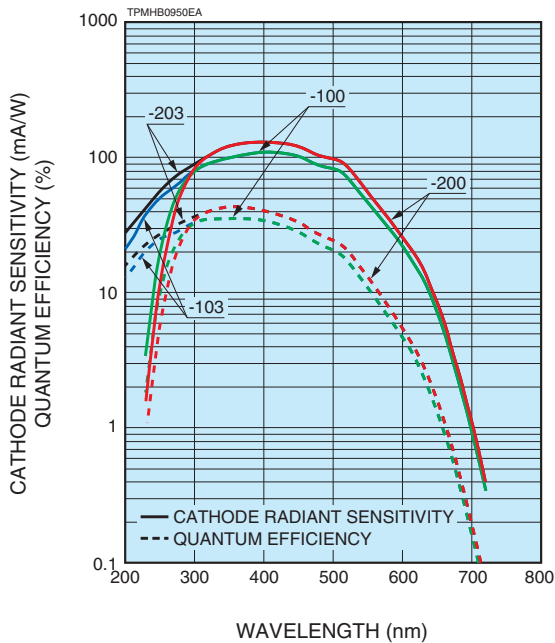
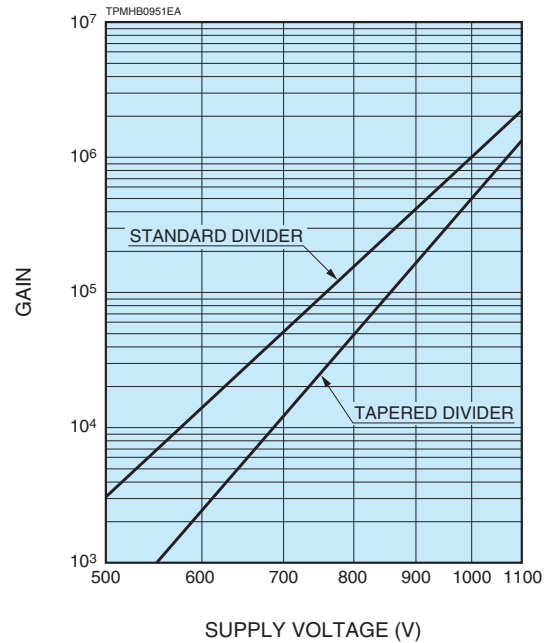


Figure 2: Typical gain



PHOTOMULTIPLIER TUBES AND PHOTOMULTIPLIER TUBE ASSEMBLIES

R11265U-M4 SERIES / H13226A SERIES

Type No.	Spectral response		Photo-cathode material	Window material	Dynode structure / stages	Maximum ratings		Cathode characteristics					Anode to cathode supply voltage (V)
	Range (nm)	Peak wavelength (nm)				Supply voltage between anode and cathode (V)	Average anode output current in total (mA)	Luminous		Blue sensitivity index (CS 5-58) Typ.	Quantum efficiency	Radiant	
								Min. ($\mu\text{A/lm}$)	Typ. ($\mu\text{A/lm}$)				
R11265U-100-M4	300 to 650	400	SBA	K	MC/12	1100	0.1	90	105	13.5	35	110	1000
R11265U-200-M4	300 to 650	400	UBA	K	MC/12	1100	0.1	110	135	15.5	43	130	1000
R11265U-103-M4	185 to 650	400	SBA	UV	MC/12	1100	0.1	90	105	13.5	35	110	1000
R11265U-203-M4	185 to 650	400	UBA	UV	MC/12	1100	0.1	110	135	15.5	43	130	1000
H13226A-100	300 to 650	400	SBA	K	MC/12	-1100	0.018	90	105	13.5	35	110	-1000
H13226A-200	300 to 650	400	UBA	K	MC/12	-1100	0.018	110	135	15.5	43	130	-1000
H13226A-103	185 to 650	400	SBA	UV	MC/12	-1100	0.018	90	105	13.5	35	110	-1000
H13226A-203	185 to 650	400	UBA	UV	MC/12	-1100	0.018	110	135	15.5	43	130	-1000

NOTE: (A) SBA: Super bialkali, UBA: Ultra bialkali
 (B) K: Borosilicate glass, UV: UV glass
 (C) MC: Metal channel
 (D) Quantum efficiency is measured at the peak wavelength (350 nm).
 (E) Cathode radiant sensitivity is measured at the peak wavelength (400 nm).

