# 2026

# Official Product Catalog

Sartec Photoelectronics

UV sensors, flame detectors, PMTs, InGaAs photodiodes, SiPMs and optical gas sensing modules

Sensing the Light for a Safer World

SarTEC-Photoelectronics

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### Looking for a specific sensing solution?

Contact our engineering team to discuss additional product options and customization requirements.

# UV phototubes

Flame and discharge sensing

## Features

Ultraviolet phototubes detect weak UV radiation through the photoelectric effect and gas-discharge current multiplication. The family covers 185 to 300 nm, with the response range specified for each model.

## Sensing characteristics

High sensitivity, fast response, compact construction, and low current consumption. Narrow spectral response rejects visible and infrared radiation.

## Applications

Fire alarms; burner combustion monitoring; discharge detection in transmission towers, substations, and distribution cabinets; UV leakage monitoring; automated equipment; aerospace fire suppression; military applications.

# SR1406i

## UV phototube

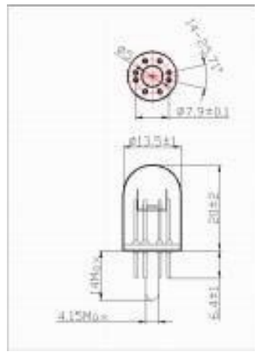
Alternative solution for Hamamatsu R9533

## Features

Top-view sensing of weak UV radiation. High sensitivity and fast response. Mounting bracket available on request.

## Dimensions (mm)





## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Start-up voltage | > 210 | V |
| Sensitivity | > 5000 | cps |
| Background count rate | < 10 | cps |
| Spectral response range | 185 to 260 | nm |
| Service life | 20000 | h |
| Operating voltage | 350 ±25 | V |
| Average output current | 0.3 | mA |
| Operating temperature | -55 to +125 | °C |

## Applications

Flame monitoring, fire alarms, burner fuel and gas monitoring, discharge detection, and military alarm monitoring.

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# SR15A

## UV phototube

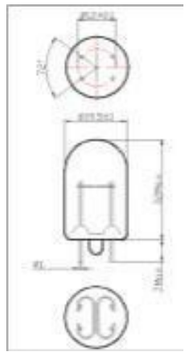
Alternative solution for Siemens P57861-13V

### Features

Top-view sensing of weak UV radiation. High sensitivity and fast response. Mounting bracket available on request.

### Dimensions (mm)





### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Start-up voltage | ≥ 180 | V |
| Sensitivity | ≥ 1000 | cps |
| Background count rate | < 10 | cps |
| Spectral response range | 185 to 300 | nm |
| Service life | 10000 | h |
| Operating voltage | 310 ±25 | V |
| Average output current | 5 | mA |
| Operating temperature | -20 to +125 | °C |

### Applications

Boiler combustion flame detection, fire alarms, and discharge monitoring.

# SR15

## UV phototube

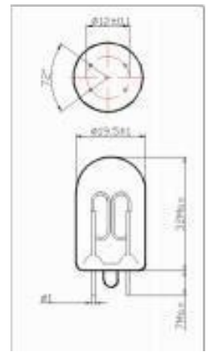
Alternative solution for Siemens P57861-13V

### Features

Side-view UV phototube with high sensitivity, fast response, and reliable performance.

### Dimensions (mm)





### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Start-up voltage | ≥ 180 | V |
| Sensitivity | ≥ 1500 | cps |
| Background count rate | < 10 | cps |
| Spectral response range | 185 to 300 | nm |
| Service life | 10000 | h |
| Operating voltage | 310 ±25 | V |
| Average output current | 5 | mA |
| Operating temperature | -20 to +125 | °C |

### Applications

Boiler combustion flame detection, fire alarms, and discharge monitoring.

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# SR0708

## UV phototube

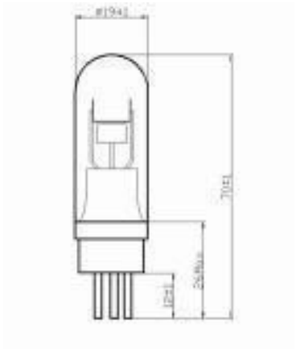
Alternative solution for Honeywell 7035 / 7027

### Features

High sensitivity, long detection range, and resistance to mechanical shock.

### Dimensions (mm)





### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Start-up voltage | ≥ 180 | V |
| Sensitivity | > 5000 | cps |
| Background count rate | < 10 | cps |
| Spectral response range | 185 to 300 | nm |
| Service life | 15000 | h |
| Operating voltage | 310 ±25 | V |
| Average output current | > 5 | mA |
| Operating temperature | -45 to +120 | °C |

### Applications

Boiler combustion flame detection and industrial UV monitoring.

# SR65

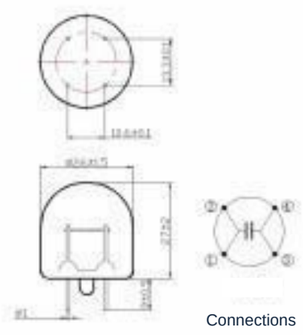
## UV phototube

### Features

Top-view phototube for rapid remote flame detection. High sensitivity, fast response, and a wide detection angle.

### Dimensions (mm)





Connections

### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Start-up voltage | ≥ 180 | V |
| Sensitivity | > 1000 | cps |
| Background count rate | < 10 | cps |
| Spectral response range | 185 to 300 | nm |
| Service life | 10000 | h |
| Operating voltage | 350 ±25 | V |
| Average output current | 1 | mA |
| Operating temperature | -20 to +125 | °C |

### Applications

Boiler combustion flame detection, fire alarms, military monitoring, and outdoor UV monitoring.

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# SR1406

## UV phototube

Alternative solution for Hamamatsu R9533

## Features

Compact UV phototube with no response to visible light. Top-view sensing.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Electrode material | Nickel (Ni) | — |
| Spectral response range | 185 to 260 | nm |
| Recommended supply (DC) | 350 ±25 | V |
| Recommended average current | 0.3 | mA |
| Quenching time | 1 min. | ms |
| Discharge starting voltage (DC) | 325 max. | V |
| Discharge sustaining voltage (DC) | 280 typ. | V |
| Sensitivity[1] | 8000 typ. | $min^{-1}$ |
| Background count rate[2] | 10 max. | $min^{-1}$ |
| Expected life[3] | 25000 | h |
| Supply voltage (DC), absolute max. | 400 | V |
| Average discharge current, max.[4] | 1 | mA |
| Peak current, max.[5] | 30 | mA |
| Operating temperature | -40 to +125 | °C |
| Weight | 2.5 | g |
| Socket / driver (sold separately) | Not specified in source | — |

## Applications

Boiler combustion and hydrogen flame monitoring; fire detection in public transport and facilities.

[1] Characteristics at 25 °C. Sensitivity at 200 nm; irradiance unit in the source requires confirmation. $min^{-1}$ = counts per minute.
[2] Background: approximately 500 lx indoors under recommended operating conditions; outdoor interference may increase counts.
[3] Life depends on the circuit and temperature. Cooling may be required at elevated temperatures.
[4] Maximum current operation shortens life; use the recommended current.
[5] Peak current applies to pulse widths below 10 µs.

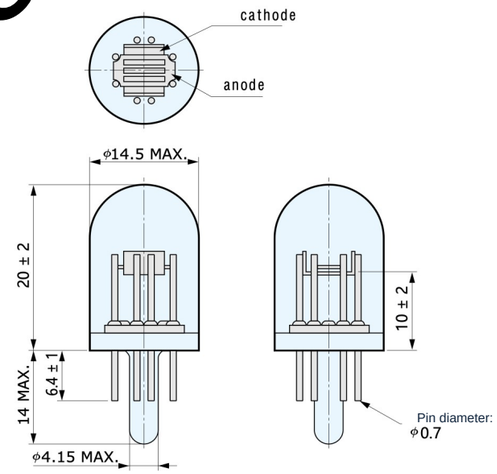
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# SR1406

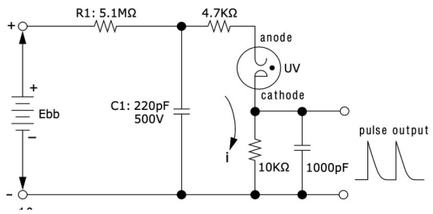
## Dimensions and application data

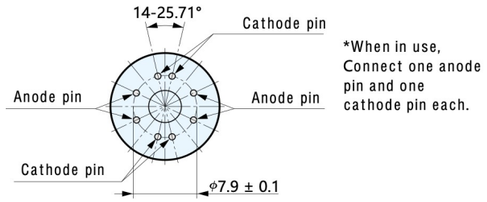
## Dimensions (mm)






### Source circuit — timing TBC

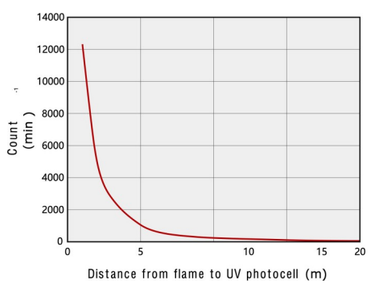



Observe the anode and cathode pin markings.

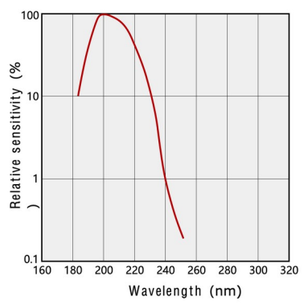
## Typical Characteristics

### Sensitivity vs. distance



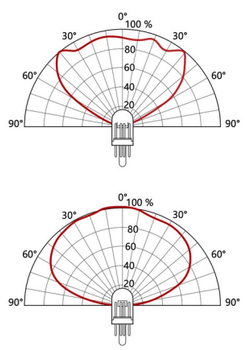

Counts/min vs. distance (m)
Test source: alcohol lamp

### Spectral response




Relative sensitivity (%)
Wavelength (nm)

### Detection angle



# SR07

## UV phototube

Alternative solution for Hamamatsu R259

## Features

UV phototube with no response to visible light. Side-view sensing.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Electrode material | Nickel (Ni) | — |
| Spectral response range | 185 to 260 | nm |
| Recommended supply (DC) | 500 ±50 | V |
| Recommended average current | 0.3 | mA |
| Quenching time | 1 min. | ms |
| Discharge starting voltage (DC) | 440 max. | V |
| Discharge sustaining voltage (DC) | 330 typ. | V |
| Sensitivity[1] | 480 typ. | $min^{-1}$ |
| Background count rate[2] | 5 max. | $min^{-1}$ |
| Expected life[3] | 25000 | h |
| Supply voltage (DC), absolute max. | 575 | V |
| Average discharge current, max.[4] | 1 | mA |
| Peak current, max.[5] | 30 | mA |
| Operating temperature | -40 to +125 | °C |
| Weight | 2.7 | g |
| Socket / driver (sold separately) | Not specified in source | — |

## Applications

Boiler combustion monitoring and fire detection in facilities.

