

# UV - Photodetector with integrated amplifier

**JIC 167 BC**  
**JIC 168 BC**  
**JIC 169 BC**



- characteristics :**
- ◆ integrated UV-BC filter
  - ◆ spectral range 280 ... 305 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,7/7/70 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            | +5,5            | 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<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V  
typ. values, maximum values in brackets

| parameter                  | test condition        | JIC167BC       | JIC168BC | JIC169BC | unit              |
|----------------------------|-----------------------|----------------|----------|----------|-------------------|
| feedback resistor          |                       | 10             | 100      | 1.000    | MΩ                |
| dark offset voltage        | E = 0 lx              | ± 1            | ± 2      | ± 3      | mV                |
| noise voltage              | B = 1 kHz             | 1              |          |          | mV <sub>rms</sub> |
| max. spectral responsivity | λ = 254 nm            | 0,7            | 7        | 70       | mV/nW             |
| risetime                   |                       | 30             | 150      | 600      | μs                |
| bandwidth                  | - 3 dB                | 10             | 2        | 0,5      | kHz               |
| saturation voltage         | R <sub>L</sub> = 2 kΩ | + 4,95 (+ 4,8) |          |          | V                 |
| short current              |                       | ± 50           |          |          | mA                |
| supply voltage             |                       | + 2,7...+ 5    |          |          | V                 |
| current consumption        |                       | 750 (1100)     |          |          | μA                |

rev2 (03/2009)

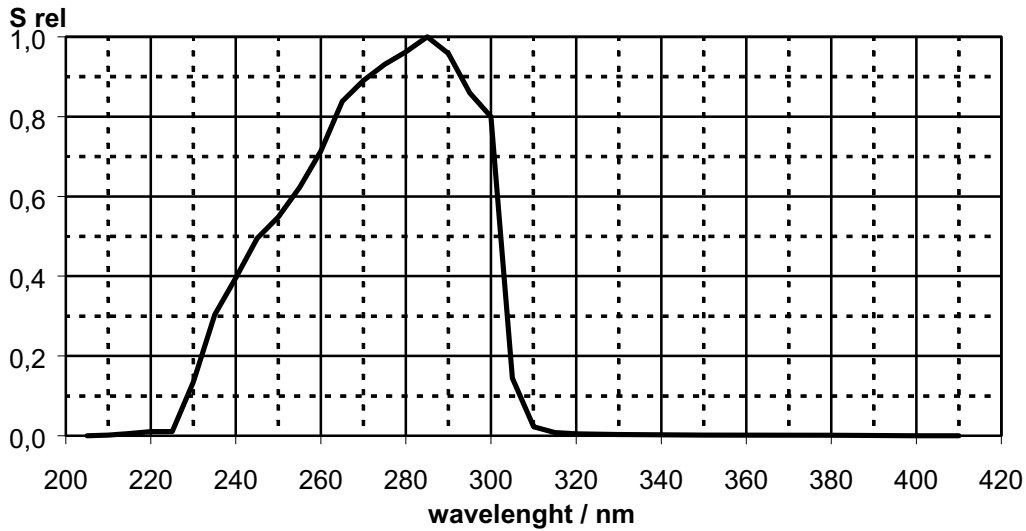
For more information:

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Phone: (707) 568-1642 | Fax: (707) 568-1652 | Email: info@eoc-inc.com

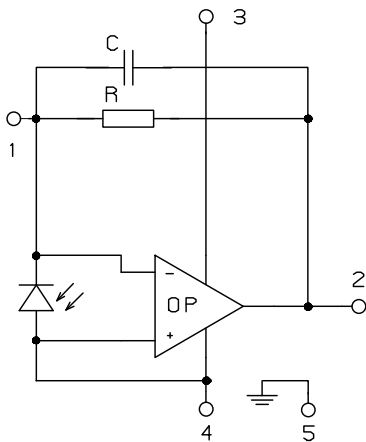
DATA SHEET

# JIC 167 BC, 168 BC, 169 BC

## relative spectral responsivity

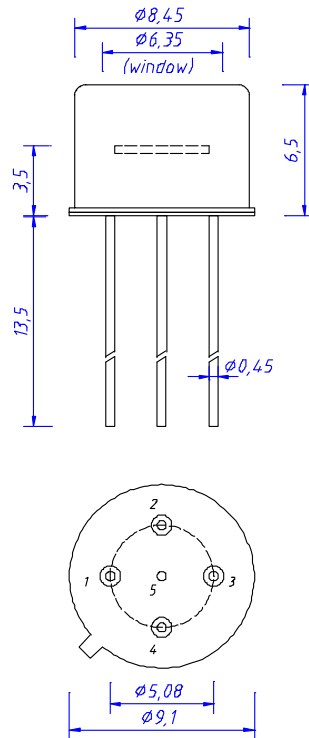


## pin configuration



- 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“.