

# UV - Photodetector with integrated amplifier

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



- characteristics :**
- ◆ spectral range 210 ... 390 nm
  - ◆ active area 0,055 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 :

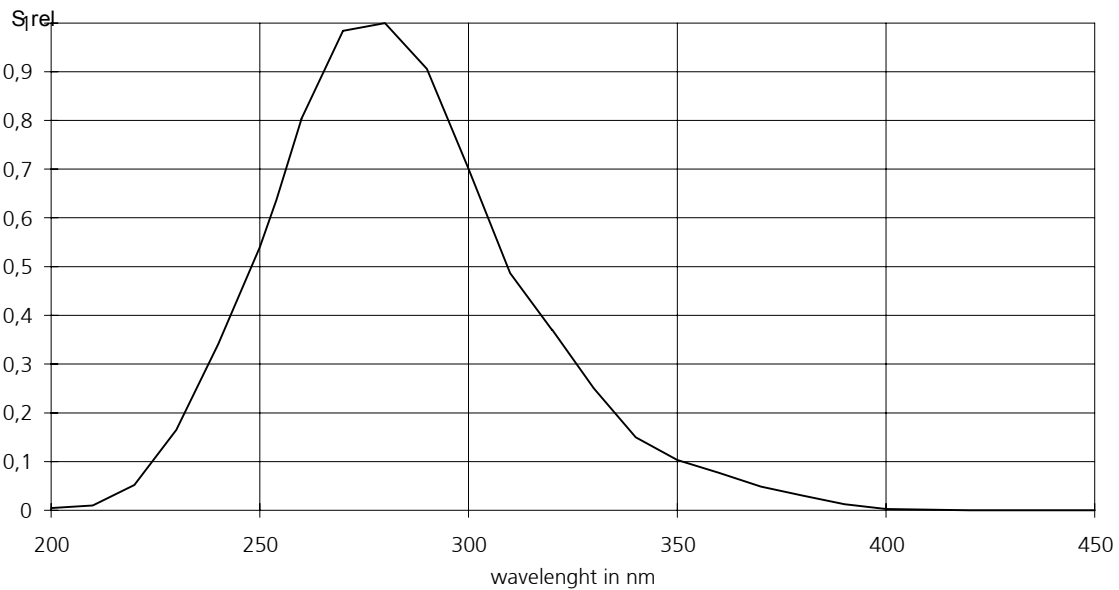
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC 117	JIC 118	JIC 119	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. of spectral responsivity	$\lambda = 280\text{ nm}$	1,2	12	120	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
shortcurrent		± 50			mA
operation voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

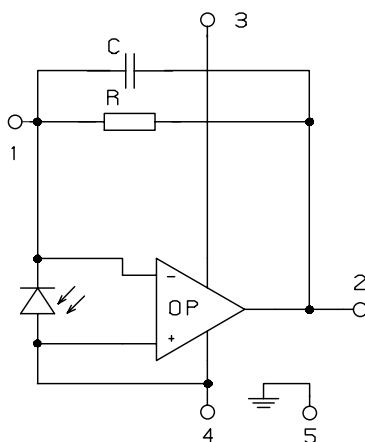
rev. 1 (03/2006)

# JIC 117, 118, 119

## relative spectral responsivity

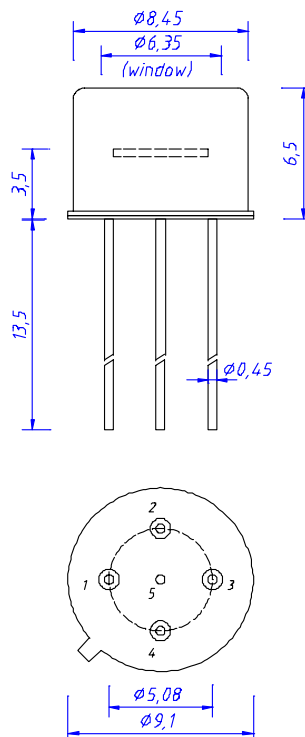


## pin configuration



- 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“.