[1] Characteristics at 25 °C. Sensitivity at 200 nm; irradiance unit in the source requires confirmation. $min^{-1}$ = counts per minute.
[2] Background: approximately 500 lx indoors under recommended operating conditions; outdoor interference may increase counts.
[3] Life depends on the circuit and temperature. Cooling may be required at elevated temperatures.
[4] Maximum current operation shortens life; use the recommended current.
[5] Peak current applies to pulse widths below 10 µs.

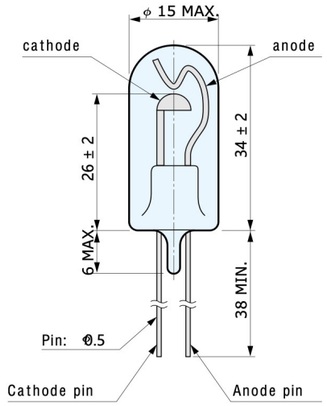
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SR07

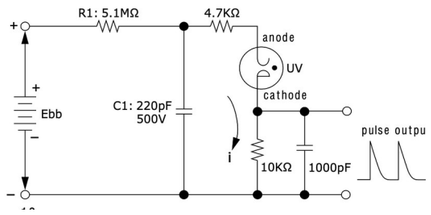
## Dimensions and application data

## Dimensions (mm)





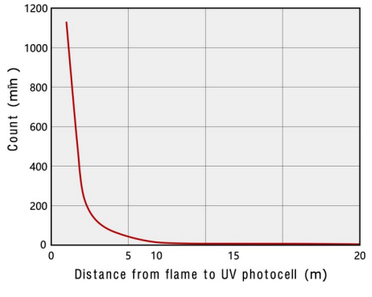

### Source circuit — timing TBC




Observe the anode and cathode pin markings.

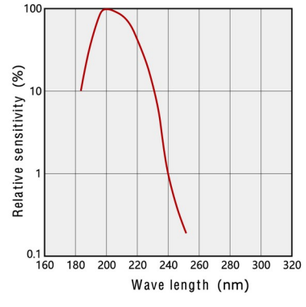
## Typical Characteristics

### Sensitivity vs. distance



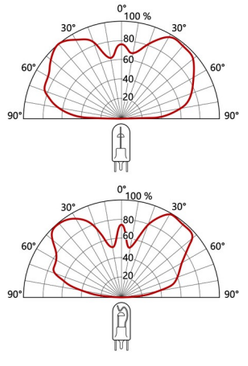

Counts/min vs. distance (m)
Test source: alcohol lamp

### Spectral response




Relative sensitivity (%)
Wavelength (nm)

### Detection angle



# SR08

## UV phototube

Alternative solution for Hamamatsu R2868

## Features

UV phototube with no response to visible light. Side-view sensing.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Electrode material | Nickel (Ni) | — |
| Spectral response range | 185 to 260 | nm |
| Recommended supply (DC) | 325 ±25 | V |
| Recommended average current | 0.3 | mA |
| Quenching time | 1 min. | ms |
| Discharge starting voltage (DC) | 280 max. | V |
| Discharge sustaining voltage (DC) | 240 typ. | V |
| Sensitivity[1] | 4000 typ. | $min^{-1}$ |
| Background count rate[2] | 10 max. | $min^{-1}$ |
| Expected life[3] | 25000 | h |
| Supply voltage (DC), absolute max. | 400 | V |
| Average discharge current, max.[4] | 1 | mA |
| Peak current, max.[5] | 30 | mA |
| Operating temperature | -40 to +70 | °C |
| Weight | 1.5 | g |
| Socket / driver (sold separately) | Not specified in source | — |

## Applications

Fire monitors, facility fire detection and boiler combustion monitoring.

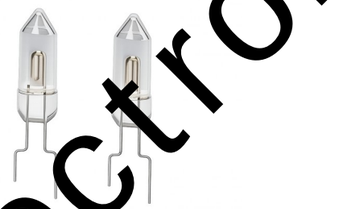
[1] Characteristics at 25 °C. Sensitivity at 200 nm; irradiance unit in the source requires confirmation. $min^{-1}$ = counts per minute.
[2] Background: approximately 500 lx indoors under recommended operating conditions; outdoor interference may increase counts.
[3] Life depends on the circuit and temperature. Cooling may be required at elevated temperatures.
[4] Maximum current operation shortens life; use the recommended current.
[5] Peak current applies to pulse widths below 10 µs.

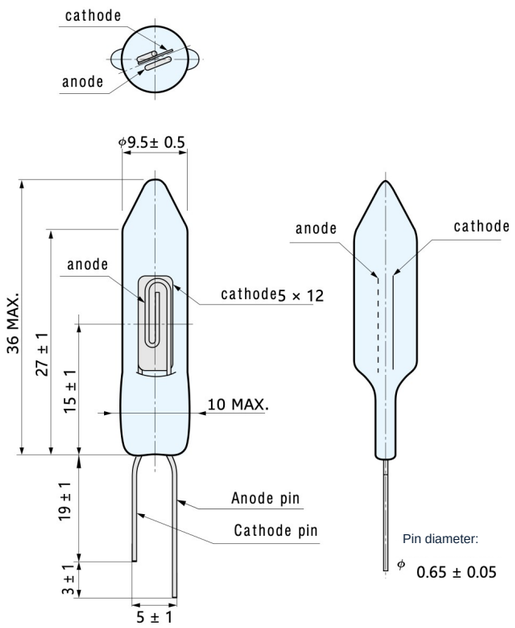
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# SR08

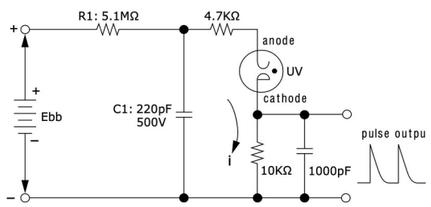
## Dimensions and application data

## Dimensions (mm)





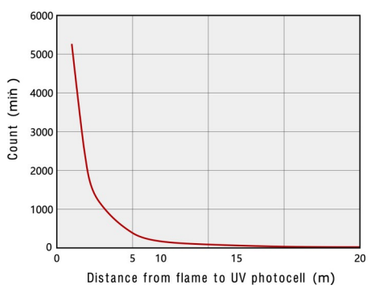

### Source circuit — timing TBC




Observe the anode and cathode pin markings.

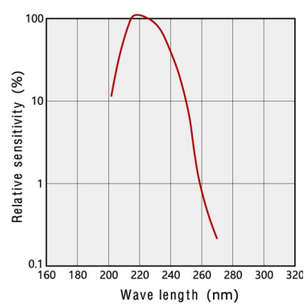
## Typical Characteristics

### Sensitivity vs. distance



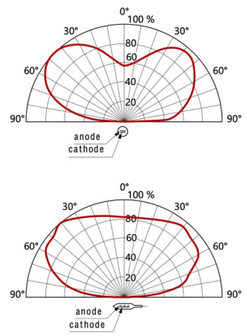

Counts/min vs. distance (m)
Test source: alcohol lamp

### Spectral response




Relative sensitivity (%)
Wavelength (nm)

### Detection angle



# SR1309

## UV phototube

Alternative solution for Hamamatsu R9454

## Features

UV phototube with no response to visible light. Side-view sensing.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Electrode material | Nickel (Ni) | — |
| Spectral response range | 185 to 260 | nm |
| Recommended supply (DC) | 400 ±25 | V |
| Recommended average current | 0.3 | mA |
| Quenching time | 1 min. | ms |
| Discharge starting voltage (DC) | 360 max. | V |
| Discharge sustaining voltage (DC) | 300 typ. | V |
| Sensitivity[1] | 4000 typ. | $min^{-1}$ |
| Background count rate[2] | 10 max. | $min^{-1}$ |
| Expected life[3] | 25000 | h |
| Supply voltage (DC), absolute max. | 500 | V |
| Average discharge current, max.[4] | 1 | mA |
| Peak current, max.[5] | 30 | mA |
| Operating temperature | -40 to +125 | °C |
| Weight | 1.5 | g |
| Socket / driver (sold separately) | Not specified in source | — |

## Applications

Boiler combustion monitoring and fire detection in facilities.

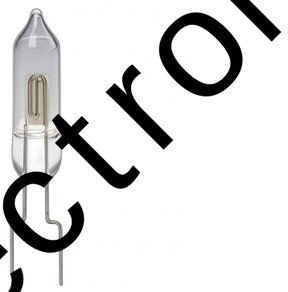
[1] Characteristics at 25 °C. Sensitivity at 200 nm; irradiance unit in the source requires confirmation. $min^{-1}$ = counts per minute.
[2] Background: approximately 500 lx indoors under recommended operating conditions; outdoor interference may increase counts.
[3] Life depends on the circuit and temperature. Cooling may be required at elevated temperatures.
[4] Maximum current operation shortens life; use the recommended current.
[5] Peak current applies to pulse widths below 10 µs.

