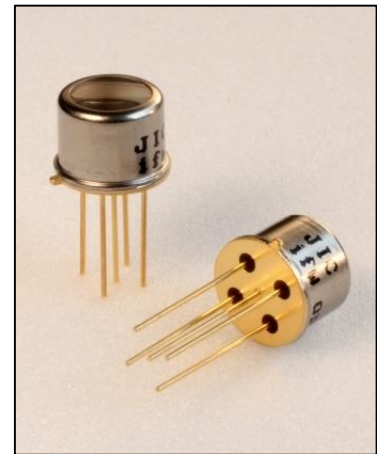


Characteristics :

- ◆ integrated spectral filter for UVA-range
- ◆ custom filter characteristics on request
- ◆ active area: 0,965 mm²
- ◆ decadic staggering of responsivity: 0,6/6/60 mV/nW
- ◆ extra sensor pin for external adjustment of gain bandwidth
- ◆ single supply voltage
- ◆ sensor assembly isolated from case
- ◆ hermetically welded TO5-metal/glass package
- ◆ RoHS und WEE conform



Applications :

- ◆ selective measurement of the UVA region
- ◆ solar UV-index measurements
- ◆ control of UV-lamps

Absolute Maximum Ratings :

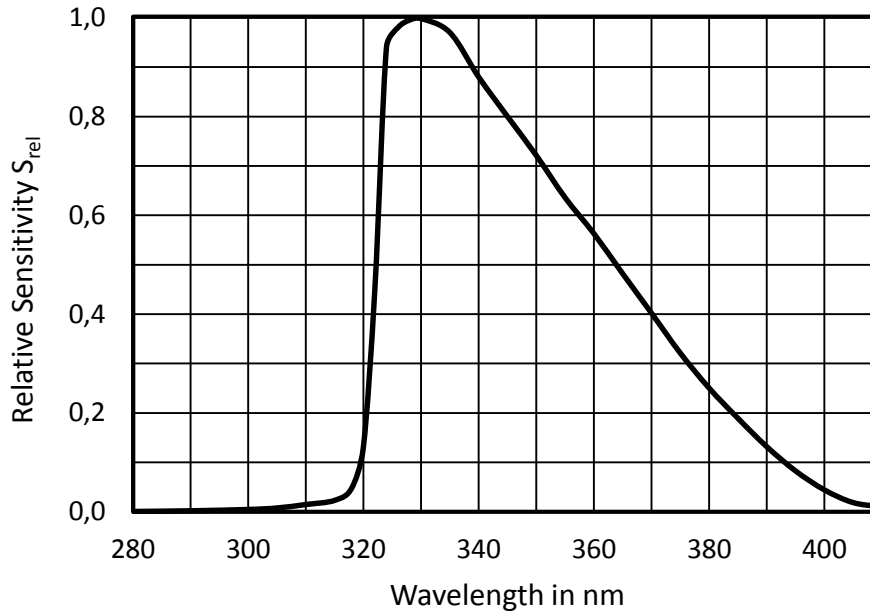
- | | |
|------------------------------|--------------------|
| ◆ supply voltage | 5,5 V |
| ◆ working temperature | - 25 °C ... 85 °C |
| ◆ storage temperature | - 40 °C ... 100 °C |
| ◆ soldering temperature (5s) | 300 °C |

Technical Specifications :

| Parameter | Test conditions | JIC157A | JIC158A | JIC159A | Unit |
|---|-----------------------|----------------|---------|---------|-------------------|
| Transimpedance | | 10 | 100 | 1.000 | MΩ |
| dark offset voltage | E = 0 lx | ± 1 | ± 2 | ± 3 | mV |
| noise voltage | B = 1 kHz | 1 | | | mV _{rms} |
| max. spectral responsivity S _{max} | λ = 330 nm | 0,6 | 6 | 60 | mV/nW |
| rise time | | 30 | 150 | 600 | μs |
| bandwidth | - 3 dB | 10 | 2 | 0,5 | kHz |
| saturation voltage | R _L = 2 kΩ | + 4,95 (+ 4,8) | | | V |
| short circuit current | | ± 50 | | | mA |
| supply voltage | | + 2,7 ... + 5 | | | V |
| current consumption | | 750 (1100) | | | μA |

common test conditions, if not specified otherwise: T_A = 25 °C, V_S = +5 V
typical values, maximum values in brackets

Relative Spectral Sensitivity

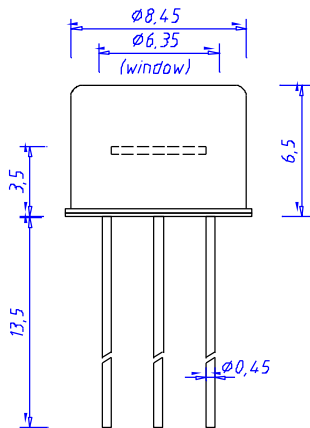


Spectral Specifications :

| Parameter | | Test conditions | JIC157A | JIC158A | JIC159A | Unit |
|--|-----------------|----------------------------|----------|---------|---------|--------|
| spectral range | λ_{min} | $S = 0,1 * S_{max}$ | 320 | | | nm |
| | λ_{max} | | 395 | | | nm |
| wavelength of max. sensitivity λ_p | | $S = S_{max}$ | 330 | | | nm |
| max. spectral responsivity S_{max} | | $\lambda = 330 \text{ nm}$ | 0,6 | 6 | 60 | mV/nW |
| field of view | | $S = 0,5 * S_{max}$ | ± 45 | | | degree |

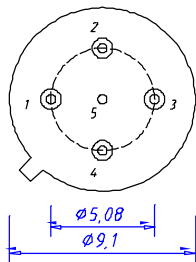
common test conditions, if not specified otherwise: $T_A = 25 \text{ }^\circ\text{C}$, typical values

Case Dimensions



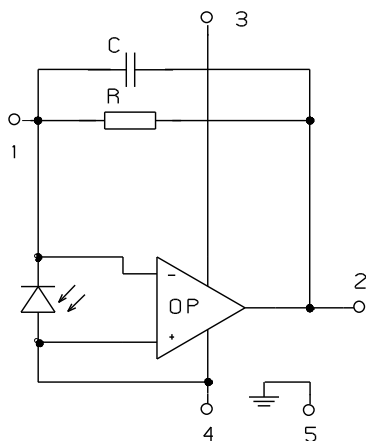
pin configuration:

- 1 R_F
- 2 Out
- 3 V_S
- 4 GND
- 5 Case



bottom view

Application Example



If an external resistor for gain reduction between pin "1" and "2" is used, it is good practice to keep the connector-length as short as possible to reduce noise incoupling and capacitive interference.

If the internally adjusted gain is used only, it is good practice to cut pin "1".