# UV – Photodiode with integrated amplifier

**JIC 119-22**  
**JIC 119-22L**



- characteristics :**
- ◆ spectral range 210...390 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ optional version with lense cap (version -L)
  - ◆ very high UV-responsivity
  - ◆ integrated amplifier
  - ◆ single supply voltage
  - ◆ sensor assembly isolated to ground
  - ◆ full hermetically sealed glass/metall package
  - ◆ replacement for obsolete components UV10.T2E.10F and UV10.T2E.10L (PerkinElmer) (not pincompatible !)
  - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ flamedetection and -control in burners
  - ◆ UV-measurement
  - ◆ measurement of very low UV-levels

**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:**

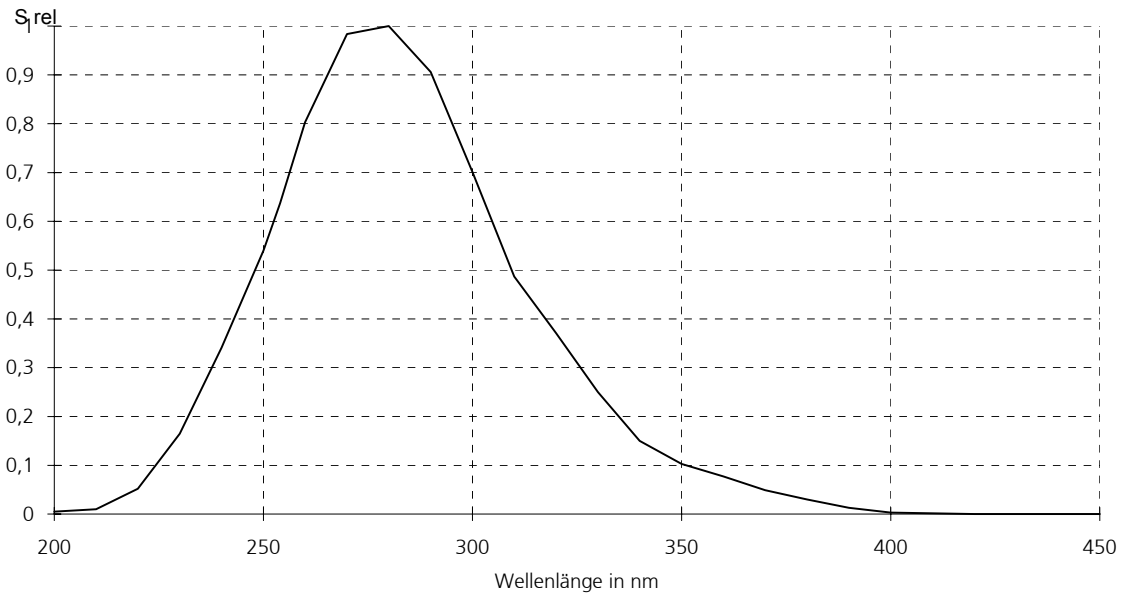
common test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V

parameter	test condition	JIC 119-22	JIC 119-22L	unit
feedback resistor		22	22	GΩ
dark offset voltage	E = 0 lx	±0,5 (±2)	±0,5 (±2)	mV
noise voltage	B = 10 Hz	1	1	mV <sub>rms</sub>
max. spectral responsivity	λ = 280 nm	0,1	6	V/mW/m <sup>2</sup>
risetime		10	10	ms
bandwidth	- 3 dB	25	25	Hz
saturation voltage	R <sub>L</sub> = 2 kΩ	+4,95(+4,8)	+4,95(+4,8)	V
short current		± 50	± 50	mA
operating voltage		2,5...5,0	2,5...5,0	V
current consumption		0,55 (0,90)	0,55 (0,90)	mA

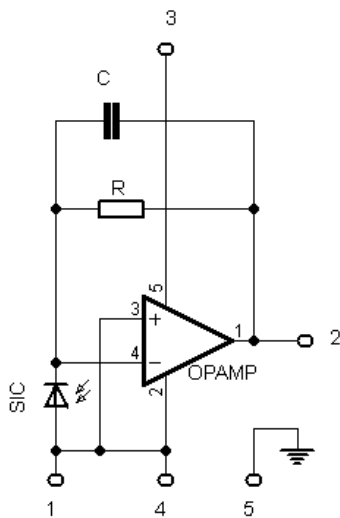
rev. 2 (12/2008)