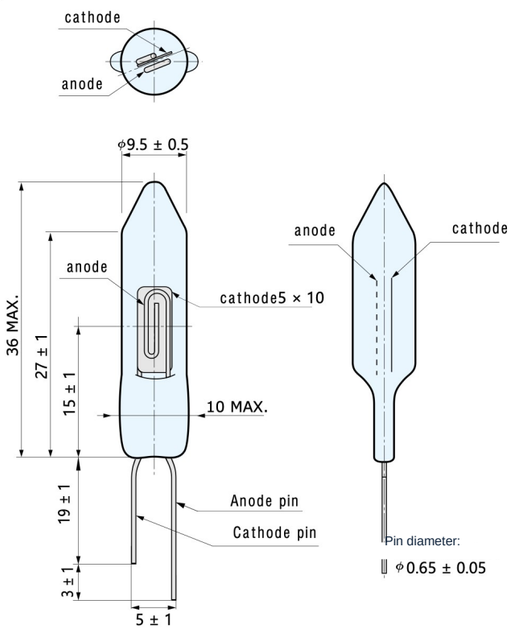
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# SR1309

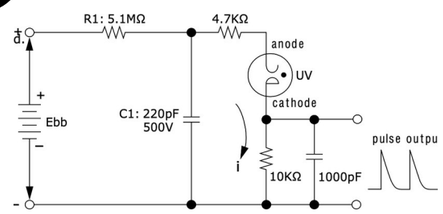
## Dimensions and application data

## Dimensions (mm)





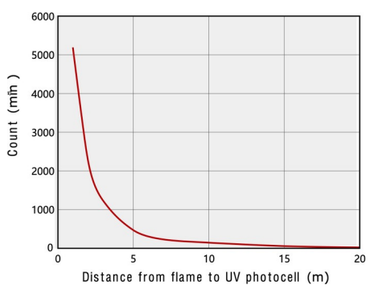

### Source circuit — timing TBC




Observe the anode and cathode pin markings.

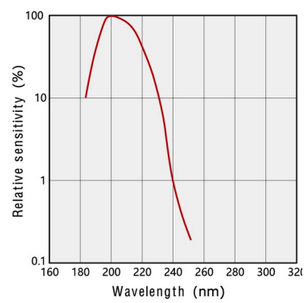
## Typical Characteristics

### Sensitivity vs. distance



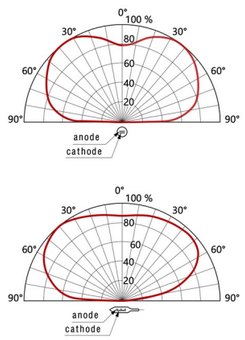

Counts/min vs. distance (m)
Test source: alcohol lamp

### Spectral response




Relative sensitivity (%)
Wavelength (nm)

### Detection angle



# SR244

## UV phototube

Alternative solution for Hamamatsu R244

## Features

UV phototube with no response to visible light. Source drawing identifies the anode and cathode connections.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Electrode material | Nickel (Ni) | — |
| Spectral response range | 185 to 260 | nm |
| Recommended supply (DC) | 500 ±50 | V |
| Recommended average current | 0.3 | mA |
| Quenching time | 1 min. | ms |
| Discharge starting voltage (DC) | 440 max. | V |
| Discharge sustaining voltage (DC) | 330 typ. | V |
| Sensitivity[1] | 480 typ. | $min^{-1}$ |
| Background count rate[2] | 5 max. | $min^{-1}$ |
| Expected life[3] | 25000 | h |
| Supply voltage (DC), absolute max. | 575 | V |
| Average discharge current, max.[4] | 1 | mA |
| Peak current, max.[5] | 30 | mA |
| Operating temperature | -40 to +125 | °C |
| Weight | 2.7 | g |
| Socket / driver (sold separately) | Not specified in source | — |

## Applications

Boiler combustion monitoring and fire detection in facilities.

[1] Measured at 200 nm and 10 pW/cm². Sensitivity depends on wavelength and drive circuit. $min^{-1}$ means counts per minute.
[2] Indoor illumination approximately 500 lx, at recommended operating conditions. Outdoor interference may increase counts.
[3] Life depends on the circuit and ambient temperature; cooling may be required at elevated temperatures.
[4] Operation at the maximum current shortens life. Use the recommended current.
[5] Maximum instantaneous current for a pulse width below 10 μs.

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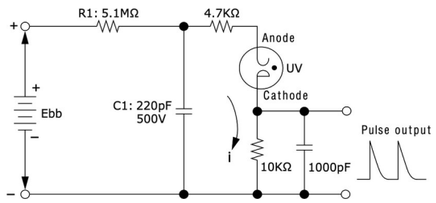
SR244

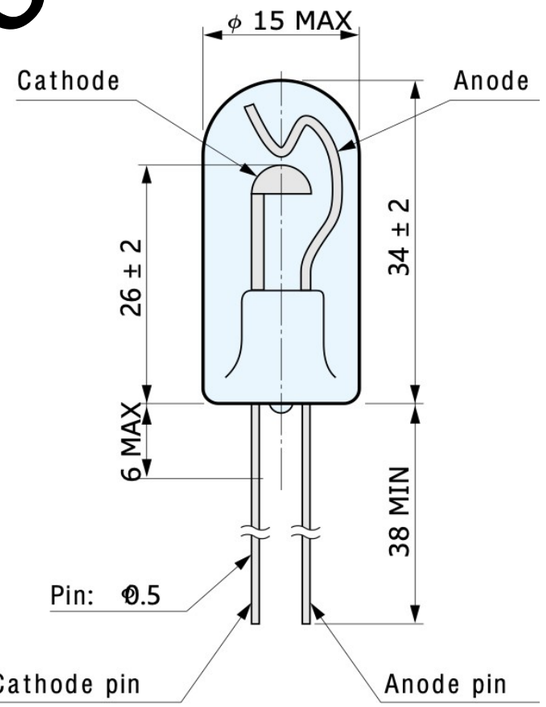
## Dimensions and application data

## Dimensions (mm)



**Source circuit — timing TBC**

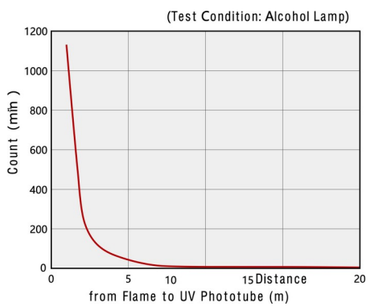



Observe the anode and cathode pin markings.

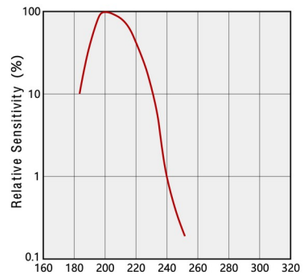
## Typical Characteristics

### Sensitivity vs. distance



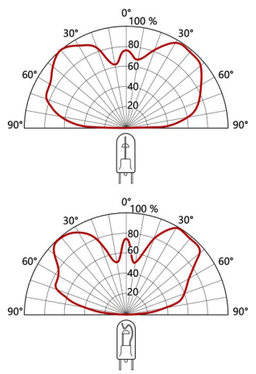

Counts/min vs. distance (m)
Test source: alcohol lamp

### Spectral response




Relative sensitivity (%)
Wavelength (nm)

### Detection angle



# SR13192

## UV phototube

## Features

Compact UV phototube with no response to visible light. Connect one anode pin and one cathode pin, as identified in the source drawing.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Electrode material | Nickel (Ni) | — |
| Spectral response range | 185 to 260 | nm |
| Recommended supply (DC) | 325 ±25 | V |
| Recommended average current | 0.1 | mA |
| Quenching time | 1 min. | ms |
| Discharge starting voltage (DC) | 325 max. | V |
| Discharge sustaining voltage (DC) | 280 typ. | V |
| Sensitivity[1] | 4000 typ. | $min^{-1}$ |
| Background count rate[2] | 10 max. | $min^{-1}$ |
| Expected life[3] | 25000 | h |
| Supply voltage (DC), absolute max. | 400 | V |
| Average discharge current, max.[4] | 1 | mA |
| Peak current, max.[5] | 30 | mA |
| Operating temperature | -40 to +125 | °C |
| Weight | 2.5 | g |
| Socket / driver (sold separately) | Not specified in source | — |

## Applications

Boiler combustion monitoring, hydrogen flame monitoring, and fire detection in public transport and facilities.

[1] Measured at 200 nm and 10 pW/cm². Sensitivity depends on wavelength and drive circuit. $min^{-1}$ means counts per minute.
[2] Indoor illumination approximately 500 lx, at recommended operating conditions. Outdoor interference may increase counts.
[3] Life depends on the circuit and ambient temperature; cooling may be required at elevated temperatures.
[4] Operation at the maximum current shortens life. Use the recommended current.
[5] Maximum instantaneous current for a pulse width below 10 µs.
Sensitivity grades A, B and C are mentioned in the source; grade limits are not provided.

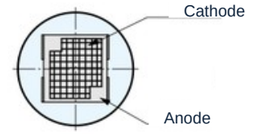
SarTEC-Photoelectronics

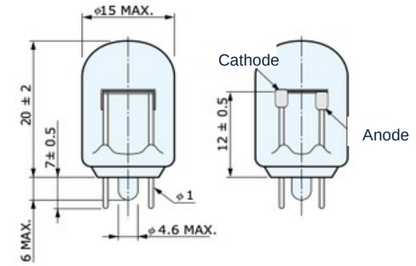
SR13192

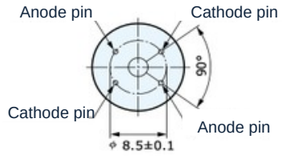
## Dimensions and application data

## Dimensions (mm)

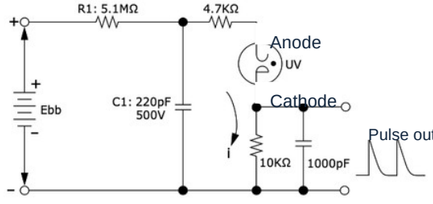




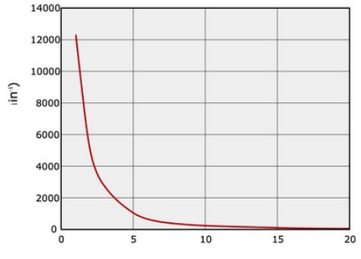

### Source circuit — timing TBC




Anode pins are above cathode pins in the source orientation. Connect one pin of each polarity.

