

Photomultiplier

XP2012

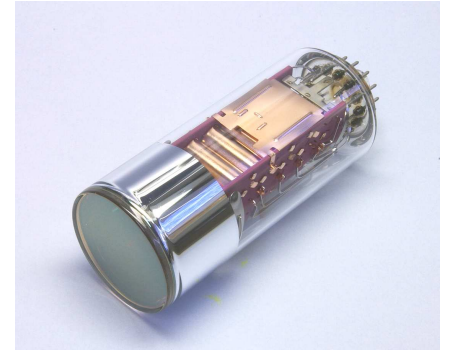
10-stage 39mm (1,5"), Round tube

Applications

- ✓ Industrial photometry
- ✓ Scintillation counting

Features

- ✓ Good PHR



Description

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

Photocathode characteristics

| | Min | Typ | Max | Unit |
|--------------------------|-----|---------|-----|--------|
| Spectral range : | | 290-650 | | nm |
| Maximum sensitivity at : | | 420 | | nm |
| Sensitivity : | | | | |
| Luminous : | | 85 | | µA/lm |
| Blue * : | 9 | 11 | | µA/lmf |
| Radiant, at 420nm | | 85 | | 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 | | 7.5 | | A/lmf |
| Supply voltage * | 1050 | 1250 | 1450 | V |
| Gain | | 6.5×10^5 | | |
| Anode dark current * | | 1 | 10 | |
| Pulse height resolution ¹³⁷ Cs - NaI(Tl) 2" x 2" | | 7.5 | | % |
| Pulse height resolution ⁵⁵ Fe - NaI(Tl) 2" x 2" * | | 42 | | % |
| Peak to valley ratio for ⁵⁵ Fe | | 34 | | |
| Mean anode sensitivity deviation : | | | | |
| Long term (16h) : | | 1 | | % |
| After change of count rate : | | 1 | | % |
| Vs temperature between 0 and +40°C at 420 nm | | 0.2 | | %/K |
| Gain halved for a magnetic field of : | | | | |
| Perpendicular to axis "n" : | | 0.35 | | mT |
| Parallel to axis "n" : | | 0.15 | | mT |

For a supply voltage of : 1250V

| | Min | Typ | Max | Unit |
|---|-----|-------------------|-----|------|
| Linearity (2%) of anode current up to : | | 65 | | mA |
| Gain | | 6.5×10^5 | | |
| Anode pulse: | | | | |
| Rise time: | | 3 | | ns |
| Duration at half height: | | 7 | | ns |
| Transit time: | | 28 | | ns |

Recommended Voltage Divider

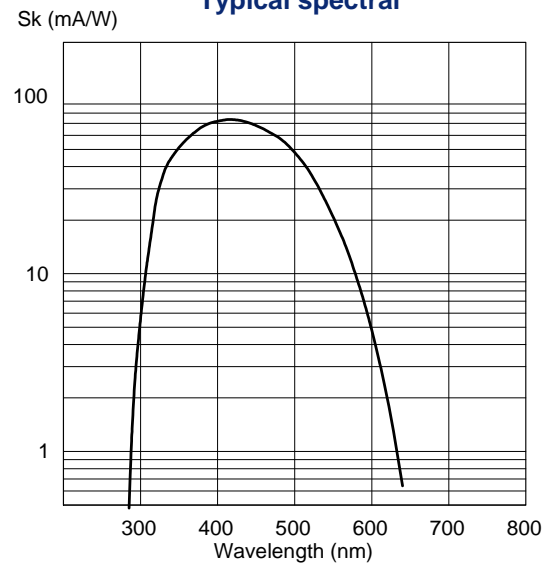
Type A for maximum gain

| | | | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|-----|---|--------------|
| K | D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | D9 | D10 | A | |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | (total : 12) |