# JIC 119-22, JIC 119-22L

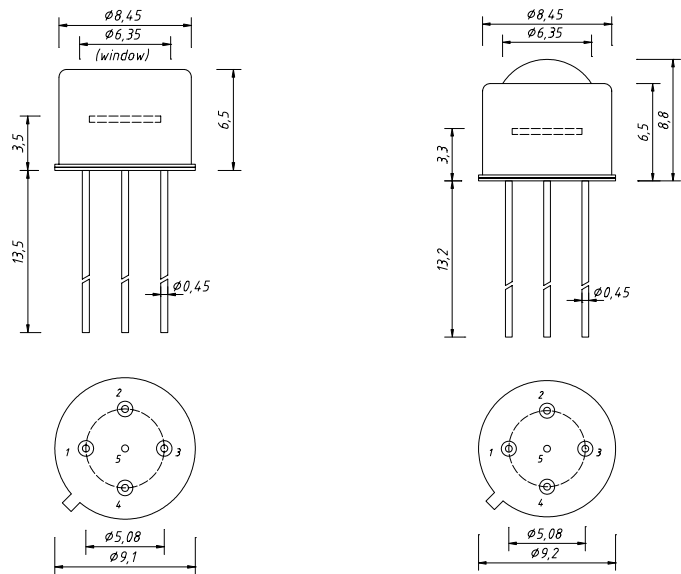
## relative spectral responsivity



## internal circuit



## package dimension (bottom view)



JIC 119-22

JIC 119-22L

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

## application hints:

- please make sure that length of connectors is as short as possible to reduce noise and capacitive interference.

# UV - Photodetector with integrated amplifier

**JIC 137**  
**JIC 138**  
**JIC 139**



- 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 :

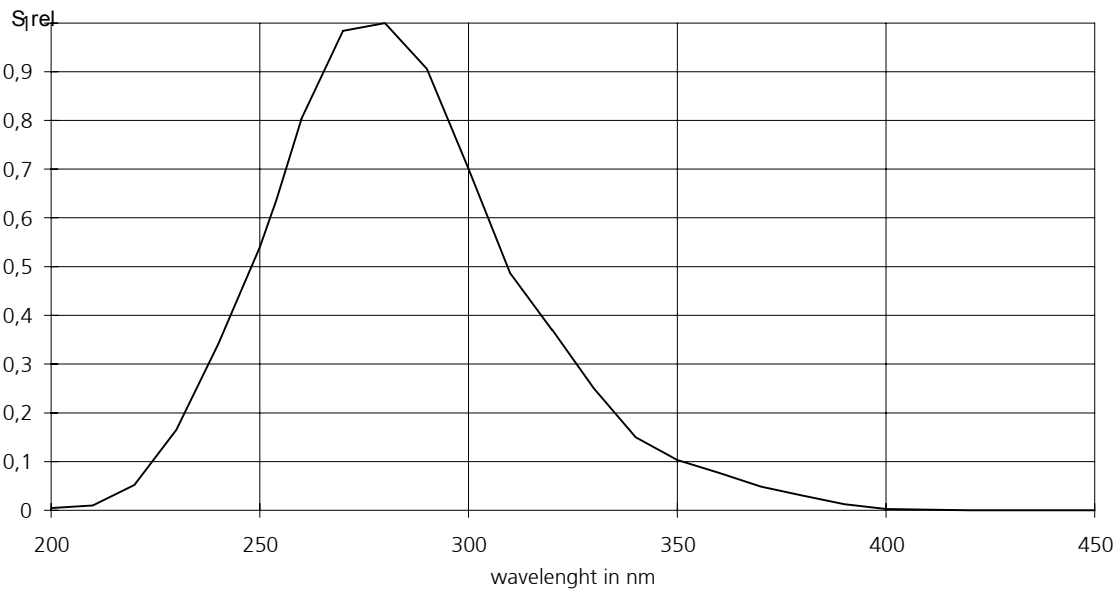
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC 137	JIC 138	JIC 139	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 10\text{ kHz}$	0,5	1	2	mV <sub>rms</sub>
max. of spectral responsivity	$\lambda = 280\text{ nm}$	1,2	12	120	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
shortcurrent		± 50			mA
operation voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