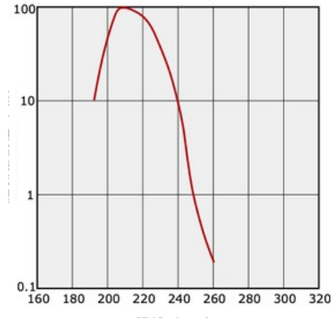
## Typical Characteristics

### Sensitivity vs. distance



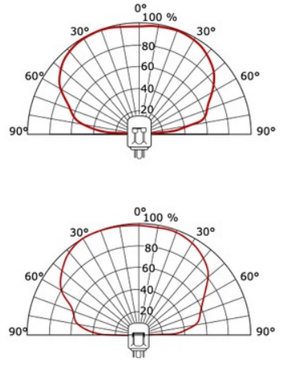

Counts/min vs. distance (m)
Test source: alcohol lamp

### Spectral response




Relative sensitivity (%)
Wavelength (nm)

### Detection angle



# SR9657-03

## UV checker lamp

## Features

UV checker lamp for functional checks of UV sensors. Specifications and engineering drawings below are Hamamatsu L9657-03 reference data.

## L9657-03 Reference Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Emission wavelength range | 185 to 400 | nm |
| Window material | UV glass | — |
| Weight | Approx. 0.74 | g |
| Supply voltage, absolute max. | 600 | V |
| Peak current, absolute max.[1] | 200 | µA |
| Operating temperature | -40 to +125 | °C |
| Discharge starting voltage (DC) | 260 max. | V |
| Recommended supply voltage (DC) | 300 ±25 | V |
| Recommended average current | 150 | µA |
| Guaranteed life[2] | 1000 | h |

## Applications

Functional checking of UV flame and discharge sensors.

Reference characteristics at 25 °C.
[1] Operation at the maximum current considerably shortens life.
[2] Reference life ends when light output falls to 50% of its initial value.
Source: Hamamatsu L9657-03 online product specification, accessed 10 September 2026.

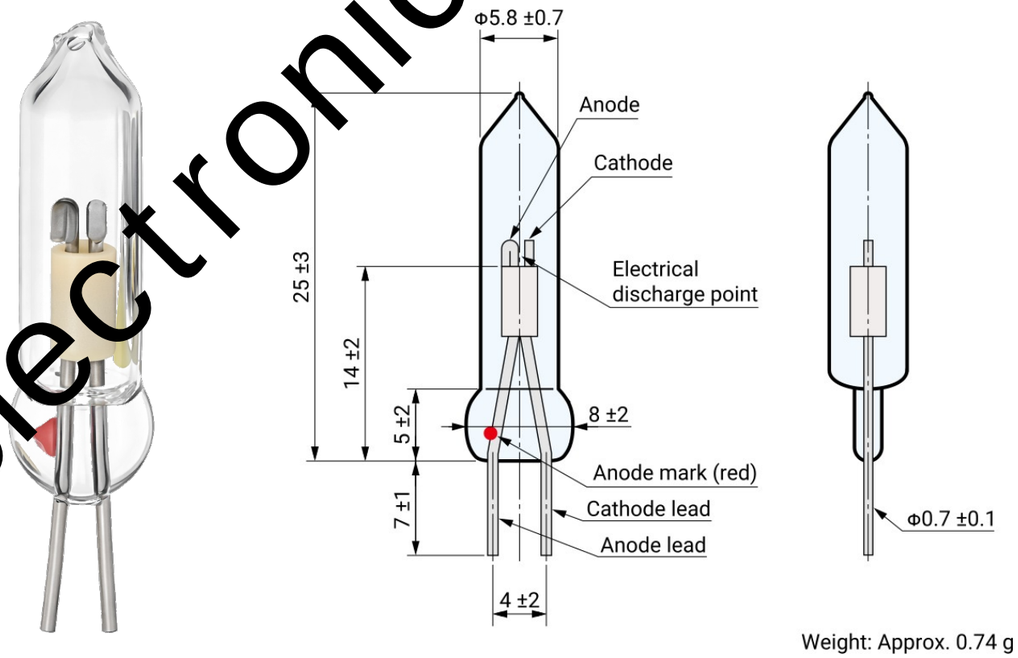
Reference specifications are not independent test results for SR9657-03. Confirm product performance and compatibility before design approval.

SarTEC-Photoelectronics

# SR9657-03

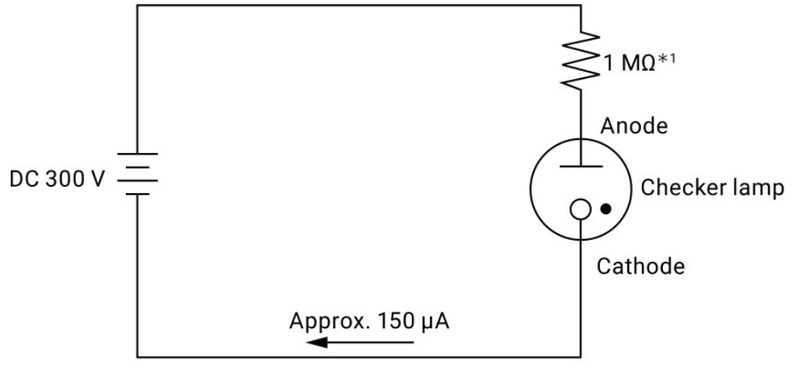
## Dimensions and application data

## Dimensions (mm) — Reference Drawing




Weight: Approx. 0.74 g

## Operating Circuit — Reference




*1: Insert a resistor (1 MΩ) immediately before (within 10 mm) the checker lamp anode.

Hamamatsu L9657-03 reference circuit and dimensions.
Confirm suitability for the SR9657-03 implementation.

# UV flame detectors

Industrial combustion monitoring

## Features

A UV sensor converts ultraviolet radiation from combustion into an electrical signal. A controller processes the signal to provide flame monitoring, alarm, or control functions.

## Operating principle

High sensitivity and signal-to-noise ratio support weak-flame detection. Fast response enables prompt recognition of flame signals.

## Applications

Heating furnaces, industrial boilers, and gas or oil combustion systems. Select the model using its stated temperature, humidity, protection, and interface specifications.

# SRA2 / SRA2M

## UV flame sensor

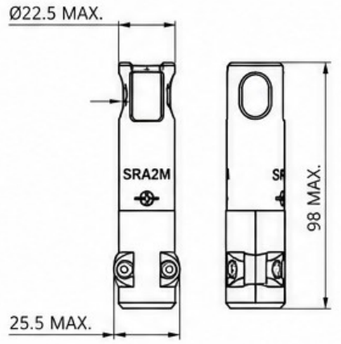
Alternative solution for Siemens QRA2M (SRA2M only)

## Features

Monitors gas flames, yellow or blue oil flames, and ignition sparks. Used with combustion controllers for gas or oil flame supervision.

## Dimensions (mm)






## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Average service life | 10000 at 50 °C | h |
| Protection rating | IP40 | — |
| Weight | 60 | g |
| Operating temperature | -20 to +60 | °C |
| Humidity | < 95 | % |

## Applications

Gas burner flame monitoring.

Drawing: SRA2M. Overall height 98 MAX. SRA2-specific dimensions require confirmation.

SarTEC-Photoelectronics

# SRA4.U

## UV flame sensor

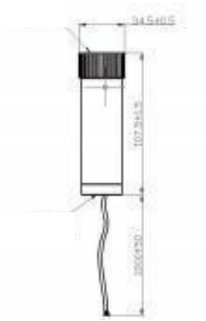
### Features

Monitors gas flames, yellow or blue oil flames, and ignition spark signals. Used with combustion controllers for flame supervision.

### Dimensions (mm)




1/2 inch
internal thread



1/2 inch
internal thread

### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Average service life | 10000 at 50 °C | h |
| Protection rating | IP54 | |
| Weight | 180 | g |
| Operating temperature | -20 to +60 | °C |
| Humidity | < 95 | % |

### Applications

Oil burners, gas burners, and dual-fuel burners.

# SR79A

## UV flame sensor

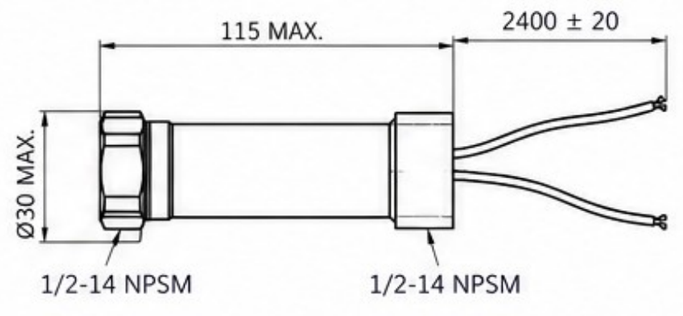
Alternative solution for Honeywell C7027

### Features

Compact UV flame monitor for combustion controllers and flame amplifiers. Small, lightweight construction for installation in locations with limited visibility.

### Dimensions (mm)




### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Operating temperature | -18 to +102 | °C |
| Maximum pressure rating | 5 | psi |
| Mounting | 1/2-14 NPSM internal thread | — |
| Observation tube | 1/2 inch | — |
| Lead wires | Two 8 ft (2.4 m), 18 AWG | — |
| Insulation | Color-coded plastic, NEC Class 1 | — |
| Wire temperature rating | 105 | °C |

### Applications

Oil burners, gas burners, and dual-fuel burners.

Rear connection description in source requires confirmation; verify the supplied wiring configuration.

