

# Photomultiplier

# XP14B2

## Nine-channel, 11-stage 38mm (1.5"), Square tube

### Applications

- ✓ Medical imaging
- ✓ Physics
- ✓ Analytical and control

### Features

- ✓ Compact size
- ✓ Large area of detection
- ✓ High energy resolution



### Description

Window material	Borosilicate glass
Photocathode	Bi-alkali
Refr. Index at 420nm	1.48
Multiplier structure	Foil multiplier

### Photocathode characteristics

	Min	Typ	Max	Unit
Spectral range :		270-650		nm
Maximum sensitivity at		420		nm
Sensitivity :				
Luminous *	70	90		μA/lm
Blue *	10	11		μA/lmF
Radiant, at 420nm		100		mA/W

### Characteristics with voltage divider A

	Min	Typ	Max	Unit
Gain slope (vs supp. Volt., log/log)		8		
For an anode blue sensitivity of		16		A/lmF
Supply voltage	900	1150	1250	V
Gain		1.5x10 <sup>6</sup>		
Anode dark current *		30	100	nA
Cross talk between channels		5	10	%
Pulse height resolution per channel for 511 keV Gama Ray with BGO *		18	20	%
Mean anode sensitivity deviation :				
Long term (16h) :		1		%
After change of count rate :		1		%
Anode sensitivity change for magnetic field of 0.3mT :				
Perpendicular to axis "n" :		TBD		%
Parallel to axis "n" :		TBD		%
Parallel to tube axis		TBD		%

### For a supply voltage of : 1500V

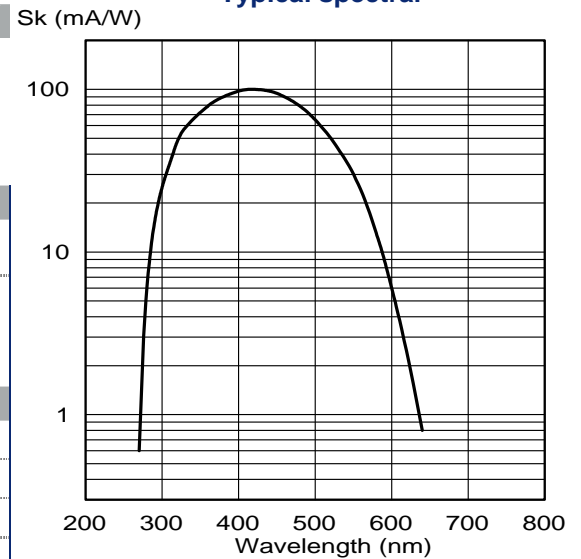
	Min	Typ	Max	Unit
Anode pulse :				
Rise time :		4.5		ns
Duration at half height :		6		ns
Transit Time :		<30		ns

### Recommended Voltage Divider

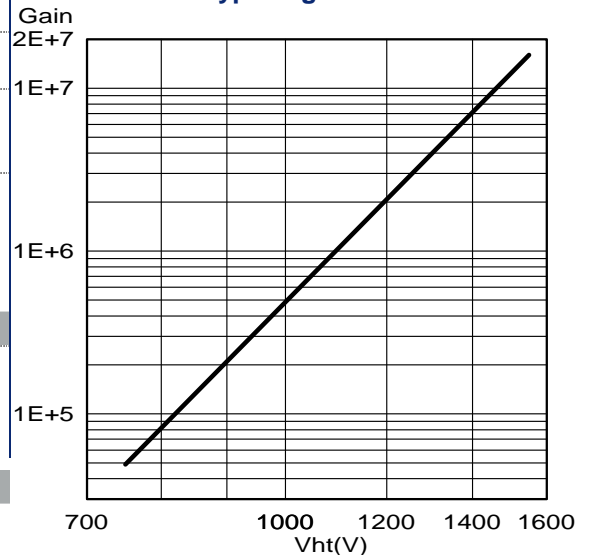
Type A for maximum gain

K	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	An	
3	2	1	1	1	1	1	1	1	1	1	1	2.5	(total : 16.5)

Typical spectral



Typical gain curve

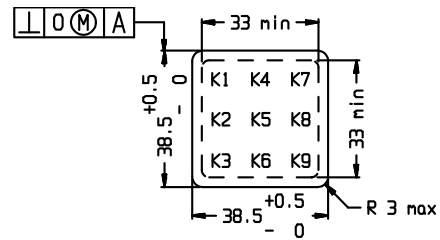
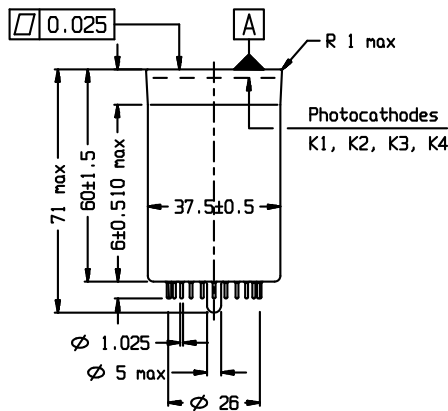


\* characteristic measured and mentioned on the test ticket of each tube

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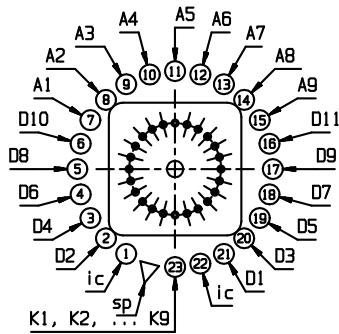
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## Outline (dimensions in mm)



Mass: 85g

Accessories :  
Socket : FE3139



Kn: cathode  
sp: short pin

Dn: dynode  
ic: internal connection

An: anode

Limiting values	Min	Max	Unit
Anode blue sensitivity		200	A/lmf
Supply voltage		1550	V
Continuous anode current		100	mA
Voltage between :			
D1 and photocathode :	150	350	V
Consecutive dynode :		270	V
Anode and D11 :	25	300	V
Ambient temperature :			
Short operation (<30 mn) :	-30	+80	°C
Continuous operation :	-20	+50	°C
Continuous storage :	-35	+50	°C

## Variants

### Finishing

F with flying leads  $\varnothing 0.5$

XP14B2

### Option

C with electrostatic coating  
(conductive paint connected to the cathode  
+ insulating coating)

Also, other variants can be made. Please, contact us to discuss any specific product requirements.