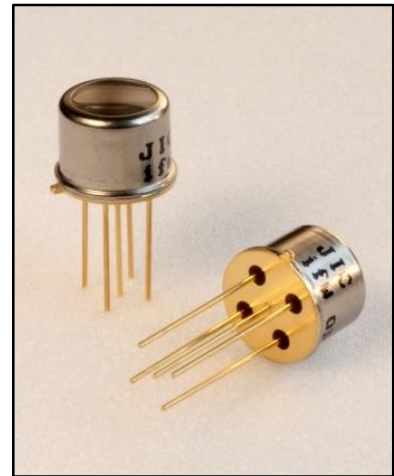


#### Characteristics :

- ◆ integrated spectral filter for UVC-, UVB- und UVBC-range
- ◆ custom filter characteristics on request
- ◆ active area: 0,22 mm<sup>2</sup>
- ◆ decadic staggered sensitivity:  
Transimpedance-code: x=7: 10 MΩ / x=8: 100 MΩ / x=9: 1000 MΩ
- ◆ extra sensor pin for external adjustment of gain and bandwidth
- ◆ single supply voltage
- ◆ sensor assembly isolated from case
- ◆ hermetically welded TO5-metal/glass package
- ◆ RoHS und WEE conform



#### Applications :

- ◆ selective measurement of the UV region with spectral restriction
- ◆ control of UV-lamps
- ◆ flame detection
- ◆ solar UV-index measurements

#### Absolute Maximum Ratings :

- ◆ supply voltage 5,5 V
- ◆ working temperature - 25 °C ... 85 °C
- ◆ storage temperature - 40 °C ... 100 °C
- ◆ soldering temperature (5s) 300 °C

#### Technical Specifications :

Parameter	Test conditions	JIC147f <sup>1)</sup>	JIC148f <sup>1)</sup>	JIC149f <sup>1)</sup>	Unit
Transimpedance		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 $S_{max}$	$\lambda = \lambda_p$	0,1	1	10	multiplier <sup>2)</sup>
rise time		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 circuit current		± 50			mA
supply voltage		+ 2,7 ... + 5			V
current consumption		750 (1100)			μA

common test conditions, if not specified otherwise: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V

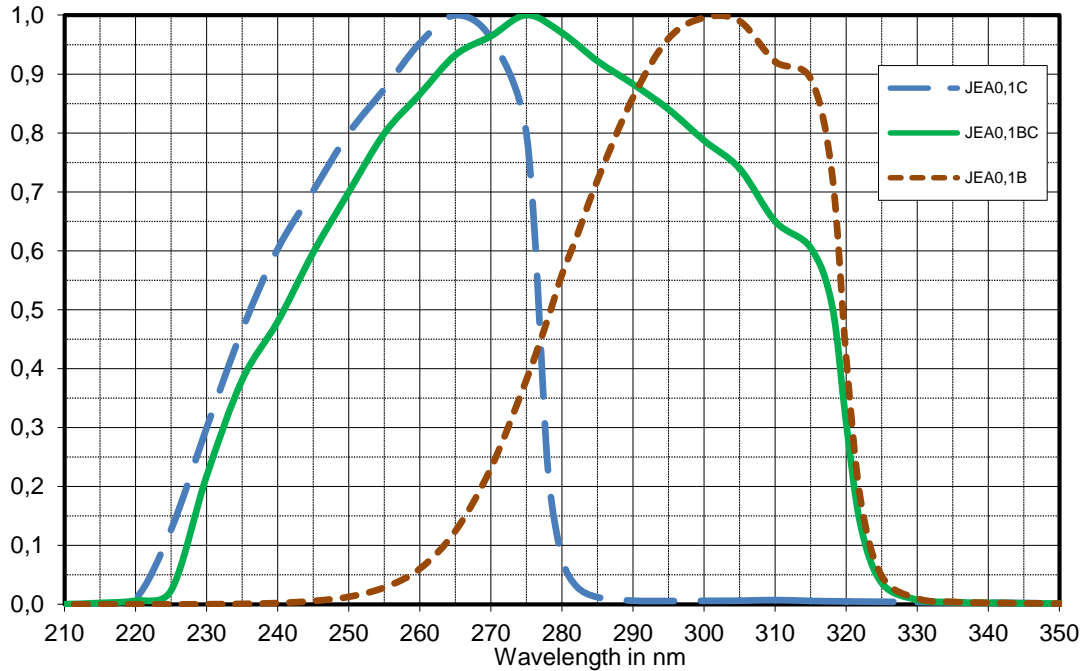
typical values, maximum values in brackets

<sup>1)</sup>: f: filter variant UV-C, UV-BC or UV-B

<sup>2)</sup>: see S<sub>max</sub> in table „spectral specifications“

Rev. 1 (01/2016)

Relative Spectral Sensitivity



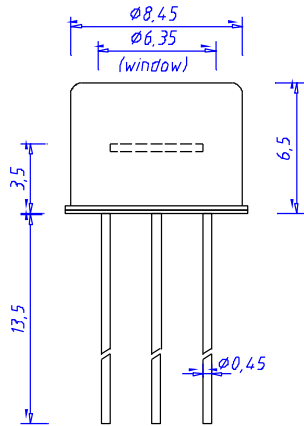
Spectral Specifications :

Parameter		Test conditions	JIC14xC	JIC14xBC	JIC14xB	Unit
spectral range	$\lambda_{min}$	$S = 0,1 * S_{max}$	225	228	265	nm
	$\lambda_{max}$		280	322	322	nm
wavelength of max. sensitivity $\lambda_p$		$S = S_{max}$	265	275	305	nm
max. spectral sensitivity $S_{max}$		$\lambda = \lambda_p$ $x=8: 100 M\Omega$ <sup>1)</sup>	10	12	7	mV/nW
Sensitivity for Hg-LP-lamps		$\lambda = 254 \text{ nm}$	9	8	< 0,3	mV/nW
field of view		$S = 0,5 * S_{max}$	±45			Grad

common test conditions, if not specified otherwise:  $T_A = 25 \text{ }^\circ\text{C}$ , typical values

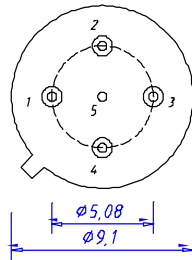
<sup>1)</sup> other gain-settings: see  $S_{max}$  in table "technical specifications"

Case Dimensions



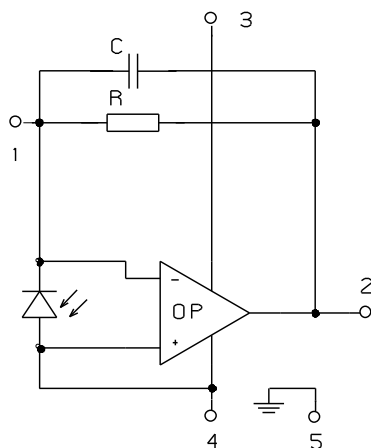
pin configuration:

- 1 R<sub>F</sub>
- 2 Out
- 3 V<sub>S</sub>
- 4 GND
- 5 Case



bottom view

Application Example



If an external resistor for gain reduction between pin "1" and "2" is used, it is good practice to keep the connector-length as short as possible to reduce noise incoupling and capacitive interference.

If the internally adjusted gain is used only, it is good practice to cut pin "1".