SarTEC-Photoelectronics

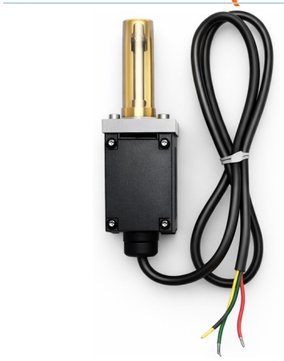
# UVS5AB (3-wire)

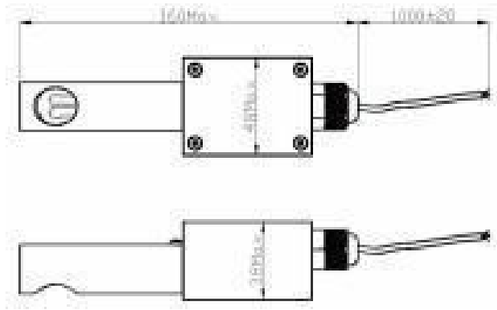
## UV flame detector

### Features

High-sensitivity UV monitoring of gas and oil flames, including low-luminosity flames from alcohol-based fuels, methanol, biodiesel, and blended fuels. Dust resistance and stable operation.

### Dimensions (mm)





### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50 | Hz |
| Effective detection distance | 1 | m |
| Spectral response range | 185 to 300 | nm |
| Output | Analog | — |
| Protection rating | IP65 | — |
| Wiring | Red: live; blue: neutral; yellow: signal | — |

### Applications

Gas and oil burner flame monitoring.

# UVS5AB (4-wire)

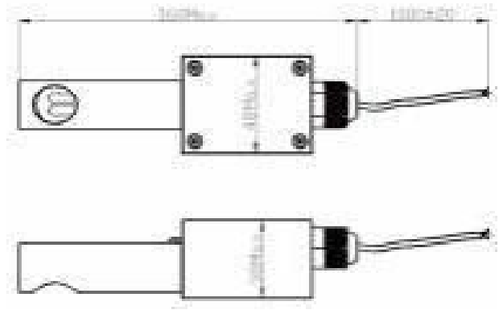
## UV flame detector

### Features

High-sensitivity UV monitoring of gas and oil flames, including low-luminosity flames from alcohol-based fuels, methanol, biodiesel, and blended fuels. Dust resistance and stable operation.

### Dimensions (mm)





### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50 | Hz |
| Effective detection distance | 1 | m |
| Spectral response range | 185 to 300 | nm |
| Output | Switching | — |
| Protection rating | IP65 | — |
| Wiring | Red: live; blue: neutral; yellow and green: control | — |

### Applications

Gas and oil burner flame monitoring.

SarTEC-Photoelectronics

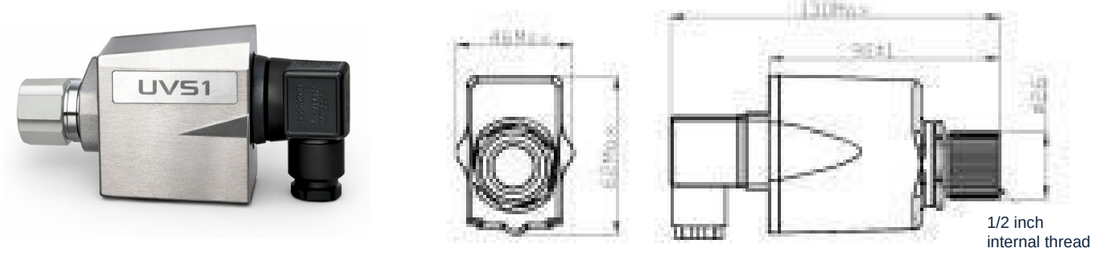
# UVS1

## UV flame detector

### Features

Works with ignition controllers to monitor UV radiation from gas or liquid combustion. Fast response, high sensitivity, and resistance to sunlight, lamp light, and furnace-wall radiation.

### Dimensions (mm)




### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50/60 | Hz |
| Effective detection distance | To be confirmed | m |
| Spectral response range | 185 to 260 | nm |
| Phototube service life | 10000 | h |
| Operating temperature | -40 to +80 | °C |
| Protection rating | IP60 | — |

Aluminum housing, B-12 connector socket, UV-transmitting waterproof lens, and 1/2-inch flange mounting interface.

### Applications

Hot-air furnaces, gas boilers, and industrial heating furnaces or kilns.

Source lists 0.7-1.2 m and a red 2 m annotation. Confirm detection distance.

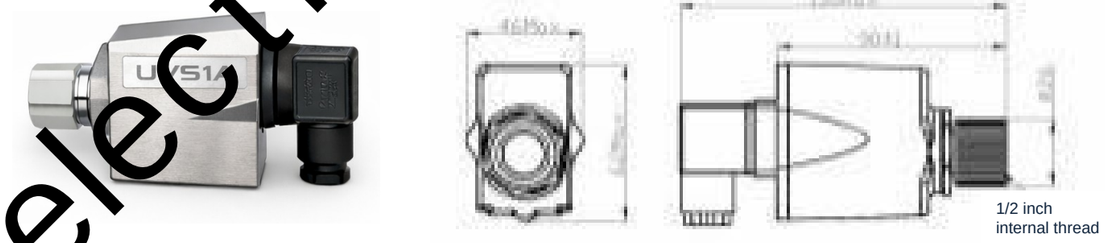
# UVS1A

## UV flame detector

### Features

Rectifies and amplifies the phototube signal to provide a switching output. Supports direct PLC connection without a separate programming controller. High sensitivity and resistance to sunlight, infrared radiation, moisture, and dust.

### Dimensions (mm)




### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50/60 | Hz |
| Effective detection distance | 5 | m |
| Spectral response range | 185 to 260 | nm |
| Phototube service life | 20000 | h |
| Output | Switching | — |
| Protection rating | IP60 | — |

Aluminum housing, B-12 connector socket, UV-transmitting waterproof lens, and 1/2-inch flange mounting interface.

### Applications

Hot-air furnaces, gas boilers, and industrial heating furnaces or kilns.

SarTEC-Photoelectronics

# UVS1B

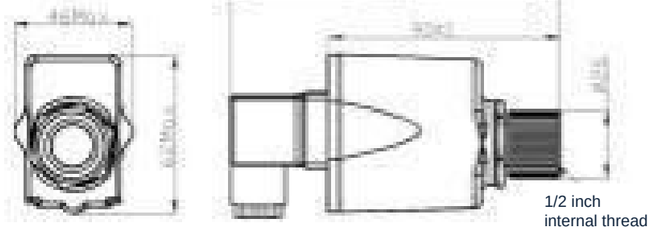
## UV flame detector

### Features

Works with burner controllers and flame amplifiers for atmospheric and forced-air burners. High sensitivity and straightforward installation.

### Dimensions (mm)




### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50 | Hz |
| Effective detection distance | 5 | m |
| Spectral response range | 185 to 260 | nm |
| Phototube service life | 20000 | h |
| Output | Analog | — |
| Protection rating | IP60 | — |

Aluminum housing, B-12 connector socket, UV-transmitting waterproof lens, and 1/2-inch flange mounting interface.

### Applications

Hot-air furnaces, gas boilers, and industrial heating furnaces or kilns.

# UVS8

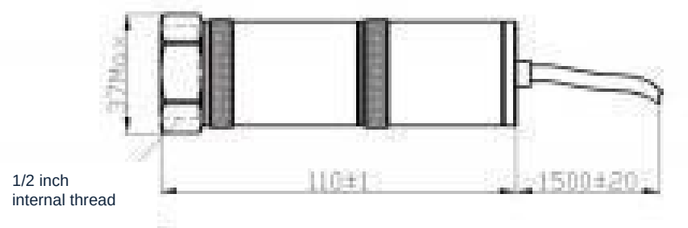
## UV flame detector

### Features

Works with ignition controllers for real-time gas or liquid combustion monitoring. Fast response and high sensitivity, with resistance to sunlight, artificial lighting, and furnace-wall radiation.

### Dimensions (mm)




### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50/60 | Hz |
| Effective detection distance | 0.7 to 1.2 | m |
| Spectral response range | 185 to 300 | nm |
| Phototube service life | 10000 | h |
| Operating temperature | -20 to +60 | °C |
| Output | Analog | — |
| Protection rating | IP54 | — |

Metal housing, UV-transmitting waterproof lens, 1.5 m silicone cable, three-core aviation connector, and 1/2-inch flange mounting interface.

### Applications

Hot-air furnaces, gas boilers, and industrial heating furnaces or kilns.

SarTEC-Photoelectronics

# UVS2

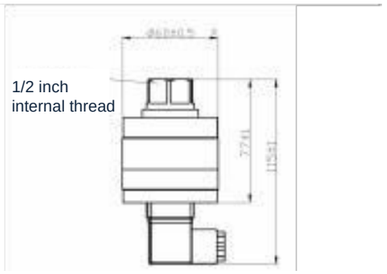
## UV flame detector

### Features

Works with ignition controllers to detect UV radiation from gas or liquid combustion. Fast response and high sensitivity, with resistance to visible and infrared interference.

### Dimensions (mm)




### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50/60 | Hz |
| Effective detection distance | 0.7 to 1.2 | m |
| Spectral response range | 185 to 260 | nm |
| Phototube service life | 10000 | h |
| Operating temperature | -20 to +60 | °C |
| Protection rating | IP40 | — |

Metal housing, 4-pin B-12 connector, UV-transmitting waterproof lens, and 1/2-inch flange mounting interface.

### Applications

Industrial furnace burners.

# KLC-1000

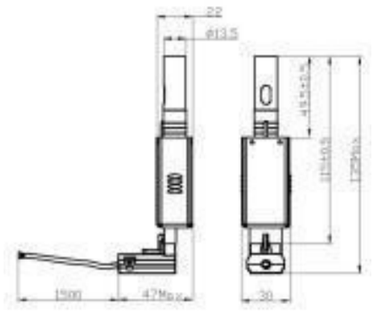
## UV flame detector

### Features

Detects low-NOx burner flames and light-blue flames from alcohol-based fuels, methanol, biodiesel, and blended fuels. High sensitivity, stable operation, and dust resistance.

### Dimensions (mm)



### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply voltage | 220 AC | V |
| Frequency | 50 | Hz |
| Effective detection distance | > 1.5 | m |
| Spectral response range | 185 to 260 | nm |
| Phototube service life | 10000 | h |
| Output | Analog | — |
| Protection rating | IP40 | — |

Front and side detection.