Figure 3: Single photon counting (Example)

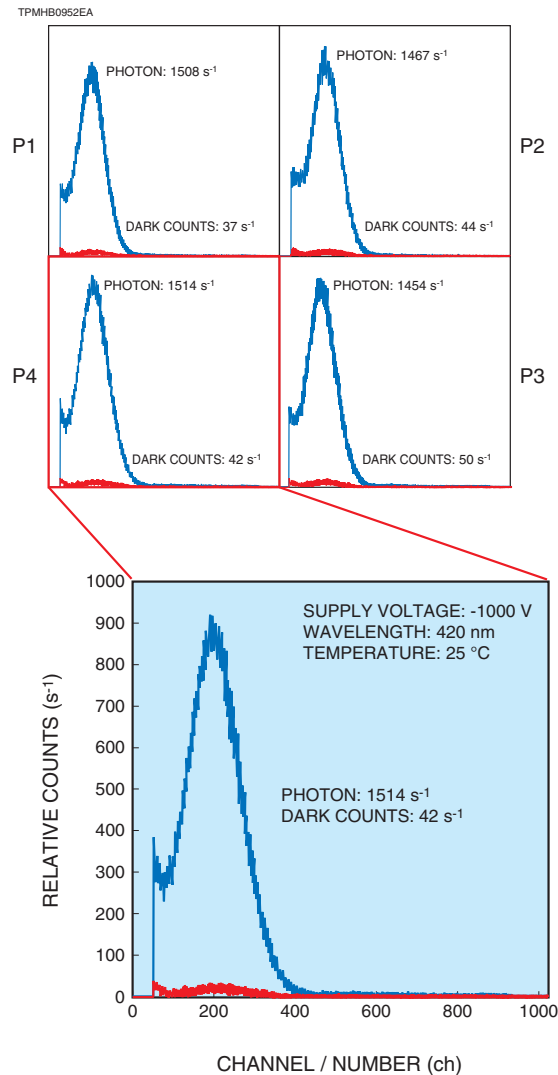


Figure 4: Anode cross-talk (Example)

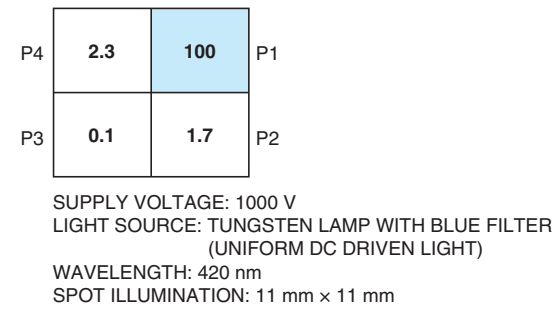
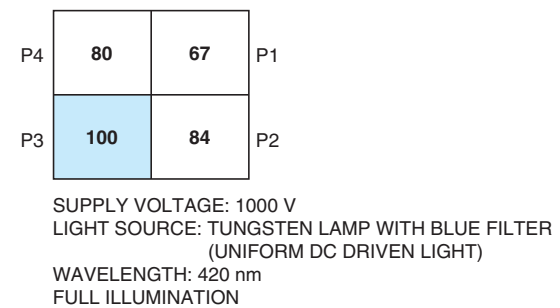


Figure 5: Anode uniformity (Example)



Anode characteristics									Pulse linearity per channel		Uniformity between each anode		Operating ambient temperature (°C)	Storage temperature (°C)	Type No.
Luminous		Gain Typ.	Dark current per channel (After 30 min)		Time response			2 % Deviation (mA)	5 % Deviation (mA)	Typ.	Max.				
Min. (A/lm)	Typ. (A/lm)		Typ.	Typ. (nA)	Max. (nA)	Rise time (ns)	Transit time (ns)					T.T.S. (ns)			
25 (25)	105 (50)	1.0×10^6 (4.8×10^5)	1	4	1.1	5.3	0.39	4 (11)	7 (25)	1:1.5	1:3	-30 to +50	-30 to +50	R11265U-100-M4	
25 (25)	135 (65)	1.0×10^6 (4.8×10^5)												R11265U-200-M4	
25 (25)	105 (50)	1.0×10^6 (4.8×10^5)												R11265U-103-M4	
25 (25)	135 (65)	1.0×10^6 (4.8×10^5)												R11265U-203-M4	
25	105	1.0×10^6						4	7	0 to +50	-15 to +50	H13226A-100			
25	135	1.0×10^6										H13226A-200			
25	105	1.0×10^6										H13226A-103			
25	135	1.0×10^6										H13226A-203			

(): Measured with the special voltage distribution ratio (Tapered divider) shown below.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	Dy11	Dy12	GR	P
Standard divider type	2.3	1.2	1	1	1	1	1	1	1	1	1	1	1	1	0.5
Tapered divider type	2.8	1.5	1	1	1	1	1	1	1	1	1	1	1.3	3.3	0.5

Supply voltage: 1000 V, K: Cathode, Dy: Dynode, GR: Guard ring, P: Anode

Figure 6: Time response (Example)

