

UV - Photodetector with integrated amplifier

JIC 137
JIC 138
JIC 139



- characteristics :
- ◆ spectral range 210 ... 390 nm
 - ◆ active area 0.22 mm²
 - ◆ 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

- 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

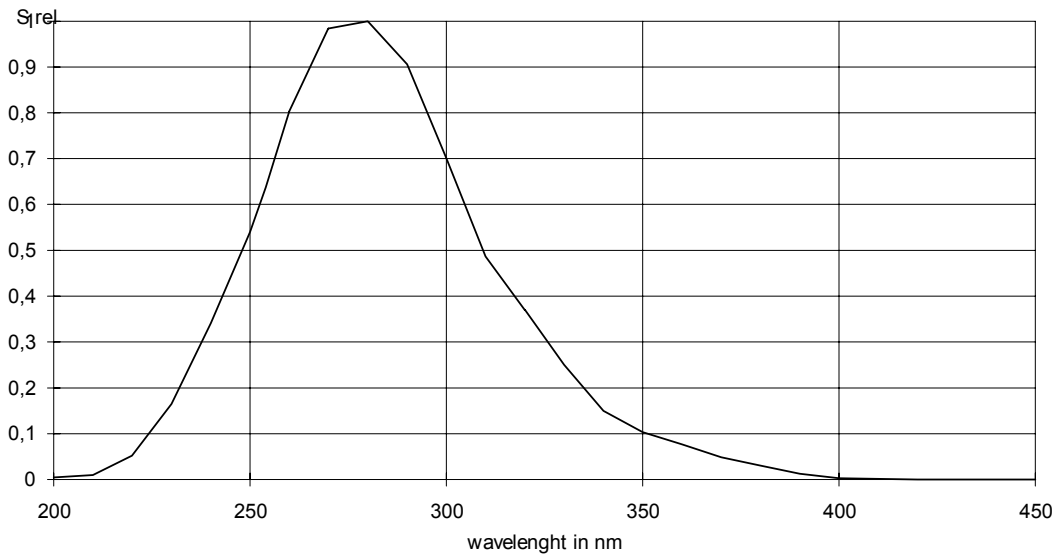
technical data :

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

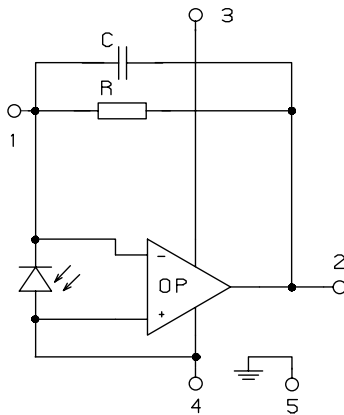
parameters	test condition	JIC 157	JIC 158	JIC 159	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	E = 0 lx	± 1	± 2	± 3	mV
noise voltage	B = 10 kHz	0.5	1	2	mV _{rms}
max. of spectral responsivity	λ = 280 nm	1.2	12	120	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0.5	kHz
saturation voltage	R _L = 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

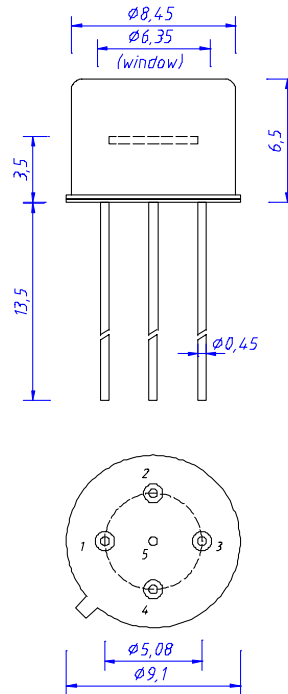


pin configuration



- 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.

For more information & quotations, please contact:
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