### Applications

Low-NOx burners.

SarTEC-Photoelectronics

# UVFLAME-01

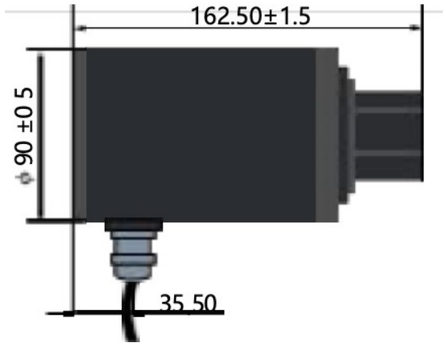
## Integrated UV flame detector

### Features

Integrated UV sensing and signal processing for combustion control. Solar-blind sensor, self-test, high-speed signal processing, and digital filtering to distinguish flame signals from interference.

### Dimensions (mm)






### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply | 24 V DC, ±10%; 1 A | — |
| Operating temperature | -40 to +65 | °C |
| Humidity | 0 to 95 | % |
| Connection | 10-pin terminal block | |
| Mounting interface | 1 inch NPT | — |
| Protection rating | IP66 | — |
| Analog output | 4-20 mA (500 Ω) | — |
| Flame relay | N.O., 2 A at 250 V AC / 30 V DC | — |
| Fault relay | N.O., 2 A at 250 V AC / 30 V DC | — |
| Spectral response range | 185 to 260 | nm |

### Applications

Industrial flame monitoring and combustion control.

# UVFLAME-02

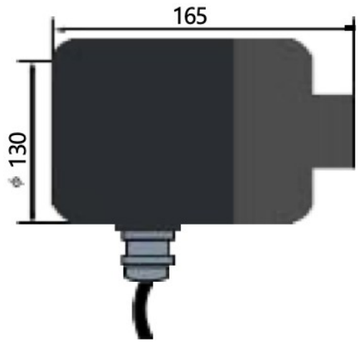
## Integrated UV flame detector

### Features

Integrated UV sensing and signal processing for combustion control. Combines UV sensing, signal processing, and output functions in a compact unit.

### Dimensions (mm)




### Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Supply | 24 V DC, ±10%; 350 mA | — |
| Operating temperature | -40 to +65 | °C |
| Humidity | 0 to 95 | % |
| Connection | 8-pin terminal block | — |
| Mounting interface | 1 inch NPT | — |
| Protection rating | IP66 | — |
| Source Ex marking | EXDIICT6; confirmation required | — |
| Analog output | 4-20 mA (500 Ω) | — |
| Flame relay | N.O., 2 A at 250 V AC / 30 V DC | — |
| Fault relay | N.O., 2 A at 250 V AC / 30 V DC | — |
| Spectral response range | 185 to 260 | nm |

### Applications

Industrial flame monitoring and combustion control.

SarTEC-Photoelectronics

# Photomultiplier tubes

Weak-light detection

## Features

Photomultiplier tubes convert extremely weak optical signals into electrical signals and amplify them through secondary electron multiplication. End-window and side-window structures are available.

## Sensing characteristics

High sensitivity, low noise, and fast response. High-vacuum construction minimizes dark current and background noise.

## Applications

Astronomical photometry, spectrophotometry, scintillation counting, radiation detection, and other weak-light measurement systems.

# N2002

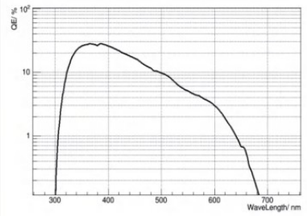
**Photomultiplier tube**

## Features

High gain and compact construction.

## Dimensions / Spectral Response






Response curve shown. Package dimensions are not provided in the source.

## Technical Specifications

Borosilicate glass window; bialkali photocathode; linear-focused dynodes.

| Parameter | Specification | Unit |
|---|---|---|
| Effective cathode diameter | 10 min. | mm |
| Spectral response range | 290 to 650 | nm |
| Peak QE wavelength | 380 typ. | nm |
| Cathode luminous sensitivity | 30 min.; 100 typ. | μA/lm |
| Cathode blue sensitivity | 8 typ. | μA/lmf |
| Anode luminous sensitivity | 30 min.; 100 typ. | A/lm |
| Supply voltage | 1250 max. | V |
| Gain | 6 × $10^6$ typ. | — |
| Anode dark current | 1 typ.; 15 max. | nA |
| Rise time | 2.1 typ. | ns |
| Operating temperature | -30 to +50 | °C |
| Storage temperature | -50 to +50 | °C |

## Applications

Environmental monitoring.

SarTEC-Photoelectronics

# N2013

## Photomultiplier tube

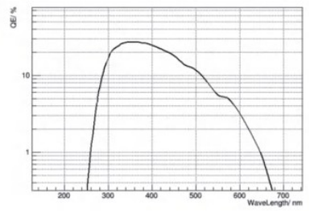
Alternative solution for CR10 / CR105

### Features

Fast response and low noise.

### Dimensions / Spectral response






Response curve shown. Package dimensions are not provided in the source.

### Technical Specifications

Borosilicate glass window; bialkali photocathode; box and linear-focused dynodes.

| Parameter | Specification | Unit |
|---|---|---|
| Effective cathode diameter | 25 min. | mm |
| Spectral response range | 290 to 650 | nm |
| Peak QE wavelength | 380 typ. | nm |
| Cathode luminous sensitivity | 80 typ. | μA/lm |
| Cathode blue sensitivity | 9 min.; 11 typ. | μA/lm |
| Anode blue sensitivity | 30 typ. | A/lm |
| Supply voltage | 1150 max. | |
| Gain | 7 × 10⁶ typ. | — |
| Dark count: N2013-1 / -2 / -3 | 140 / 300 / 1000 max. | Hz |
| Anode dark current | 2 typ.; 10 max. | nA |
| Rise time | 1.9 typ. | ns |
| Transit time spread (TTS) | 3 typ. | ns |
| Operating temperature | -30 to +50 | °C |
| Storage temperature | -50 to +50 | °C |

### Applications

Scintillation counting and high-energy physics.

# N2014

## Photomultiplier tube

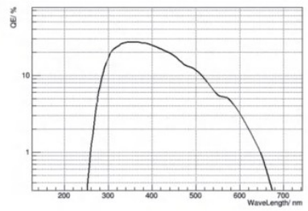
Alternative solution for CR332 / R1924

### Features

Fast response and compact construction.

### Dimensions / Spectral response






Response curve shown. Package dimensions are not provided in the source.

### Technical Specifications

Borosilicate glass window; bialkali photocathode; circular and linear-focused dynodes.

| Parameter | Specification | Unit |
|---|---|---|
| Effective cathode diameter | 22 min. | mm |
| Spectral response range | 290 to 650 | nm |
| Peak QE wavelength | 380 typ. | nm |
| Cathode luminous sensitivity | 60 typ. | μA/lm |
| Cathode blue sensitivity | 8 min.; 9 typ. | μA/lm* |
| Anode blue sensitivity | 30 typ. | A/lm* |
| Supply voltage | 1150 max. | V |
| Gain | 7 × 10⁶ typ. | — |
| Dark current: -1 at 1000 V | 3 typ.; 5 max. | nA |
| Dark current: -2 at 1050 V | 3 typ.; 5 max. | nA |
| Dark current: -3 at 1100 V | 20 max. | nA |
| Dark count: N2014-1 / -2 | 100 / 500 max. | Hz |
| Rise time | 1.2 typ. | ns |
| Transit time spread (TTS) | 1.5 typ. | ns |
| Operating temperature | -30 to +50 | °C |
| Storage temperature | -50 to +50 | °C |

### Applications

Medical measurement and radiation detection.

*Blue-sensitivity units reproduced from source; confirm whether filtered-lumen units are intended.

SarTEC-Photoelectronics

# N1012

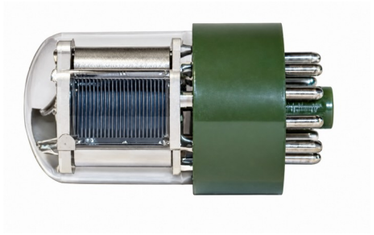
## Photomultiplier tube

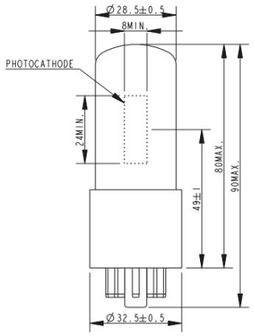
Alternative solution for R928 / CR131 / CR114

### Features

Wide spectral response and high gain.

### Dimensions (mm)






### Technical Specifications

Quartz glass window; multialkali photocathode; circular dynodes.

| Parameter | Specification | Unit |
|---|---|---|
| Cathode area | 8 × 24 | mm² |
| Spectral response range | 165 to 900 | nm |
| Anode-to-cathode voltage | 1250 | V |
| Cathode sensitivity: -1 / -2 / -3 | 140/250; 140/250; 80/150 (min./typ.) | µA/lm |
| Anode sensitivity: -1 / -2 / -3 | 1400/2500; 1500/2000; 300/500 (min./typ.) | A/lm |
| Dark current after 30 min. | 3 typ.; 50 max. (all variants) | nA |
| Gain: -1 / -2 / -3 | 1 × $10^7$ / 8 × $10^6$ / 3.3 × $10^6$ | — |
| Rise time | 2.2 | ns |
| Transit time spread (TTS) | 1.2 | ns |
| Operating temperature | -30 to +50 | °C |
| Storage temperature | -50 to +50 | °C |

### Applications

Environmental monitoring, semiconductor inspection, and biofluorescence detection.

# N1013

## Photomultiplier tube

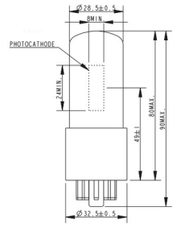
Alternative solution for R1527 / CR316 / R212

### Features

Wide spectral response, high gain, and high cathode sensitivity.

