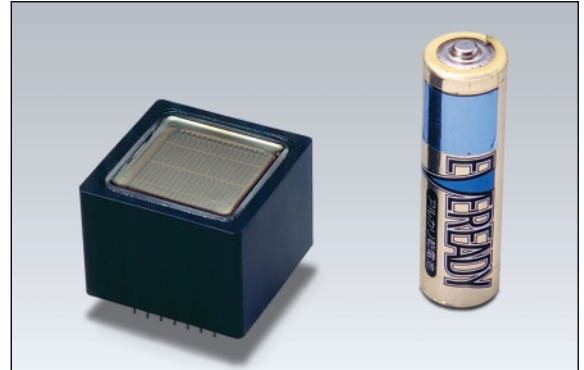


**2 × 2 Multianode, High Speed Response, Low Cross-talk, 30 mm Square
Bialkali and Multialkali Photocathode,
Metal Channel Dynode 10-stage, Head-on Type**

FEATURES

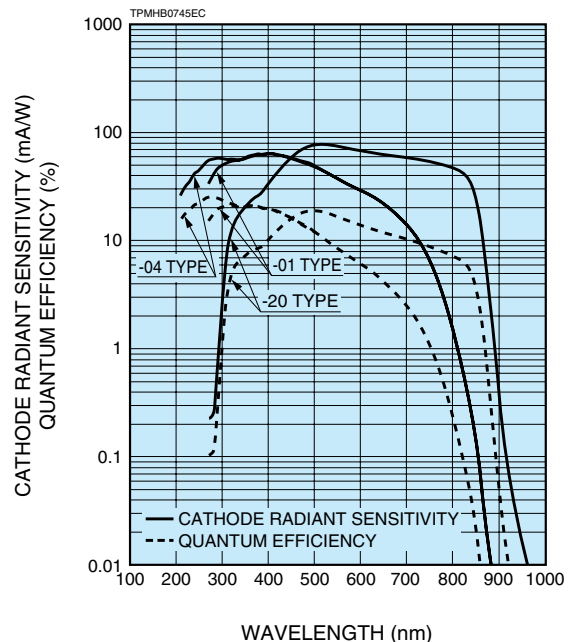
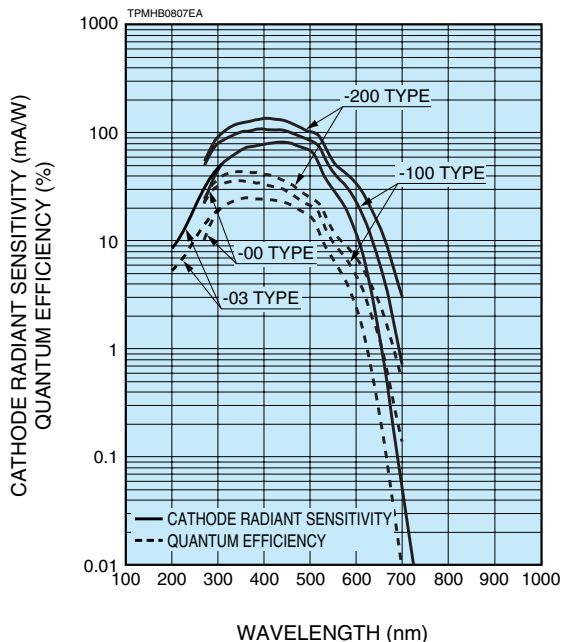
- 2 × 2 Multianode, Anode Size: 9 mm × 9 mm / Anode
- Effective Area: 18 mm × 18 mm
- High Speed Response
- Low Cross-talk: 2 % Typ.
- High Cathode Sensitivity
 - Luminous 200 μA/lm Typ. (-01 Type)
 - Luminous 500 μA/lm Typ. (-20 Type)



APPLICATIONS

- High Energy Physics
- Scintillation Counting
- Flow Cytometer (-01, -20 Type)
- DNA Sequencer (-01, -20 Type)

Figure 1: Typical Spectral Response



MULTIANODE PHOTOMULTIPLIER TUBE R7600U-M4 SERIES

Type No.	Spectral Response		Photo-cathode Material ^(A)	Window Material ^(B)	Dynode Structure / Stages ^(C)	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.	Red/White Ratio (R-68) Typ.	Radiant Typ. (mA/W)	
								Min. ($\mu\text{A/lm}$)	Typ. ($\mu\text{A/lm}$)				
R7600U-00-M4	300 to 650	420	BA	K	MC/10	900	0.1	60	80	9.5	—	80	800
R7600U-01-M4	300 to 850	400	MA	K	MC/10	900	0.1	150	200	—	0.2	65	800
R7600U-03-M4	185 to 650	420	BA	U	MC/10	900	0.1	60	80	9.5	—	80	800
R7600U-04-M4	185 to 850	400	MA	U	MC/10	900	0.1	150	200	—	0.2	65	800
R7600U-20-M4	300 to 920	530	MA	K	MC/10	900	0.1	350	500	—	0.4	78	800
R7600U-100-M4	300 to 650	400	SBA	K	MC/10	900	0.1	90	105	13.5	—	110	800
R7600U-200-M4	300 to 650	400	UBA	K	MC/10	900	0.1	110	135	15.5	—	130	800

NOTE: (A) BA: Bialkali, MA: Multialkali, SBA: Super Bialkali, UBA: Ultra Bialkali
 (B) K: Borosilicate glass, U: UV glass
 (C) MC: Metal channel

