

76mm (3") Round 9-stage Photomultiplier Tube

- ✓ Low profile
- ✓ High resolution
- ✓ High Blue sensitivity
- ✓ Scintillation counting
- ✓ Gamma Spectroscopy



Description

Window material	Lime glass
Photocathode	Bi-alkali
Refr. Index at 420nm	1.54
Multiplier structure	Box and Linear focused

Photocathode characteristics

	Min	Typ	Max	Unit
Spectral range :		290-650		nm
Maximum sensitivity at :		420		nm
Sensitivity :				
Luminous :		100		μA/lm
Blue :	11	12.5		μA/lmf
Radiant, at 420nm		100		mA/W

Characteristics with voltage divider A

	Min	Typ	Max	Unit
Gain slope (vs supp. Volt., log/log)		6.2		
For an anode blue sensitivity of		3		A/lmf
Supply voltage	800	1000	1200	V
Gain		2.4×10^5		
Anode dark current		1	20	
Pulse height resolution ⁵⁷ Co – NaI(Tl) 3"X3"		8.6	9.2	%
Mean anode sensitivity deviation :				
Long term (16h) :		1		%
After change of count rate :		1		%
Vs temperature between 0 and +40°C at 420 nm		-0.3		%/K
Anode sensitivity change for magnetic field of 0.05 mT :		2.5		%
For a supply voltage of : 1000V	Min	Typ	Max	Unit
Linearity (2%) of anode current up to :		10		mA
Anode pulse:				
Rise time:		6		ns
Duration at half height:		16		ns
Transit time:		48		ns
Center to edge difference (C.E.D):		13		ns

Recommended Voltage Divider

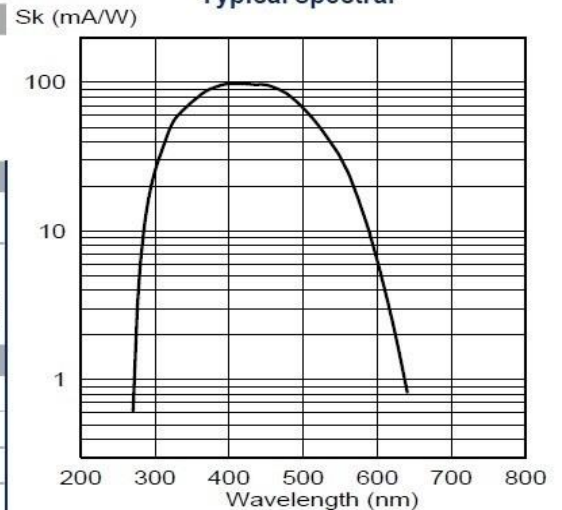
Type A for maximum gain

K	G	D1	D2	D3	D4	D5	D6	D7	D8	D9	A
1	1	1	1	1	1	1	1	1	1	1	1

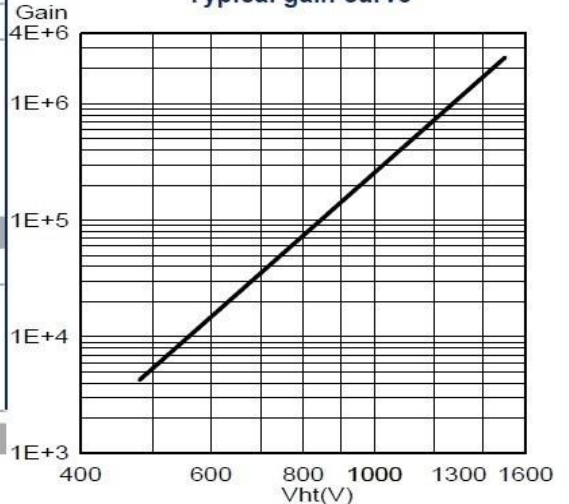
Type B for maximum linearity

K	G	D1	D2	D3	D4	D5	D6	D7	D8	D9	A
2	2	1	1	1	1	1	1	1	1	1	1

Typical spectral



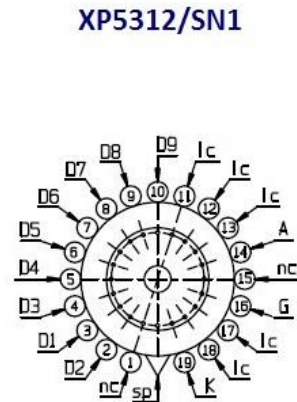
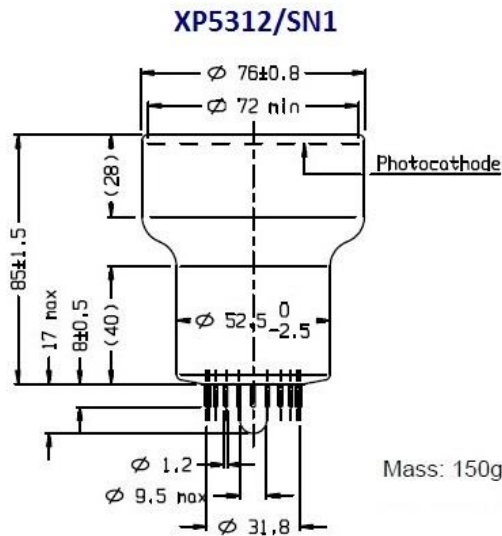
Typical gain curve