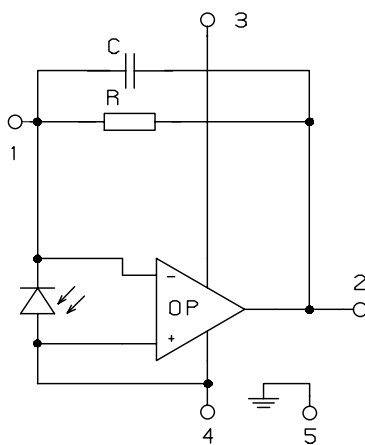
rev. 1 (03/2006)

# JIC 137, 138, 139

## relative spectral responsivity

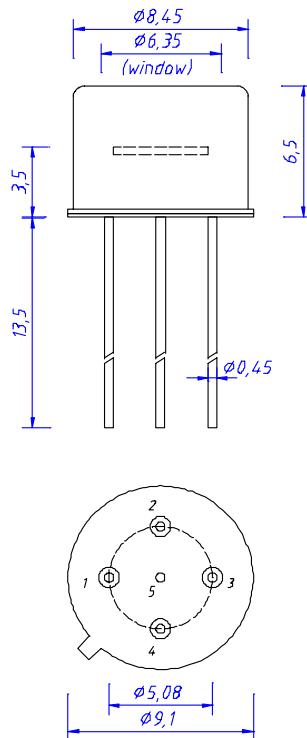


## pin configuration



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

## package dimensions



## application hints:

- If an external resistor 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“.

# UV - Photodetector with integrated amplifier

**JIC 157**  
**JIC 158**  
**JIC 159**



- characteristics :**
- ◆ spectral range 210 ... 390 nm
  - ◆ active area 0,965 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 :

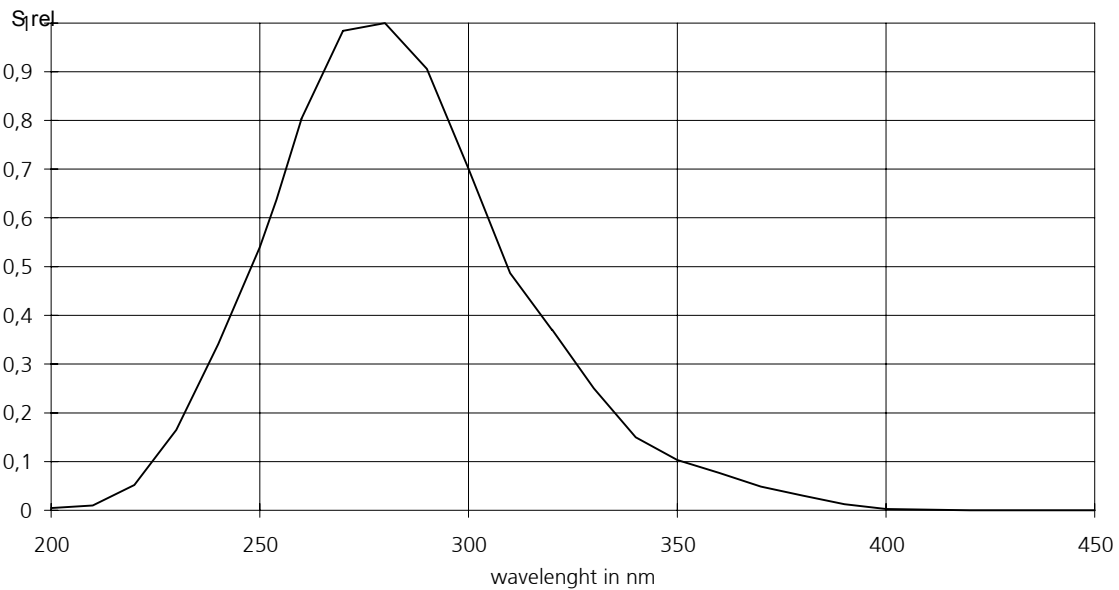
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC 157	JIC 158	JIC 159	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 10\text{ kHz}$	0,5	1	2	mV <sub>rms</sub>
max. of spectral responsivity	$\lambda = 280\text{ nm}$	1,2	12	120	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
shortcurrent		± 50			mA
operation voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

