

Photomultiplier

XP1303

10-stage 13.5mm (1/2"), Round tube

Applications

- ✓ Red sensitivity
- ✓ Spectrophotometer
- ✓ Photon counting

Features

- ✓ High gain
- ✓ Red sensitivity



Description

Window material	Borosilicate glass
Photocathode	Tri-alkali
Refr. Index at 420nm	1.48
Multiplier structure	Linear focused

Photocathode characteristics

	Min	Typ	Max	Unit
Spectral range :		270-850		nm
Maximum sensitivity at :		450		nm
Sensitivity :				
Luminous * :	100	180		μA/lm
Radiant, at 700nm * :	10	20		mA/W

Characteristics with voltage divider A

	Min	Typ	Max	Unit
Gain slope (vs supp. Volt., log/log)		7.5		
For an anode blue sensitivity of		60		A/lm
Supply voltage *	900	1200	1500	V
Gain		3x10 ⁵		
Anode dark current *		2	20	nA
Background noise *		500	1000	cps
Mean anode sensitivity deviation :				
Long term (16h) :		1		%
After change of count rate :		1		%
Vs temperature between 0° and +40° at				
420nm :		±0.1		%/K
Gain halved for a magnetic field of :				
Perpendicular to axis "n" :		0.3		mT
Parallel to axis "n" :		0.2		mT

For a supply voltage of : 1300V

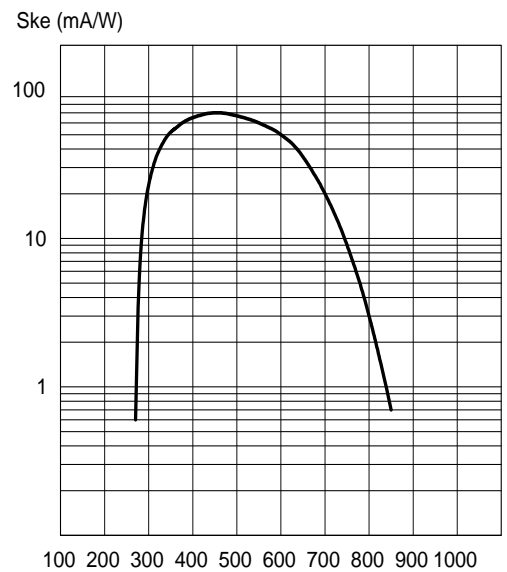
	Min	Typ	Max	Unit
Anode pulse :				
Rise time :		2.4		ns
Duration at half height :		5.4		ns
Transit Time :		22.5		ns

Recommended Voltage Divider

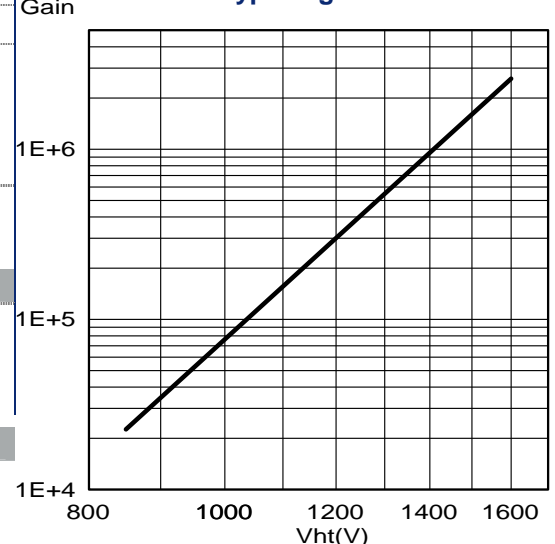
Type A for maximum gain

K	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	A
1	1	1	1	1	1	1	1	1	1	1	(total : 11)

Typical spectral



Typical gain curve

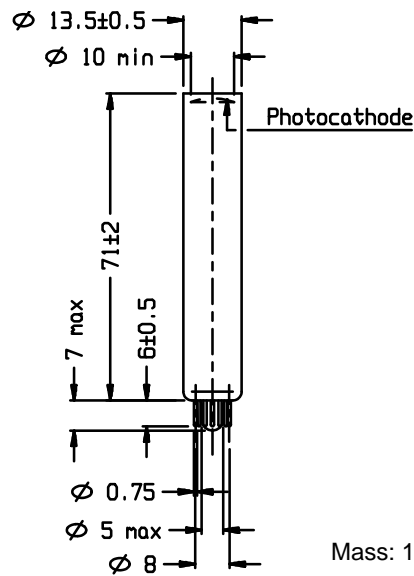


* characteristic measured and mentioned on the test ticket of each tube

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Outline (dimensions in mm)

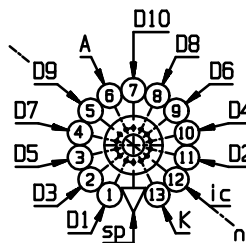


Mass: 15g

Accessories :

Socket : FE3113

Voltage divider : VD307/A



K: cathode
sp: short pin

Dn: dynode
ic: internal connection

A: anode

n: plane of symmetry of the multiplier

Limiting values	Min	Max	Unit
Anode luminous sensitivity		600	A/lm
Supply voltage		1600	V
Continuous anode current		0.1	mA
Voltage between :			
D1 and photocathode :	60	120	V
Consecutive dynode :		100	V
Anode and D10 :	30	100	V
Ambient temperature :			
Short operation (<30 mn) :	-30	+80	°C
Continuous operation & storage :	-30	+50	°C

Variants

Finishing

F with flying leads $\varnothing 0.5$
FB with flying leads and plastic base

XP1303

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.