

# UV - Photodetector with integrated amplifier

**JIC 117**  
**JIC 118**  
**JIC 119**



- characteristics :
- ◆ spectral range 210 to 390 nm
  - ◆ active area 0.055 mm<sup>2</sup>
  - ◆ responsivity, decade staged 1.2/12/120 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

- applications :
- ◆ selective UV-measurement
  - ◆ control of sterilization lamps
  - ◆ flame detection and flame control
  - ◆ control of irradiancy in varnish and adhesive hardening

absolute maximum ratings:

operating voltage	+5,5	V
operating temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
soldering 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

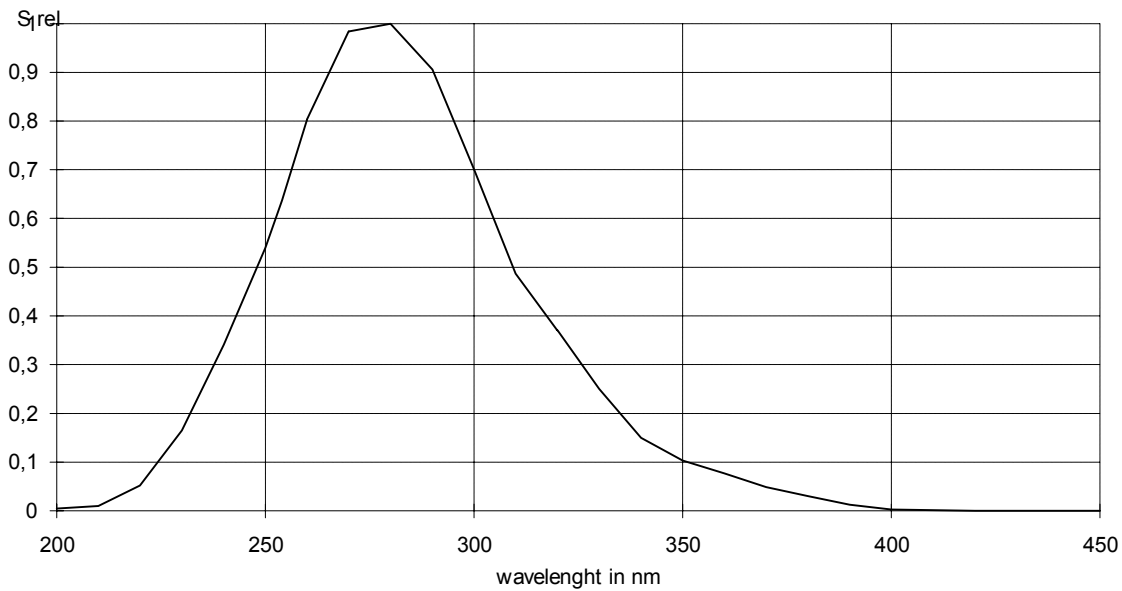
parameters	test conditions	JIC 117	JIC 118	JIC 119	unit
feedback resistor		10	100	1.000	MΩ
Dark offset voltage	E = 0 lx	± 1	± 2	± 3	mV
noise voltage	B = 1 kHz	1			mV <sub>rms</sub>
max. of spectral responsivity	λ = 280 nm	1,2	12	120	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0.5	kHz
saturation voltage	R <sub>L</sub> = 2 kΩ	+ 4.95 (+ 4.8)			V
shortcurrent		± 50			mA
Operating voltage		+ 2.7 to + 5			V
current consumption		750 (1100)			μA

rev. 09/2002

DATA SHEET

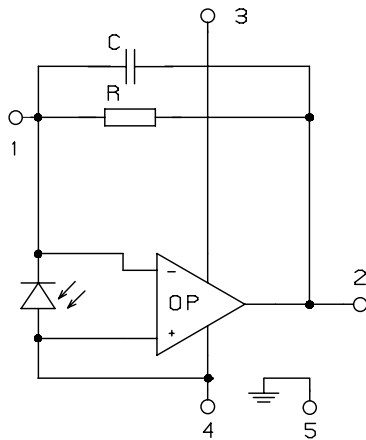
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relative spectral responsivity

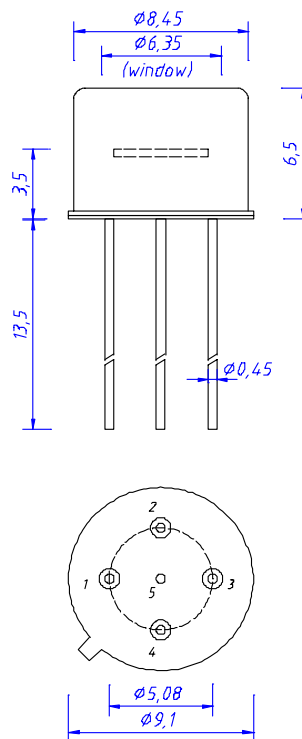


pin configuration

- 1 R<sub>f</sub>
- 2 Out
- 3 V<sub>s</sub>
- 4 GND
- 5 Case



package dimensions



application hints:

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