

PHOTOMULTIPLIER TUBE R329-02

FEATURES

•Fast time response

APPLICATIONS

- •For scintillation counting
- High energy physics



SPECIFICATIONS

GENERAL

	Parameter	Description / Value	Unit
Spectral response		300 to 650	nm
Wavelength of maximu	ım response	420	nm
Photocathode	Material	Bialkali	_
Photocathode	Minimum effective area	φ46	mm
Window material		Borosilicate glass	_
Dynode	Structure	Linear focused	_
Dynode	Number of stages	12	_
Operating ambient ter	mperature	-30 to +50	°C
Storage temperature		-30 to +50	°C
Base		21-pin glass base	_
Suitable socket		E678-21C (supplied)	_

MAXIMUM RATINGS (Absolute maximum values)

	Parameter	Value	Unit
Supply voltage	Between anode and cathode	2700	V
Average anode current		0.2	mA

CHARACTERISTICS (at 25 °C)

	Parameter	Min.	Тур.	Max.	Unit
	Luminous (2856 K)	60	90	_	μ A /lm
Cathode sensitivity	Blue sensitivity index (CS 5-58)	_	10.5	_	_
	Radiant at 420 nm	_	85	90 — μA/Im 10.5 — — 85 — mA/W 100 — A/Im 9.4 × 10 ⁴ — A/W 1.1 × 10 ⁶ — — 6.0 40 nA 2.6 — ns 48 — ns 1.1 — ns 15 (100) — mA	
Anada aanaitivity	Luminous (2856 K)	30	100	_	A/Im
Anode sensitivity	Radiant at 420 nm	_	9.4×10^{4}	_	A/W
Gain		_	1.1×10^{6}	_	_
Anode dark current (after	30 min storage in darkness)	_	6.0	40	nA
	Anode pulse rise time	_	2.6	_	ns
Time response	Electron transit time	_	48	_	ns
	Transit time spread (T.T.S.)	_	1.1	_	ns
Pulse linearity	at 2 % deviation	_	15 (100)	_	mA
	at 5 % deviation	_	30 (200)	_	mA

NOTE: Anode characteristics are measured with the voltage distribution ratio shown below.

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

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

_		_	_	_		_				_						
Electrodes	K		G D	y1 [y2 D	y3 D	y4 D	y5 D	y6 D	y7 D	y8 Dy	/9 Dy1	0 Dy1	l1 Dy	/12	Р
Ratio		4	0	1	1.4	1	1	1	1	1	1	1	1	1	1	

Supply voltage: 1500 V, K: Cathode, Dy: Dynode, P: Anode, G: Grid

* The shield pin should be connected to Dy5.

VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE (Tapered Divider)

Electrodes	K		G	D	y1 [y2	Dy3	Dy	/4	Dy5	Dy	6 D	у7	Dy	8 D	y9 D	y10 🛭)y11	Dy12	Р	,
Ratio		4.0	3	0	1		6	1	1	Π.	1	1.2	1.	.5	2	2.4	3	3.	9	3	

Supply voltage: 2000 V, K: Cathode, Dy: Dynode, P: Anode, G: Grid

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Figure 1: Typical spectral response

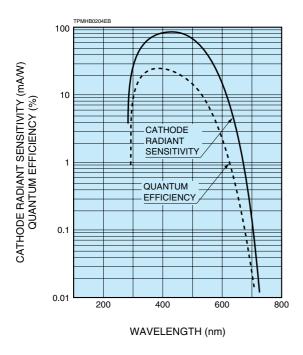


Figure 2: Typical gain characteristics

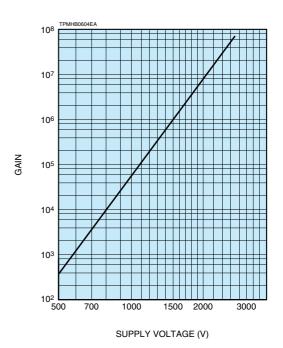
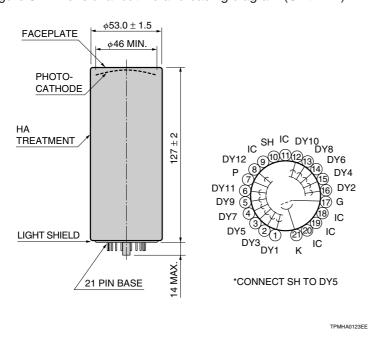
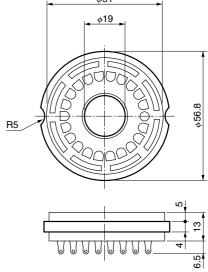


Figure 3: Dimensional outline and basing diagram (Unit: mm)



Socket E678-21C (Supplied)



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