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<b>UV - Photodetector with integrated amplifier</b>	<b>JIC 137 JIC 138 JIC 139</b>
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- characteristics :**
- ◆ spectral range 210 ... 390 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 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
  - ◆ 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:**

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 :**

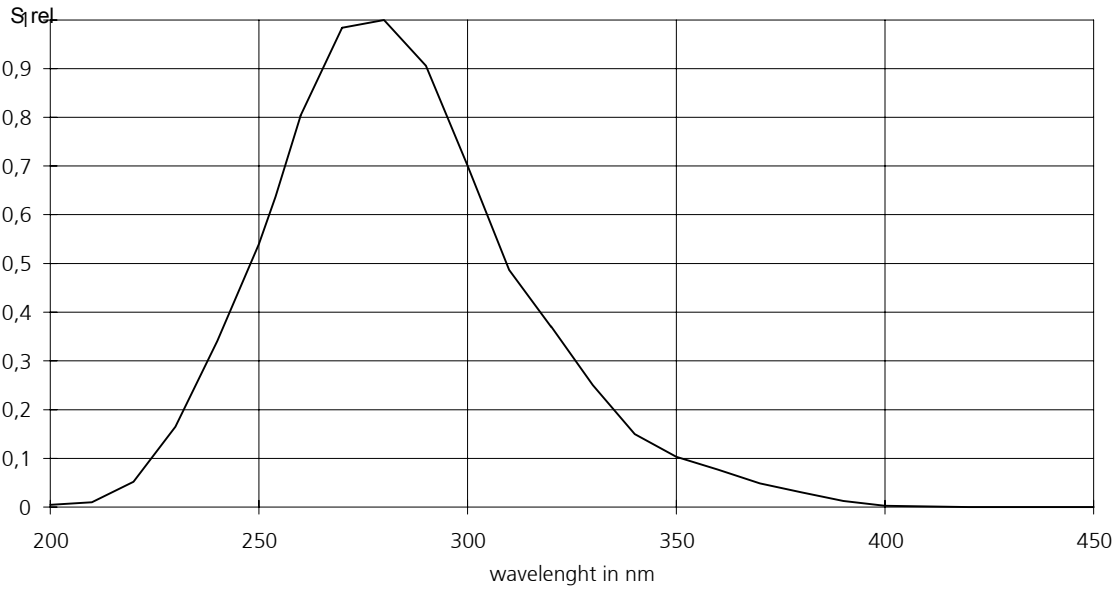
common test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V  
typ. values, maximum values in brackets

parameters	test condition	JIC 137	JIC 138	JIC 139	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	E = 0 lx	± 1	± 2	± 3	mV
noise voltage	B = 10 kHz	0,5	1	2	mV <sub>rms</sub>
max. of spectral responsivity	λ = 280 nm	1,2	12	120	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
shortcurrent		± 50			mA
operation voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

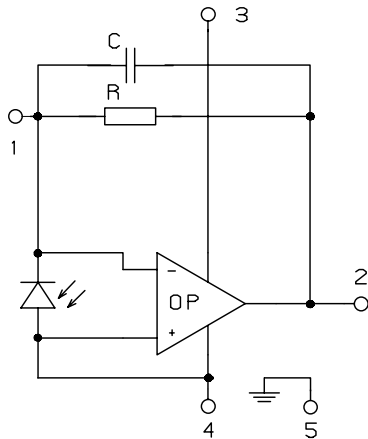


# JIC 137, 138, 139

## relative spectral responsivity

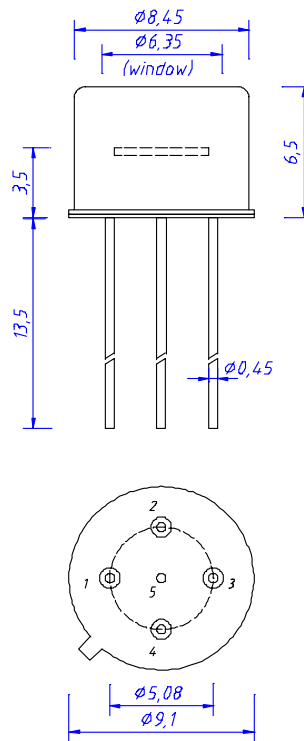


## pin configuration



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

## package dimensions



## 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“.