

UV - Photodetector with integrated amplifier

JIC 157 A
JIC 158 A
JIC 159 A



- characteristics :**
- ◆ integrated UV-A filter
 - ◆ spectral range 315 ... 395 nm
 - ◆ active area 0,965 mm²
 - ◆ responsivity, decadic staggering 0,3/3/30 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-A-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_A = 25 °C, V_S = +5 V
typ. values, maximum values in brackets

| parameter | test condition | JIC157A | JIC158A | JIC159A | 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 _{rms} |
| max. spectral responsivity | λ = 340 nm | 0,3 | 3 | 30 | mV/nW |
| risetime | | 30 | 150 | 600 | μs |
| bandwidth | - 3 dB | 10 | 2 | 0,5 | kHz |
| saturation voltage | R _L = 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)

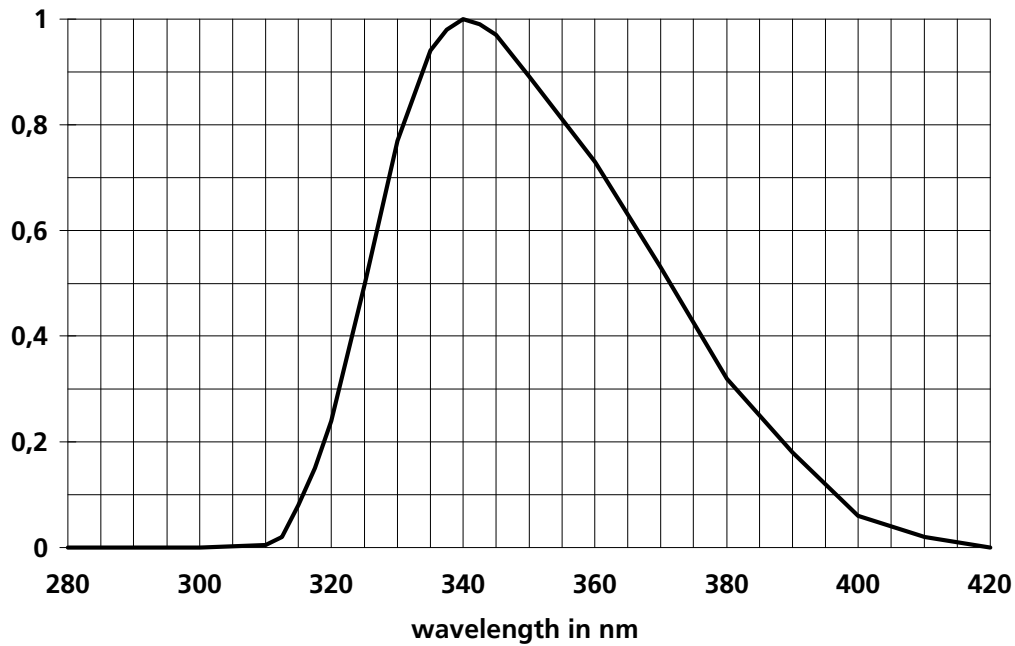
For more information:

Electro Optical Components, 5460 Skyline Blvd., Santa Rosa, CA 95403
Phone: (707) 568-1642 | Fax: (707) 568-1652 | Email: info@eoc-inc.com

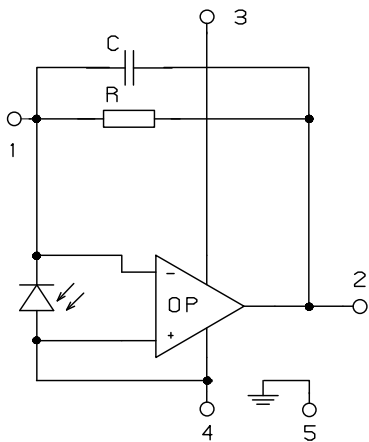
DATA SHEET

JIC 157 A, 158 A, 159 A

relative spectral responsivity

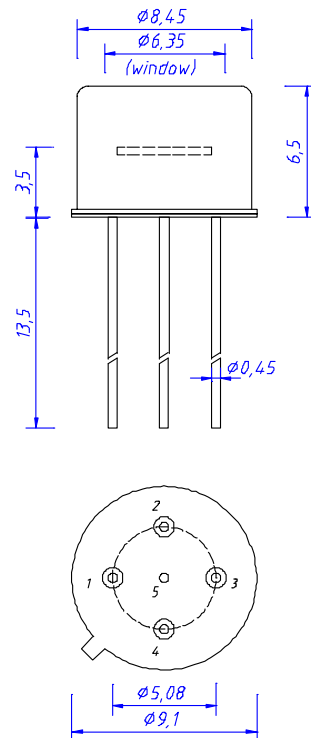


pin configuration



- 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“.