### Dimensions (mm)






### Technical Specifications

Bialkali photocathode; circular dynodes. Window material depends on variant.

| Parameter | Specification | Unit |
|---|---|---|
| Cathode area | 8 × 24 | mm² |
| Operating temperature | -30 to +50 | °C |
| Storage temperature | -50 to +50 | °C |

| Model | Window | Range (nm) | Cathode µA/lm Min. / Typ. |
|---|---|---|---|
| N1013-1 | Quartz | 160 to 650 | 40 / 60 |
| N1013-2A | Quartz | 160 to 650 | 40 / 60 |
| N1013-2B | Borosilicate | 290 to 650 | 40 / 60 |
| N1013-3A | Quartz | 160 to 650 | 25 / 40 |
| N1013-3B | Borosilicate | 290 to 650 | 25 / 40 |
| N1013-4 | Quartz | 160 to 650 | 25 / 40 |

| Model | Gain typ. | Anode A/lm Min. / Typ. | Dark nA Typ. / Max. |
|---|---|---|---|
| N1013-1 | 6.7 × $10^6$ | 200 / 400 | 0.5 / 2 |
| N1013-2A | 2 × $10^7$ | 1000 / 1500 | 2 / 10 |
| N1013-2B | 2 × $10^7$ | 1000 / 1500 | 2 / 10 |
| N1013-3A | 7.5 × $10^6$ | 200 / 400 | 2 / 10 |
| N1013-3B | 7.5 × $10^6$ | 200 / 400 | 2 / 10 |
| N1013-4 | 1 × $10^7$ | 200 / 400 | 10 / 50 |

### Applications

Environmental monitoring, semiconductor inspection, biofluorescence detection, and in vitro diagnostics.

SarTEC-Photoelectronics

# N4021

## Photomultiplier tube

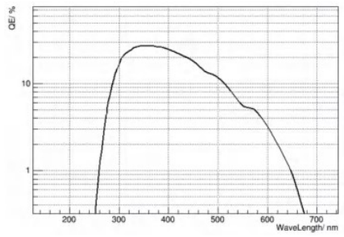
Alternative solution for CR105 series

## Features

High gain and high collection efficiency.

## Dimensions / Spectral response






Response curve shown. Package dimensions are not provided in the source.

## Technical Specifications

Borosilicate glass window; bialkali photocathode; box-and-grid dynodes.

| Parameter | Specification | Unit |
|---|---|---|
| Effective cathode diameter | 46 min. | mm |
| Spectral response range | 290 to 650 | nm |
| Peak QE wavelength | 380 typ. | nm |
| Cathode luminous sensitivity | 60 min. | μA/lm |
| Blue sensitivity: -1 / -2 / -3 | 10.5 / 9 / 7 min. | μA/lm |
| Anode sensitivity: -1 / -2 / -3 | 1500/2000; 1000/1250; 100/400 (min./typ.) | A/lm |
| Supply voltage | 1250 typ.; 1500 max. | |
| Gain: -1 / -2 / -3 | 2.5 × $10^7$ / 1.6 × $10^7$ / 1.6 × $10^6$ typ. | — |
| Dark current: -1 / -2 / -3 | 30 / 50 / 100 max. | nA |
| Rise time | 7 (source value) | ns |
| Operating temperature | -30 to +50 | °C |
| Storage temperature | -50 to +50 | °C |

## Applications

Scintillation counting, photon counting, and radiation measurement.

# M2012 / 2021 / 2031

## Photon counter

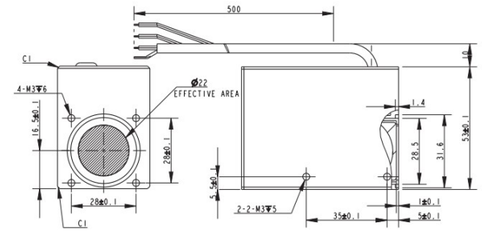
Alternative solution for H10682 / H11720 / H11721 / H11902 / CH345

## Features

Photon-counting module combining a head-on PMT, high-voltage supply, and comparator pulse-shaping circuit. Factory-preset parameters allow connection of the output to a counter after power-up.

## Dimensions (mm)






## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Input voltage | +4.75 to +5.25 | V |
| Maximum input current | 100 | mA |
| Effective area diameter | Ø22 | mm |
| Spectral response range | 290 to 650 | nm |
| Peak wavelength | 420 | nm |
| Output logic | Positive TTL | — |
| Output pulse amplitude[1] | 2.2 typ.; 2.5 max. | V |
| Counting sensitivity at 400 nm | 4.5 × $10^5$ | $s^{-1}·pW^{-1}$ |
| Max. linear count rate[2], uncorrected | 1.0 × $10^7$ | $s^{-1}$ |
| Max. linear count rate[2], corrected | 4.0 × $10^7$ | $s^{-1}$ |
| Dark count rate[3] | 100 typ.; 200 max. | $s^{-1}$ |
| Instability over 8 h[4] | 1 | % |
| Pulse-pair resolution | 17 | ns |
| Recommended load | 50 | Ω |
| Weight | 220 | g |
| Operating temperature / humidity | +5 to +40 °C / 90% RH max. | — |
| Storage temperature / humidity | -20 to +50 °C / 93% RH max. | — |

## Applications

Photon counting and weak-light detection.

Source description identifies M2012; applicability to 2021/2031 and footnotes 1-4 require confirmation.

SarTEC-Photoelectronics

# InGaAs photodiodes

Near-infrared detection

## Features

High-speed, high-sensitivity detection with low noise. The source family overview states a spectral range of 0.5 to 2.6 µm. Use the model-specific characteristics for selection.

## Applications

Optical switches; medical instruments; high-speed optical communication; optical LAN; Ethernet and Fibre Channel; optical power meters; LED and LD burn-in diagnostics.

## Engineering information

Model-specific package drawings and electrical characteristics are provided in this section. Confirm any marked values or units before design-in.

# SR-B10-8026-T46W

## InGaAs photodiode

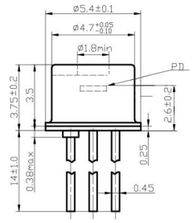
Alternative solution for G12183-010K

## Features

Top-view, low-profile package. Supports pulse operation. Active area diameter: Ø1000 µm.

## Dimensions (mm)






## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Reverse voltage (VR) | 30 | V |
| Power dissipation (Pd) | 150 | mW |
| Lead soldering temperature | 260 | °C |
| Operating temperature | -25 to +85 | °C |
| Storage temperature | -40 to +85 | °C |

**Electrical and optical characteristics (Ta = 25 °C)**

| Parameter / symbol | Condition | Min. | Typ. | Max. |
|---|---|---|---|---|
| Breakdown voltage / VR | IR = 100 µA | 3 | — | — |
| Sensitivity range / λ | VR = 0 V | 800 | — | 2600 |
| Dark current / ID | VR = 1 V | — | — | 200 |
| Capacitance / C | VR = 0 V | — | 970 | — |
| Capacitance / C | VR = 1 V | — | 275 | — |
| Responsivity* / R | λ = 1880 nm | — | 1.08 | — |
| Shunt resistance / RS | VR = 10 mV | — | 3.35 | — |
| Quantum efficiency* / QE | λ = 1860 nm | — | 71 | — |
| Photocurrent / IL | λ = 1300 nm; IF = 10 mA | — | 29 | — |
| Photocurrent / IL | λ = 1300 nm; IF = 20 mA | — | 64 | — |

## Applications

Near-infrared detection. See family applications on this page.

Soldering: 4 mm from package body, less than 5 s. Electrical table units are absent in the source and require confirmation.

SarTEC-Photoelectronics

# SR-B5-8017-T46W

## InGaAs photodiode

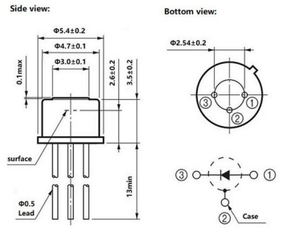
Alternative solution for G12181-005K

## Features

Top-view, low-profile package. Supports pulse operation. Active area diameter: Ø1000 µm (source value).

## Dimensions (mm)






## Technical Specifications

**Electrical and optical characteristics (Ta = 25 °C)**

| Parameter | Min. / Typ. / Max. | Unit | Condition |
|---|---|---|---|
| Spectral bandwidth (λ0.5) | - / 680 / - | nm | VR = 0 V |
| Peak sensitivity wavelength | - / 1600 / - | TBC* | VR = 0 V |
| Sensitivity range at 10% | 800 / - / 1700 | nm | VR = 0 V |
| Total capacitance | - / 13.5 / 18 | pF | Ee = 0 mW/cm²; f = 1 MHz; VR = 5 V |
| Rise / fall time | - / 12/15 / - | ns | RL = 100*; VR = 10 V |
| Breakdown voltage | 20 / 35 / - | V | IR = 10 µA |
| Dark current | - / 1 / 10 | nA | VR = 5 V; 25 °C |
| Shunt resistance | 1.5 / 3.5 / - | GΩ | VR = 10 mV |
| Noise-equivalent power | - / 8.5 × $10^{-14}$ / - | TBC* | λ = 1500 nm |
| Specific detectivity | - / 11 × $10^{12}$ / - | TBC* | λ = 1500 nm |
| Photocurrent | - / 2.3 / - | µA | λ = 1300 nm; VR = 0 V; Ee = 1 mW/cm² |

## Applications

Near-infrared detection. Family applications include optical switches, optical power meters, and optical communications.

*Source units are missing or inconsistent; confirm before design-in. Measurement conditions are preserved.

SarTEC-Photoelectronics

# SiPMs and gas sensing

## Additional product families

### Silicon photomultiplier

**S5R-DC515W3X**

905 nm single-channel SiPM for LiDAR and time-of-flight systems. Microlens and non-microlens options.

### Optical gas sensing modules

**TDLAS $H_2S$**
**NDIR CO**
**DOAS / NDUV $H_2S$**

Model-specific ranges, flow requirements and electrical interfaces appear on the following pages.

Gas module headings identify the sensing technology and target gas. Confirm the ordering code and configuration with Sartec Photoelectronics.

