

HIGH SENSIBILITY PROBES

UV-2 SERIES

FEATURES

- | | |
|------------------------------------------|--------------------------|
| • Spectral response: | 185÷260 nm |
| • Peepsight connection: | Ø 3/4" gas |
| • Discharge starting voltage: | (with UV radiation) 280V |
| • Recommended oper. voltage: | 325 ±25V |
| • Max. voltage: | 400V |
| • Recommended discharge current: | 100µA |
| • Average discharge current (note A): | 1mA |
| • Max. peak current (note B): | 30mA |
| • Operating temperature | -20÷60°C |
| • Background (note C): | max. 10 cpm |
| • Sensibility (note D) | 5,000 cpm (> 1pW) |
| • Life service with continuous discharge | > 10,000 hours |



F7001101

DESCRIPTION

The UV2 is a flame detector for industrial use installed in a robust, die-cast aluminium box, equipped with plug in connection and threaded connection for the peepsight. It contains a gas filled UV-tube. UV-rays (not daylight or artificial light from discharge or filament lamps) ionise the gas in the tube. Figure 1 shows the curb of the spectral response. The UV2 may be used either with all the electronic systems ESA produces or with any other system provided the tube is operated within its limits.

CAUTIONS AND WARNINGS

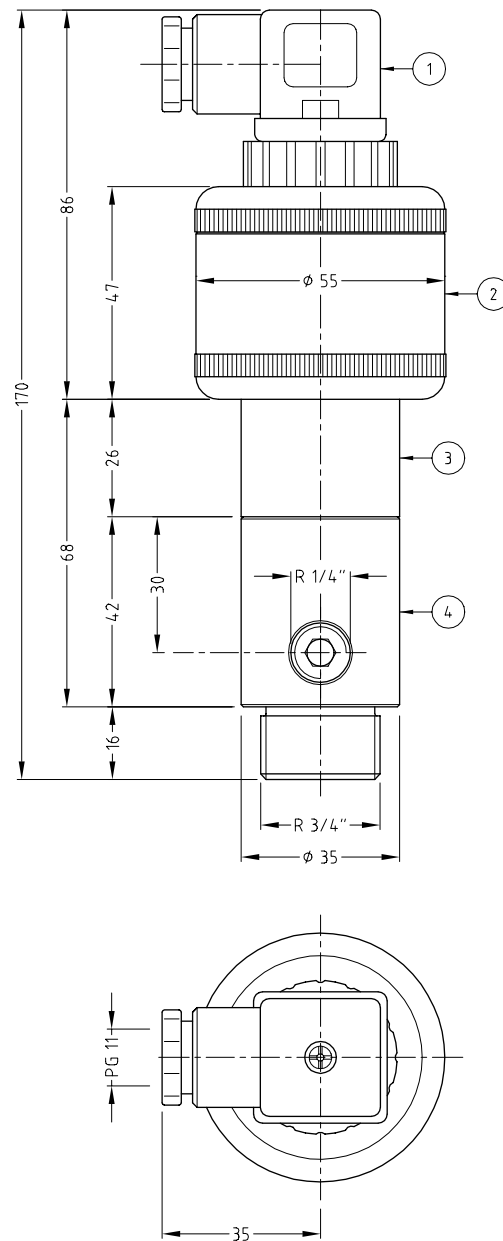
- The housing of the photo-tube should be covered. During flame detection the tube itself produces ultra-violet radiation which could be captured by others photo-tubes.
- The detector is also sensible to ultra-violet radiation produced by the crown effect.
- The UV2 is built in accordance with MIL-STD-202F (method 240D0.06" or 10g, 10-500Hz, 15 minutes, 1 cycle) and MIL-STD-202F (method 213B/100g, 11ms, semiwave, 3 events). A strong mechanical stress (fall) could damage the quartz bulb of the detector, impairing its performances or causing it to be useless. Take care when holding the UV2.
- Humidity within the housing, as well as dust or dirt within the field of vision of the photo-tube could cause losses of signal.
- Use only unipolar cables.