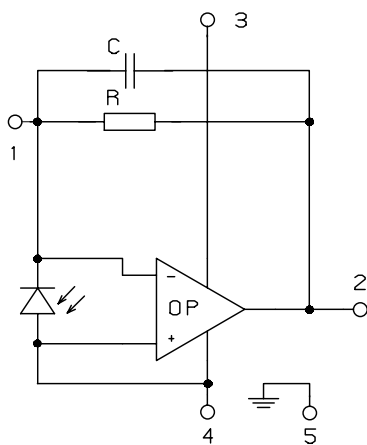
rev. 1 (03/2006)

# JIC 157, 158, 159

## relative spectral responsivity

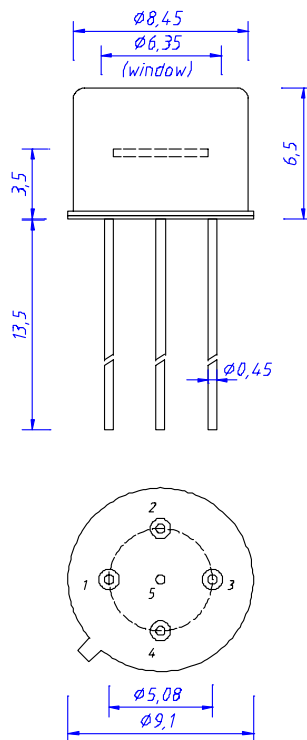


## pin configuration



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

## package dimensions



## application hints:

- If an external resistor 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“.

# UV - Photodetector with integrated amplifier

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



- characteristics :**
- ◆ integrated UV-A filter
  - ◆ spectral range 315... 395 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ 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-measurement
  - ◆ control of UV-A part of UV-lamps
  - ◆ 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 :

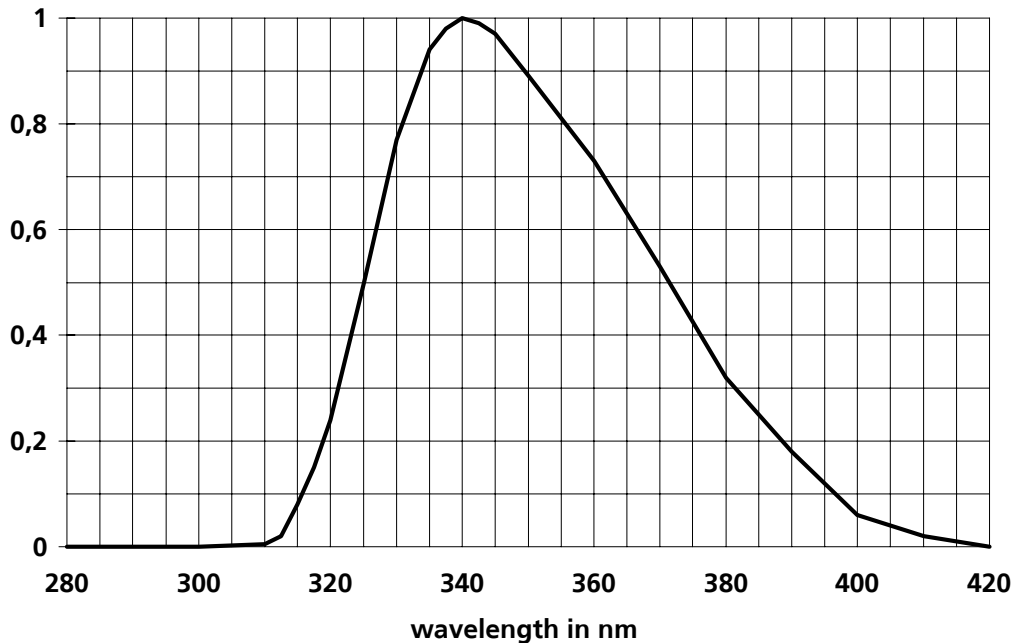
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC117A	JIC118A	JIC119A	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. spectral responsivity	$\lambda = 340\text{ nm}$	0,3	3	30	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