Figure 2: Typical Gain

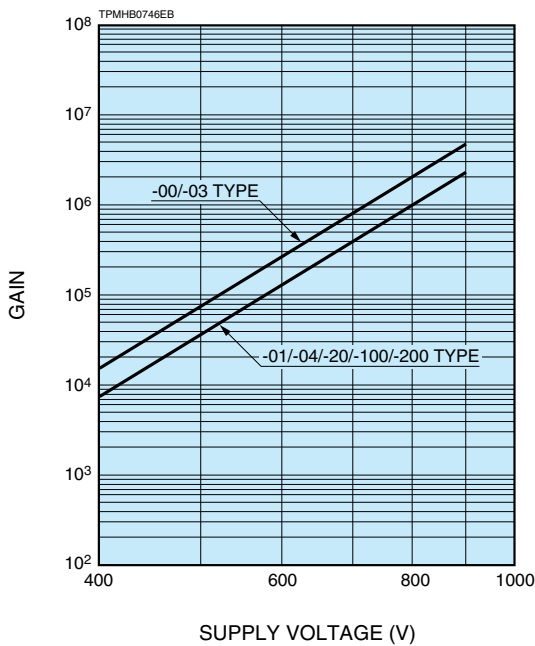


Figure 3: Time Response (Example)

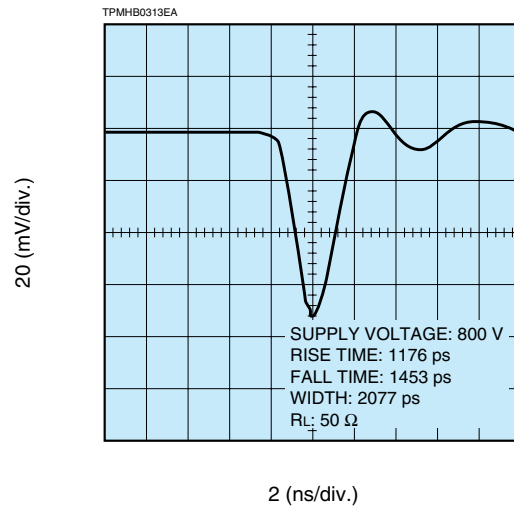


Figure 4: TTS Characteristic (Example)

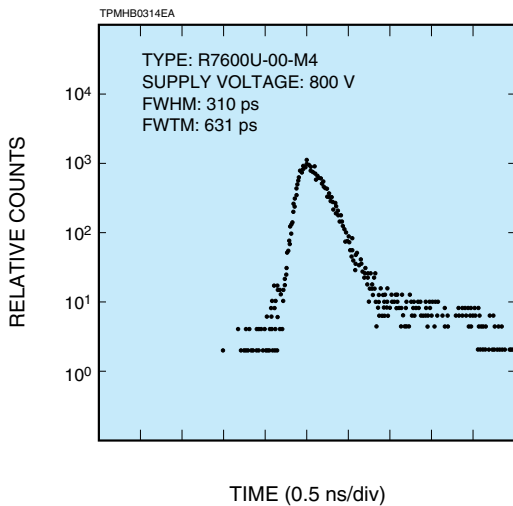
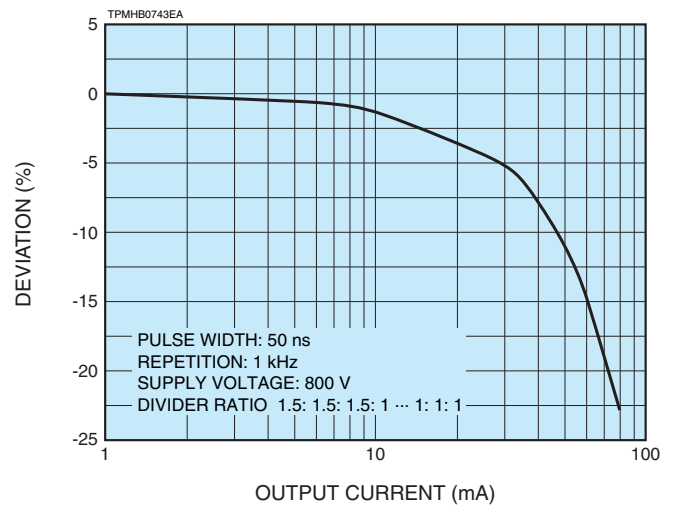


Figure 5: Pulse Linearity per Channel (Example)



Anode Characteristics								Pulse Linearity per Channel		Cross-talk (%)	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. (nA)	Max. (nA)	Rise Time (ns)	Transit Time (ns)	TTS (ns)								
25	140	1.8×10^6	0.5	5	1.2	9.5	0.36	10	30	2	1: 1.5	1: 3	-30 to +50	-30 to +50	R7600U-00-M4
50	200	1.0×10^6	2.5	12.5							R7600U-01-M4				
25	140	1.8×10^6	0.5	5							R7600U-03-M4				
50	200	1.0×10^6	2.5	12.5							R7600U-04-M4				
100	500	1.0×10^6	2.5	12.5							R7600U-20-M4				
25	140	1.3×10^6	0.5	5							R7600U-100-M4				
25	175	1.3×10^6	0.5	5							R7600U-200-M4				

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio		1.5	1.5	1.5	1	1	1	1	1	1	1	1

Supply Voltage: 800 V, K: Cathode, Dy: Dynode, P: Anode

Figure 6: Anode Uniformity (Example)

82	95
97	100

Supply Voltage: -800 V
 Light Source: Lamp (uniform DC light)
 Wavelength: 400 nm
 Full Illumination

Figure 7: Anode Cross-talk (Example)

0.1	0.9
1.3	100

Supply Voltage: -800 V
 Light Source: Lamp (uniform DC light)
 Wavelength: 400 nm
 Spot Illumination: 9 mm × 9 mm

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