NOTES

- A If the detector is operated with the recommended current for long, its service life is noticeably reduced. Use the detector within the recommended current values.
- B This is the maximum momentary current that can be handled if its full width at half maximum is less than 10 µs.
- C Measured under room illuminations (approximately 500 lux) and recommended operating conditions. Note that these values may increase if the following factors are present: mercury lamps, sterilizing lamps or halogen lamps located nearby; electrical sparks (also from ignition transformer); radiation sources; intense electric fields (including static fields) generated across the probe. It is advisable to ground the housing of the detector (not only for greater safety and because the regulations prescribes it) via the plug in connection.
- D These are representative values for a wavelength of 200 nm and a light input of 10 pW/cm². In actual use, the sensibility will vary with the wavelength of the ultraviolet radiation and the drive circuitry employed.

ELECTRICAL WIRING IS MARKED ON THE HOUSING, REVERSED POLE CONNECTION DOES NOT DAMAGE THE DETECTOR BUT DOES NOT EMIT A USEFUL SIGNAL EITHER.

DIMENSIONS

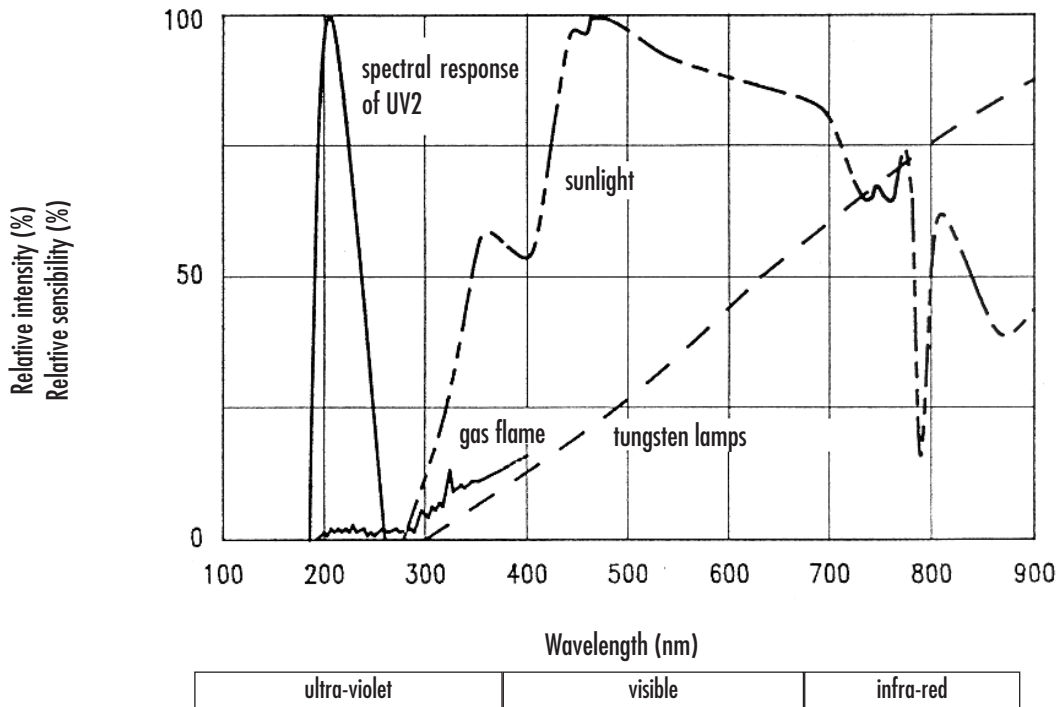


Pos.	Model identification
1	plug for electric connection
2	housing
3	athermic connection with quartz glass and gaskets
4	cooling air connection