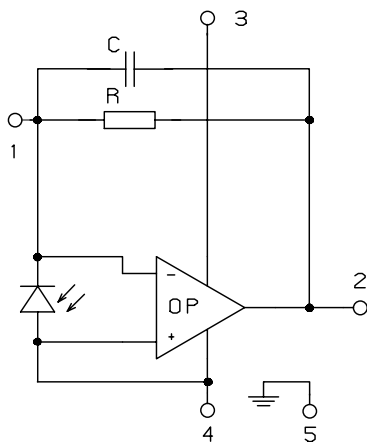
rev.1 (03/2006)

# JIC 117 A, 118 A, 119 A

## relative spectral responsivity

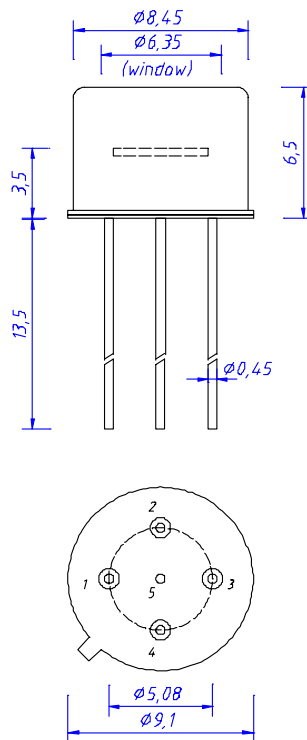


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 137 A**  
**JIC 138 A**  
**JIC 139 A**



- characteristics :**
- ◆ integrated UV-A filter
  - ◆ spectral range 315 ... 395 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ 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 :

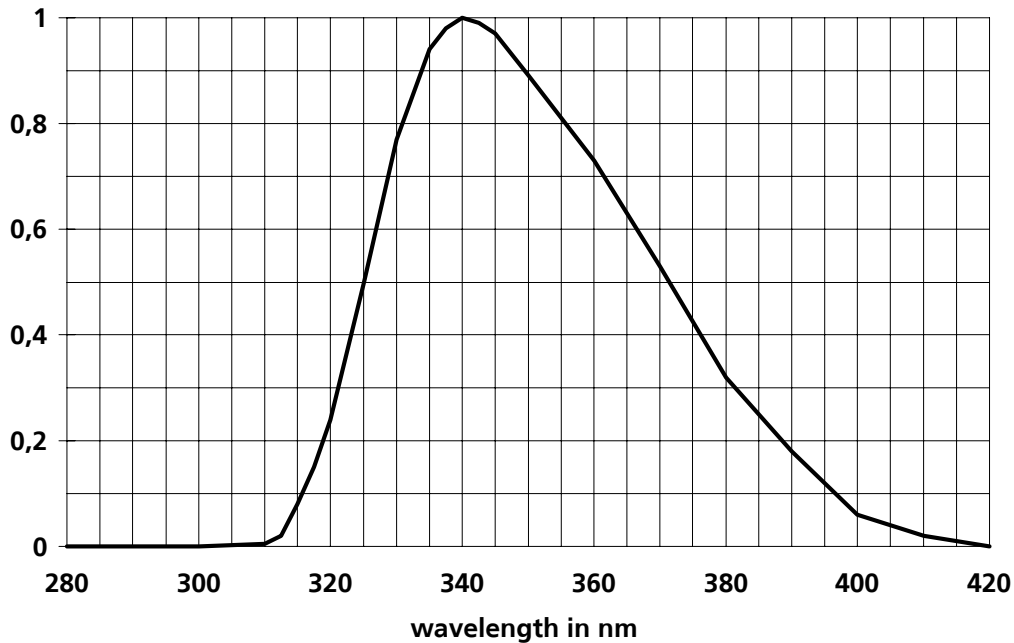
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC137A	JIC138A	JIC139A	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 340\text{ nm}$	0,3	3	30	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