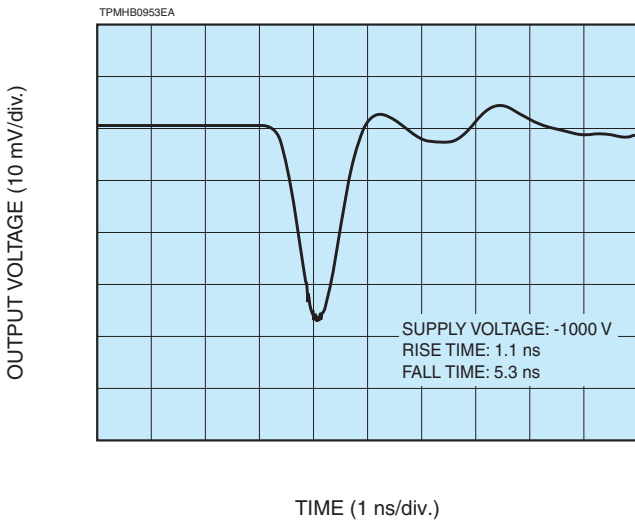


Figure 7: Pulse linearity /channel (Example)

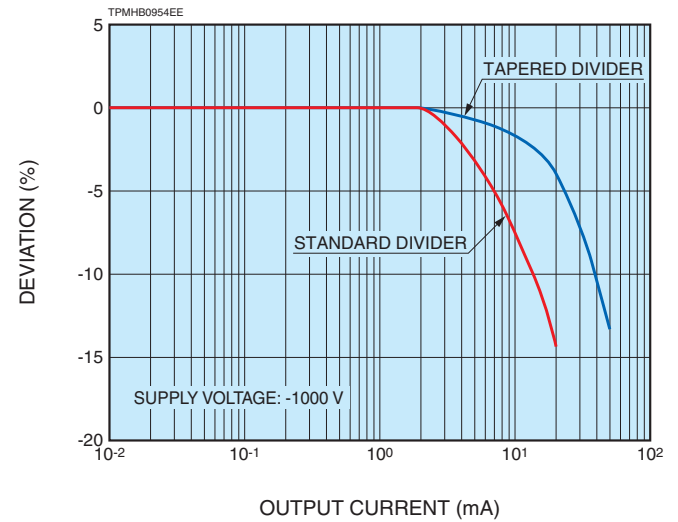
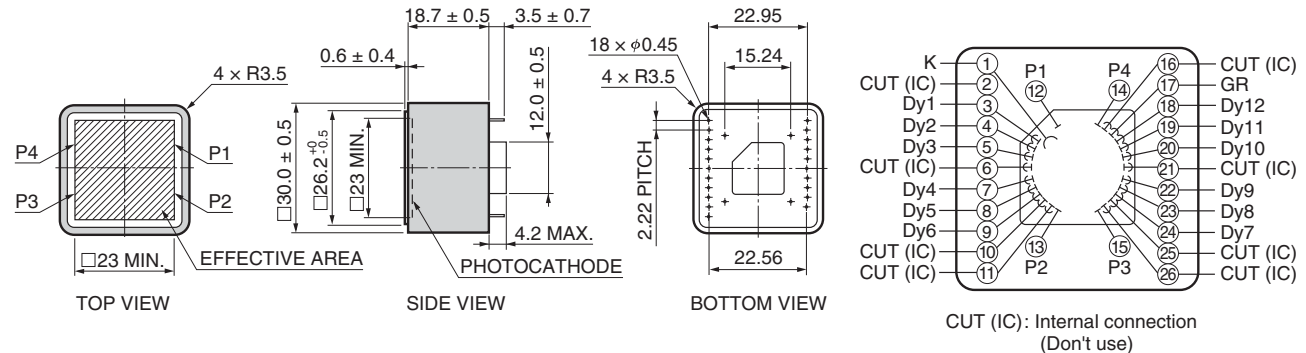


Figure 8: Dimensional outline and basing diagram (Unit: mm)