Photomultiplier

PHOTONIS XP5312/SN1

Outline (dimensions in mm)



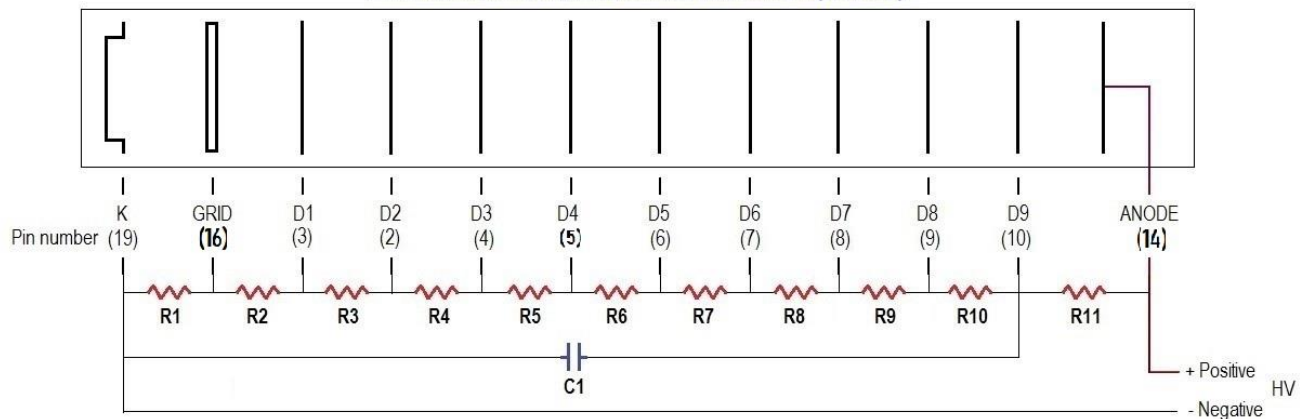
K: cathode
G: focusing electrode

A: anode
Dn: dynode

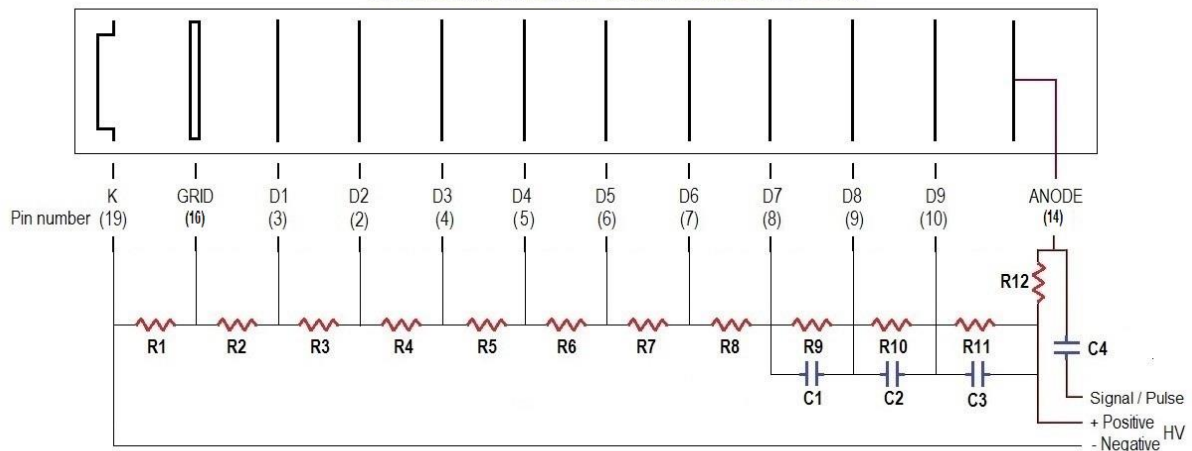
sp: short pin
ic: internal connection

nc: not connected

PHOTONIS XP5312/SN1 CIRCUIT DIAGRAM (2 WIRE)



PHOTONIS XP5312/SN1 CIRCUIT DIAGRAM (3-WIRE)



Circuit Diagrams by iRad, Inc. (7/2022)