

UV - Photodetector with integrated amplifier

JIC 367 B
JIC 368 B
JIC 369 B



- characteristics :**
- ◆ integrated UV-B filter
 - ◆ spectral range 280 ... 325 nm
 - ◆ active area 0,965 mm²
 - ◆ responsivity, decadic staggering 0,4/4/40 mV/nW
 - ◆ extra sensor pin for external adjustment of gain and bandwidth
 - ◆ single supply voltage
 - ◆ sensor assembly isolated to ground
 - ◆ hermetically welded TO5-metal/glass package
 - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ selective UV-measurement
 - ◆ control of sterilization lamps
 - ◆ flamedetection and flamecontrol
 - ◆ control of irradiancy in varnish and adhesive hardening

absolute maximum ratings:

| | | |
|---------------------------|-----------------|----|
| supply voltage | +15 | V |
| working temperature range | -25 °C ... +85 | °C |
| storage temperature range | -40 °C ... +100 | °C |
| welding temperature (5s) | 300 | °C |

technical data :

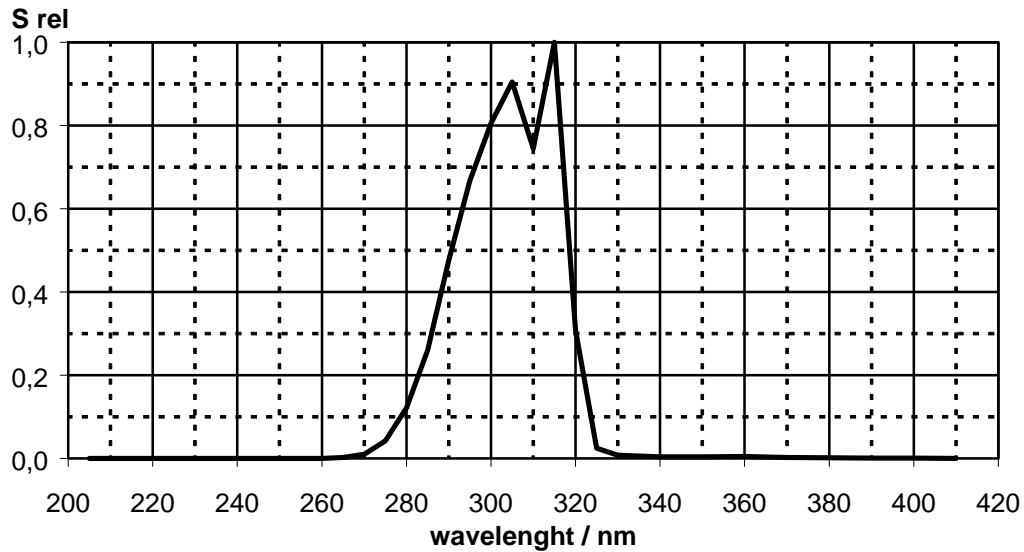
common test conditions, as not otherwise specified: $T_A = 25\text{ °C}$, $V_S = +5\text{ V}$
typ. values, maximum values in brackets

| parameter | test condition | JIC367B | JIC368B | JIC369B | unit |
|----------------------------|---------------------------|----------------|---------|---------|-------------------|
| feedback resistor | | 10 | 100 | 1.000 | MΩ |
| dark offset voltage | $E = 0\text{ lx}$ | ± 1 | ± 2 | ± 3 | mV |
| noise voltage | $B = 1\text{ kHz}$ | 1 | | | mV _{rms} |
| max. spectral responsivity | $\lambda = 315\text{ nm}$ | 0,4 | 4 | 40 | mV/nW |
| risetime | | 30 | 150 | 600 | μs |
| bandwidth | - 3 dB | 10 | 2 | 0,5 | kHz |
| saturation voltage | $R_L = 2\text{ k}\Omega$ | + 4,68 (+ 4,6) | | | V |
| short current | | ± 30 | | | mA |
| supply voltage | | + 2,7...+ 13,2 | | | V |
| current consumption | | 550 (660) | | | μA |

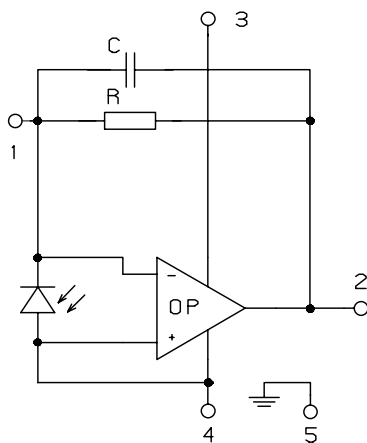
rev. 3 (03/2009)

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relative spectral responsivity

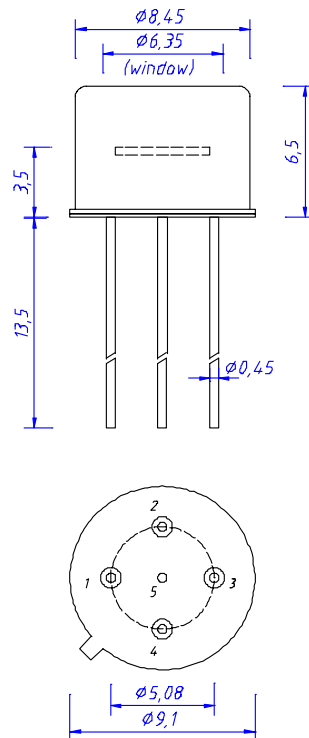


pin configuration



- 1 R_f
- 2 Out
- 3 V_s
- 4 GND
- 5 Case

package dimension



application hints:

- If an external resistor for reduction of gain is used, please make sure that length of connectors is as short as possible to reduce noise and capacitive interference.
- If internally adjusted gain is used only, please cut pin „1“.