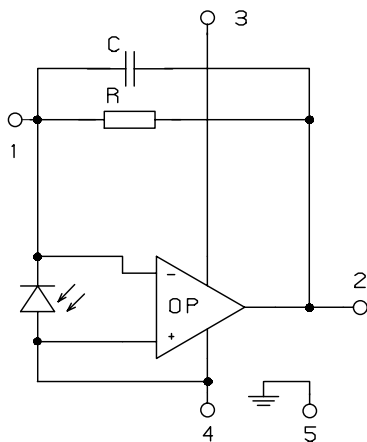
rev. 1 (03/2006)

# JIC 137 A, 138 A, 139 A

## relative spectral responsivity

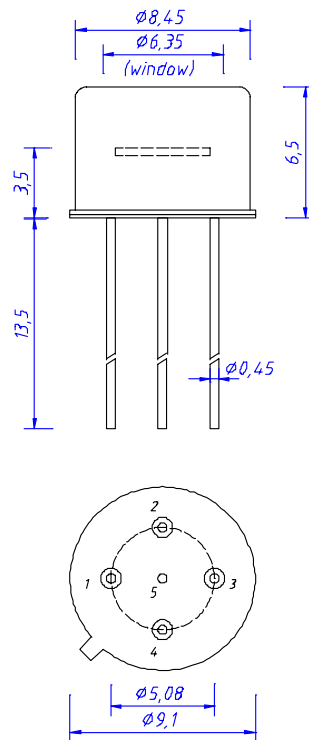


## pin configuration



- 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“.

# 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 mm<sup>2</sup>
  - ◆ 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 :

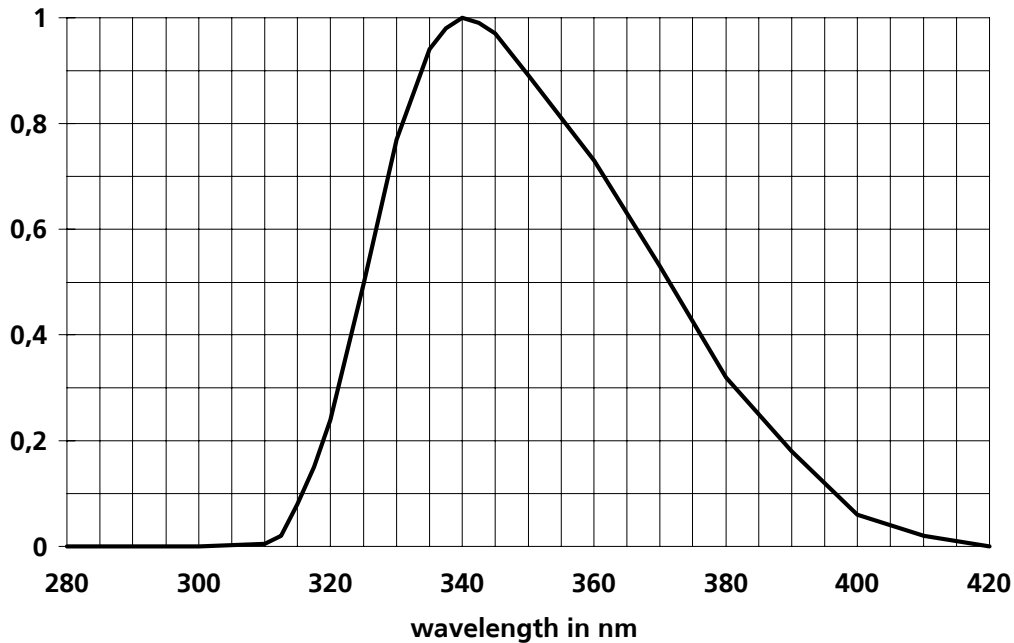
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC157A	JIC158A	JIC159A	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 340\text{ nm}$	0,3	3	30	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

