

### 38 mm Diameter Photomultiplier Tubes For Scintillation Counting, Gamma Camera Bialkali Photocathode, 10 Stages, Head-on Type

#### GENERAL

Parameter		Description/Value	Unit
Spectral Response		300 to 650	nm
Wavelength of Maximum Response		420	nm
Photocathode	Material	Bialkali	—
	Minimum Effective Area	34	mm dia.
Window Material		Borosilicate glass	—
Dynode	Structure	Circular-cage	—
	Number of Stages	10	—
Base	R980	12-pin base JEDEC No. B12-43	—
	R980-01 (flying leads temporary base)	12-pin base JEDEC No. B12-43	—
Suitable Socket		E678-12A (supplied)	—

#### MAXIMUM RATINGS (Absolute Maximum Values)

Parameter		Value	Unit
Supply Voltage	Between Anode and Cathode	1250	V dc
	Between Anode and Last Dynode	250	V dc
Average Anode Current		0.1	mA
Ambient Temperature	R980	-30 to +50	°C
	R980-01	-80 to +50	°C

#### CHARACTERISTICS (at 25 °C)

Parameter		Min.	Typ.	Max.	Unit
Cathode Sensitivity	Luminous (2856 K)	70	100	—	μA/lm
	Radiant at 420 nm	—	90	—	mA/W
	Blue Sensitivity Index (CS 5-58)	9.0	11.5	—	—
Anode Sensitivity	Luminous (2856 K)	10	35	—	A/lm
	Radiant at 420 nm	—	$3.3 \times 10^4$	—	A/W
Gain		—	$3.7 \times 10^5$	—	—
Anode Dark Current (after 30 min storage in darkness)		—	3	5	nA
Time Response	Anode Pulse Rise Time	—	2.8	—	ns
	Electron Transit Time	—	40	—	ns

#### VOLTAGE DISTRIBUTION RATIO AND SUPPLY VOLTAGE

Electrodes	K	Dy1	Dy2	Dy3	Dy4	Dy5	Dy6	Dy7	Dy8	Dy9	Dy10	P
Ratio	2	1	1	1	1	1	1	1	1	1	1	1

Supply Voltage: 1000 V dc, K: Cathode, Dy: Dynode, P: Anode

# PHOTOMULTIPLIER TUBES R980, R980-01

Figure 1: Typical Spectral Response

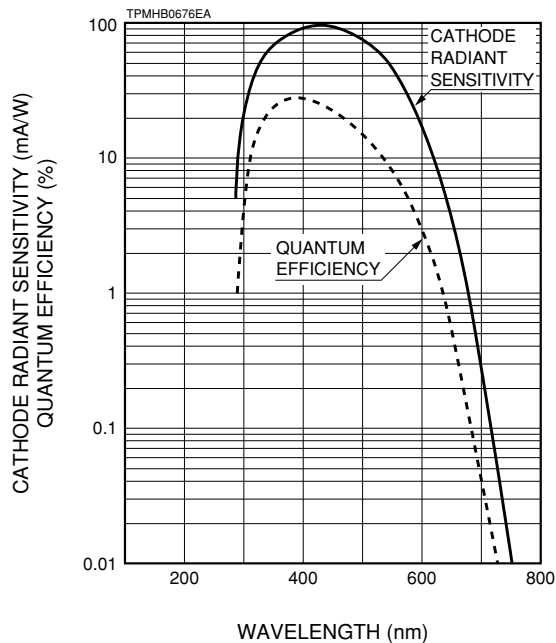


Figure 2: Typical Gain

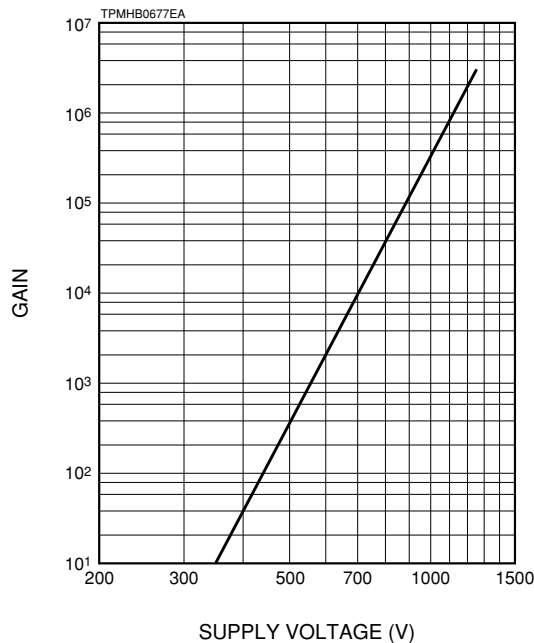
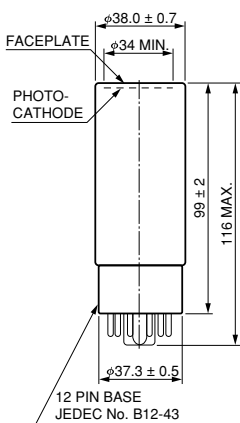
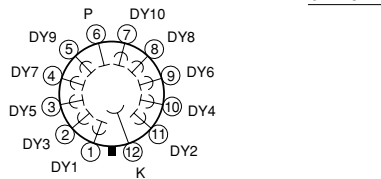


Figure 3: Dimensional Outline and Basing Diagram (Unit: mm)

## R980

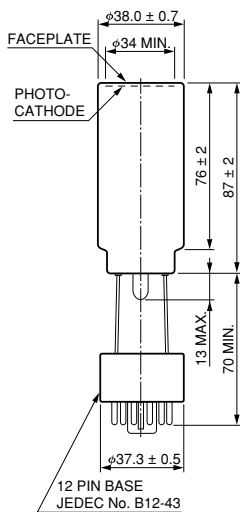


Basing Diagram (Bottom View)

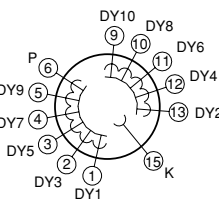


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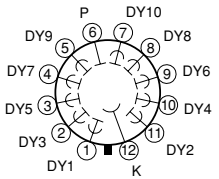
## R980-01



Temporary Base Removed

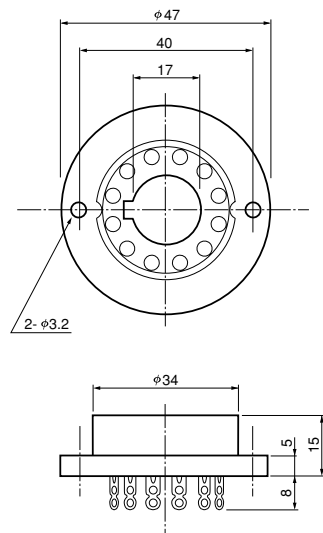


Basing Diagram (Bottom View)



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## Socket (E678-12A)



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