● R11265U-M4 series

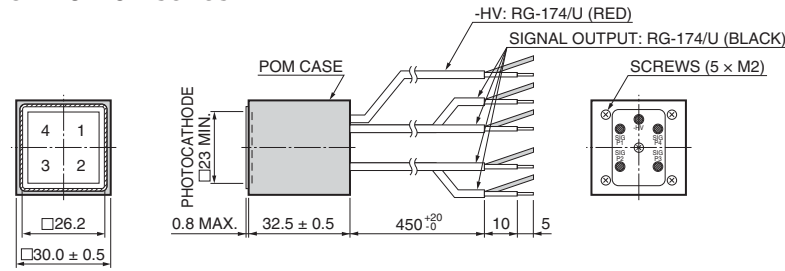


PHOTOMULTIPLIER TUBES AND PHOTOMULTIPLIER TUBE ASSEMBLIES

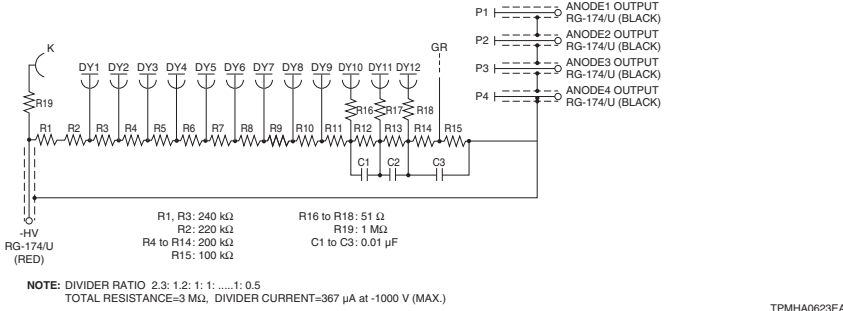
R11265U-M4 SERIES / H13226A SERIES

Figure 9: Dimensional outline and circuit diagram (Unit: mm)

● H13226A series

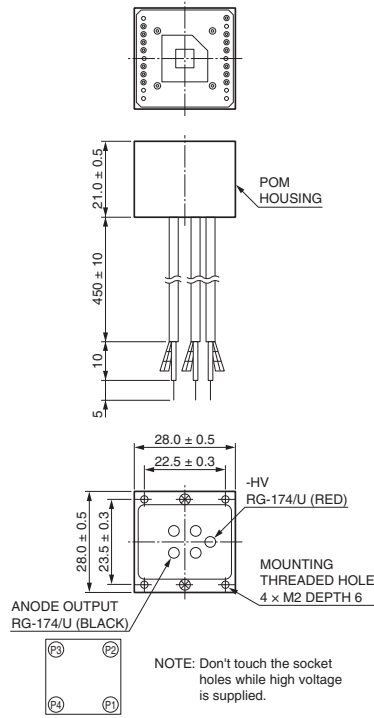


H13226A-100/-200/-103/-203

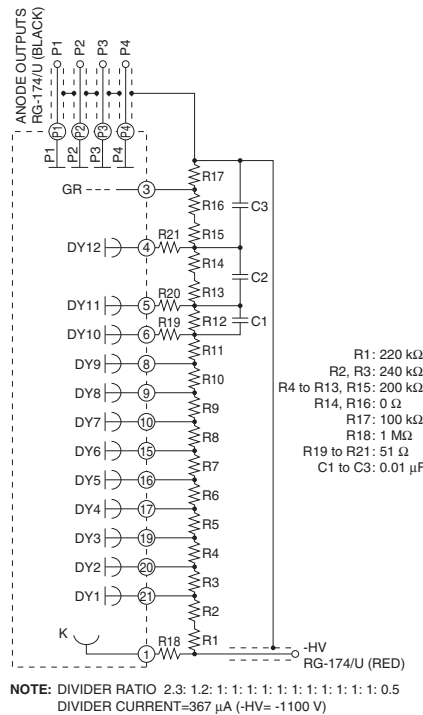


[ACCESSORIES] (Unit: mm) SOLD SEPARATELY

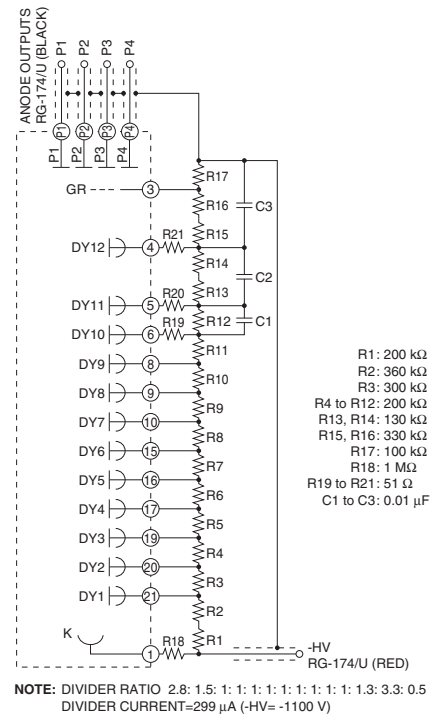
● Socket assemblies E13222-01, E13222-02



E13222-01 (Standard divider type)



E13222-02 (Tapered divider type)



⚠ 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.

* C10940 series and C13890 series can be used for R11265U-M4 series / H13226A series.

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