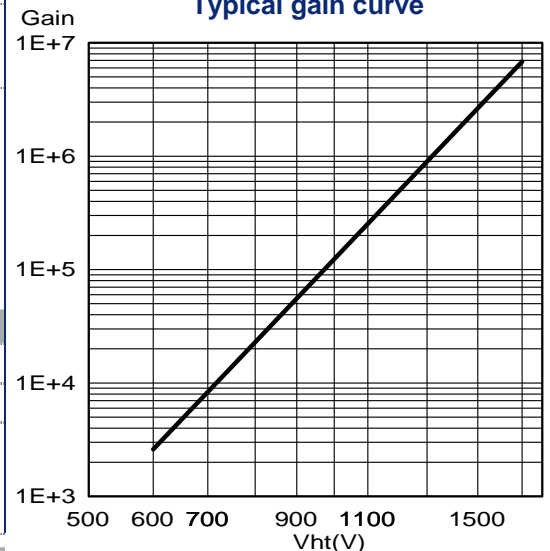
• characteristic mentioned on the test ticket of the tube

PHOTONIS

Typical spectral



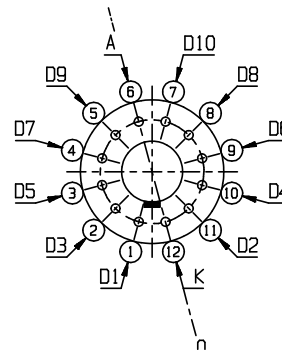
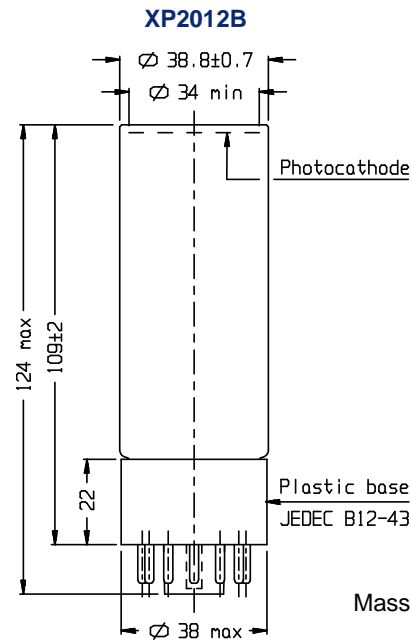
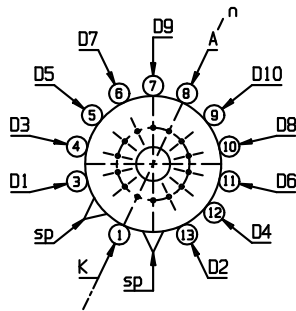
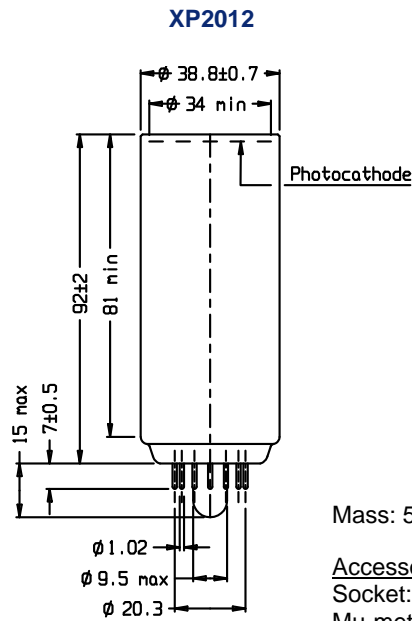
Typical gain curve



Photomultiplier

XP2012

Outline (dimensions in mm)



K: cathode

A: anode

Dn: dynode

sp: short pin

n: plane of symmetry of the multiplier

| Limiting values | Min | Max | Unit |
|----------------------------------|-----|------|-------|
| Anode blue sensitivity | | 75 | A/lmf |
| Supply voltage | | 1800 | V |
| Continuous anode current | | 0.2 | mA |
| Voltage between : | | | |
| D1 and photocathode : | 100 | 500 | V |
| Consecutive dynode : | | 300 | V |
| Anode and D10 : | 30 | 300 | V |
| Ambient temperature : | | | |
| Short operation (<30 mn) : | -30 | +80 | °C |
| Continuous operation & storage : | -30 | +50 | °C |

Variants

Finishing

B with plastic base JEDEC B12-43

F with flying leads $\varnothing 0.5$

FB with flying leads and plastic base

XP2012

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.