# S5R-DC515W2X

## Silicon photomultiplier (SiPM)

## Features

Single-channel bare-die SiPM for 905 nm detection. Microlens and non-microlens variants support different optical integration requirements.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Channels / microcells | 1 / 1156 | — |
| Breakdown voltage at 25 °C | 21.5 typ. | V |
| Recommended overvoltage | 3 to 5 | V |
| Maximum overvoltage | 7 | V |
| Operating bias at 25 °C[1] | 24.5 to 26.5 | V |
| PDE at 905 nm, without microlens | 23 typ. | % |
| PDE at 905 nm, with microlens | 30 typ. | % |
| Gain | 4.0 × $10^5$ typ. | — |
| Dark count rate | 1.8 typ. | MHz |
| Rise time[2] | 0.75 typ. | ns |
| Signal FWHM[2] | 6 | ns |
| Jitter | 50 | ps |
| Crosstalk | 2 typ. | % |
| Afterpulsing | 5 typ. | % |
| Vbd temperature coefficient at RT | 25 | mV/°C |
| Vbd temperature coefficient above 60 °C | 95 | mV/°C |
| Operating temperature | -40 to +105 | °C |
| Maximum storage temperature | 105 | °C |
| Maximum output current | 5 | mA |
| ESD, HBM / CDM | 1 / 1 | kV |

## Applications

LiDAR and time-of-flight (ToF) sensing.

Pulse test conditions and operating notes appear at right.

# S5R-DC515W2X

## Dimensions and integration

## Dimensions

| Item | Specification | Unit |
|---|---|---|
| Active area | 510 × 510 | µm |
| Sensor area including dummy cells | 540 × 540 | µm |
| Die size | 1200 × 1200 | µm |
| Die thickness | 200 | µm |
| Microcell size | 15 | µm |
| Bond pads | 2: VA (cathode), GND (anode) | — |

## Ordering Options

| Suffix | Microlens | Quantity per frame |
|---|---|---|
| DUA | With | 500 pcs |
| DUB | With | 1600 pcs |
| DXA | Without | 500 pcs |
| DXB | Without | 1600 pcs |

Suffixes follow S5R-DC515W2X-. Packaging: recon wafer on film, 8-inch frame, cassette.

## Operating Notes

[1] Vbias = Vbd + Vov. Bias range uses the typical breakdown voltage at 25 °C and requires temperature compensation.
[2] Source pulse test conditions: 50 Ω load, 50 Ω oscilloscope input, ≥1 GHz bandwidth and 20 GS/s sampling.
Typical values are not acceptance limits. Confirm the complete test conditions for PDE, gain, DCR and timing.

VA = cathode. GND = anode. Use ESD-safe handling and protect the active surface. Obtain the complete pad drawing and approved assembly process before integration.

SarTEC-Photoelectronics

# TDLAS $H_2S$

## Gas sensing module

## Features

Flow-through hydrogen sulfide module using tunable diode laser absorption spectroscopy. Gold-plated gas cell with external protective coating.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Target gas / measurement principle | $H_2S$ / TDLAS | — |
| Measurement range | 0 to 200 | ppm |
| Custom range threshold | ≥200 | ppm |
| Linearity (source notation) | ≤±2 | % F.S. |
| Repeatability (source notation) | ≤±2 | % F.S. |
| Detection limit | 2 | ppm |
| Response time, T90 | ≤30 | s |
| Span drift (source notation) | ≤±2 per 6 months | % F.S. |
| Sampling flow rate | 0.2 to 1.5 | L/min |
| Digital output | RS485 | — |
| Supply voltage | 12 ±1 | V DC |
| Power supply current capability[1] | >500 | mA |
| Housing | Powder-coated sheet metal | — |
| Gas cell / corrosion protection | Internal Au / external coating | — |
| Gas connection | 4/6, PTFE tubing | mm |
| Weight | <2 | kg |

## Applications

Hydrogen sulfide concentration measurement in OEM gas analysis equipment with conditioned sample gas.

F.S. = full scale. Configuration-specific data from the supplied manual.

# TDLAS $H_2S$

## Dimensions and integration

## Dimensions



| Item | Specification | Unit |
|---|---|---|
| Overall dimensions (L × W × H) | 200 × 175 × 76 | mm |
| Gas tubing connection | 4/6, PTFE | mm |

Overall envelope. Obtain a mounting drawing for mechanical integration.

## Electrical Interface

| Connection | Definition |
|---|---|
| Red | VDC |
| Brown | GND |
| Blue | RS485-A |
| Yellow | RS485-B |
| Serial configuration | 9600 baud, 8 data bits, no parity, 1 stop bit |

## Integration Notes

Use dry, filtered sample gas free from particles and liquid water. Follow the marked inlet and outlet direction. Place the module on a level surface without obvious vibration. The source specifies 1 min warm-up before reading data.

[1] Source supply requirement, not a measured operating current.

Ordering code, operating temperature range and mounting details require confirmation.

SarTEC-Photoelectronics

# NDIR CO

## Gas sensing module

## Features

Flow-through carbon monoxide module using non-dispersive infrared absorption. The supplied configuration covers low-range CO measurement.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Target gas / measurement principle | CO / NDIR | — |
| Measurement range | 0 to 100 | ppm |
| Custom range threshold | ≥100 | ppm |
| Accuracy | ±2 | % F.S. |
| Detection limit | 1 | % F.S. |
| Response time, T90 | ≤10 | s |
| Sampling flow rate | 0.2 to 1.5 | L/min |
| Output in specification table | RS232 | — |
| Supply voltage | 12 ±1 | V DC |
| Power supply current capability[1] | >500 | mA |
| Normal operating current | ≤200 | mA |
| Impulse current | ≤300 | mA |
| Housing | Sheet metal | — |
| Gas connection | 4/6, PTFE tubing | mm |
| Weight | <2 | kg |

## Applications

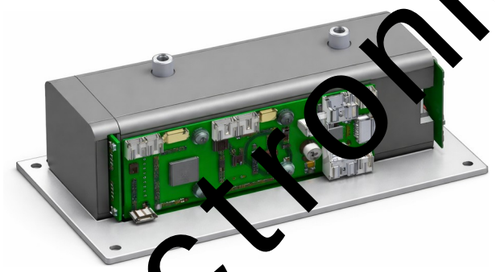
Carbon monoxide concentration measurement in OEM gas analysis equipment with conditioned sample gas.

F.S. = full scale. Configuration-specific data from the supplied manual.

# NDIR CO

## Dimensions and integration

## Dimensions



| Item | Specification | Unit |
|---|---|---|
| Nominal envelope[2] | 105 × 50 × 50 | mm |
| Gas tubing connection | 4/6, PTFE | mm |

Envelope dimensions depend on the supplied configuration. A dimensioned mounting drawing is not provided.

## Electrical Interface

| Interface item | Source specification |
|---|---|
| Listed output | RS232 |
| Additional interface in manual | RS485, select one interface only[3] |
| Serial speed | 115200 baud |
| ASCII mode | 7 data bits, even parity, 1 stop bit |
| RTU mode | 8 data bits, even parity, 1 stop bit |

## Integration Notes

Use in a dry, dust-free location. Prevent condensation and liquid ingress. Avoid nearby heat sources, strong magnetic fields and vibration.

[1] Source supply requirement, not normal operating current.

[2] Source states that dimensions depend on the measuring range. Confirm the ordered configuration.

[3] Confirm interface availability and pin assignments for the ordered configuration.

SarTEC-Photoelectronics

# DOAS / NDUV $H_2S$

## Gas sensing module

## Features

Hydrogen sulfide module using ultraviolet absorption spectroscopy. Specifications below describe the customer-customized configuration in the supplied manual.

## Technical Specifications

| Parameter | Specification | Unit |
|---|---|---|
| Target gas / detection technology | $H_2S$ / DOAS | — |
| Measurement range | 0 to 20 | ppm |
| Accuracy | ±2 | % F.S. |
| Detection limit | 0.1 | ppm |
| Response time, T90 | ≤20 | s |
| Sampling flow rate | 1 to 1.5 | L/min |
| Output in specification table | RS232 | — |
| Supply voltage | 12 ±1 | V DC |
| Power supply current capability[1] | >500 | mA |
| Normal operating current | ≤200 | mA |
| Impulse current | ≤300 | mA |
| Housing | Sheet metal | — |
| Gas connection | 4/6 | mm |
| Weight | <2 | kg |

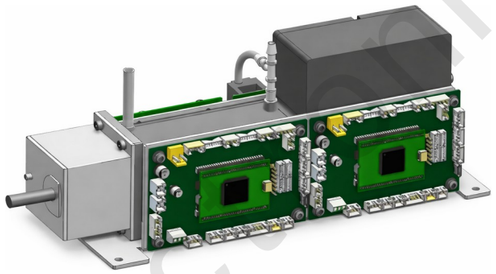
## Applications

Hydrogen sulfide concentration measurement in OEM gas analysis equipment with conditioned sample gas.

F.S. = full scale. Configuration-specific data from the supplied manual.

# DOAS / NDUV $H_2S$

## Dimensions



| Item | Specification | Unit |
|---|---|---|
| Nominal envelope[2] | 350 × 110 × 110 | mm |
| Gas connection | 4/6 | mm |

Envelope dimensions depend on the supplied configuration. A dimensioned mounting drawing is not provided.

## Electrical Interface

| Interface item | Source specification |
|---|---|
| Listed output | RS232 |
| Additional interface in manual | RS485, select one interface only[3] |
| Serial speed | 115200 baud |
| ASCII mode | 7 data bits, even parity, 1 stop bit |
| RTU mode | 8 data bits, even parity, 1 stop bit |

## Integration Notes

Keep the installation dry, dust-free and protected from liquid ingress, vibration, nearby heat sources and strong magnetic fields.

[1] Source supply requirement, not normal operating current.

[2] Source states that dimensions depend on the actual product. Confirm the ordered configuration.

[3] Confirm interface availability and pin assignments for the ordered configuration.

## Engineering enquiries

info@Sartecphotoelectronics.com +86 17322304673
www.Sartecphotoelectronics.com

SarTEC-Photoelectronics