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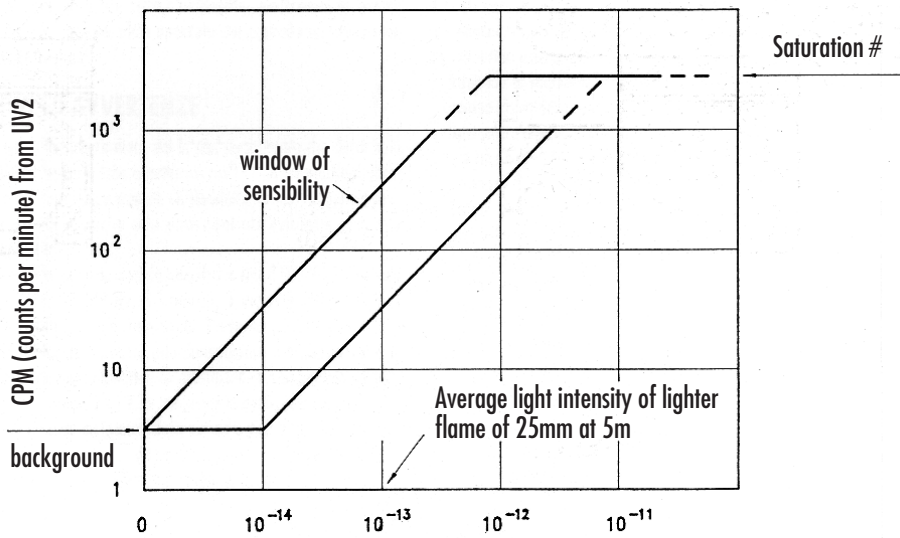
DIAGRAMS

Fig. 1 - Spectral response and light emissions of different sources



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Fig. 2 - Sensibility and background of UV2



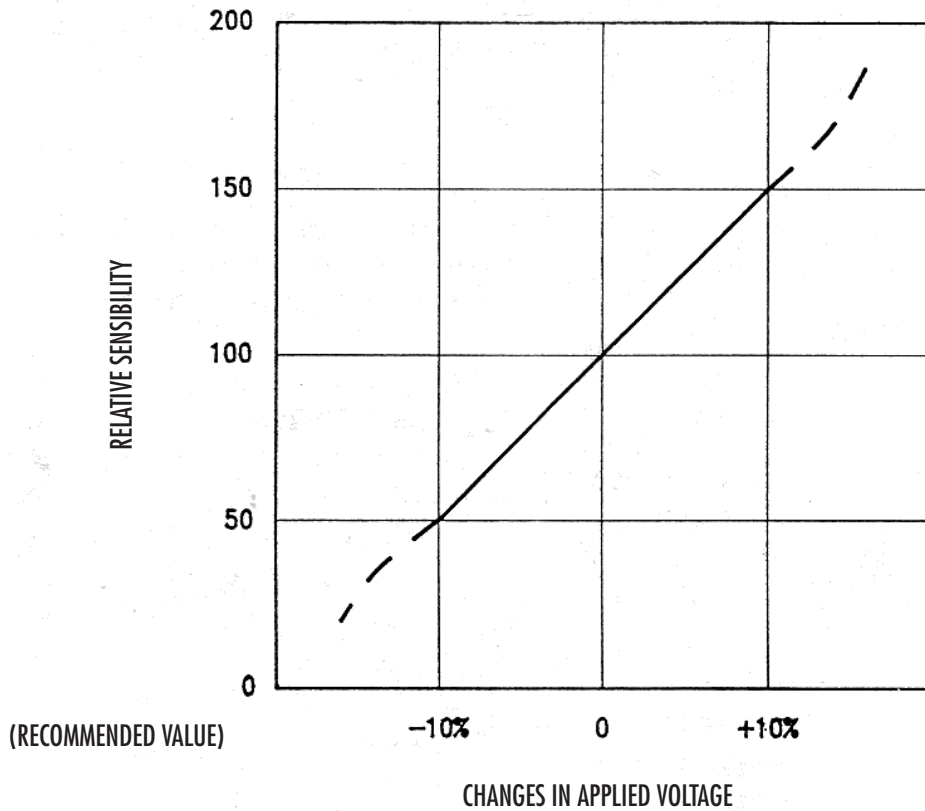
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Incident light intensity (W/cm²) λ:200 nm

The point of saturation depends on the characteristics of the driving circuit

DIAGRAMS

Fig. 3 - Applied voltage and sensibility



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