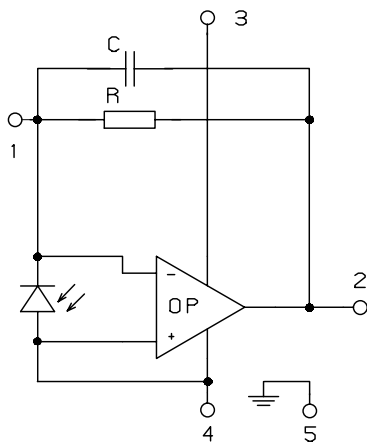
rev. 1 (03/2006)

# JIC 157 A, 158 A, 159 A

## relative spectral responsivity

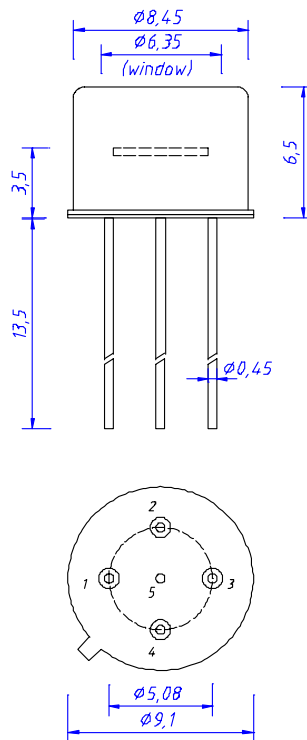


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 127 B**  
**JIC 128 B**  
**JIC 129 B**



- characteristics :**
- ◆ integrated UV-B filter
  - ◆ spectral range 280 ... 325 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,4/4/40 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 UV-B part of UV-lamps
  - ◆ 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 :

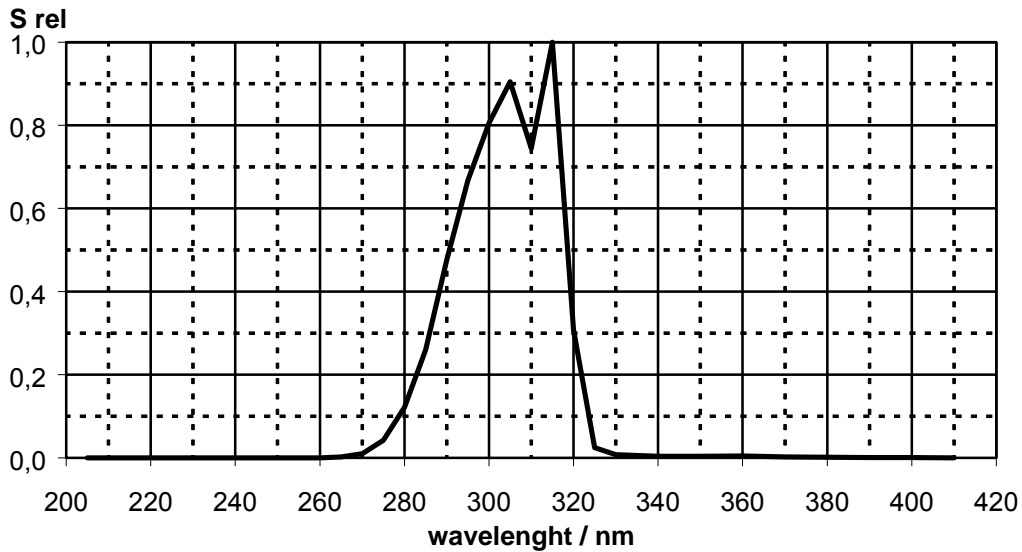
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC127B	JIC128B	JIC129B	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. spectral responsivity	λ = 315 nm	0,4	4	40	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
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

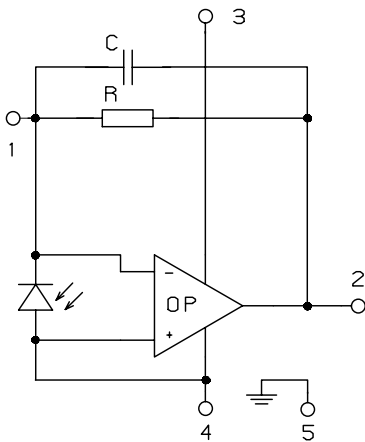
rev. 1 (03/2006)

# JIC 127 B, 128 B, 129 B

## relative spectral responsivity

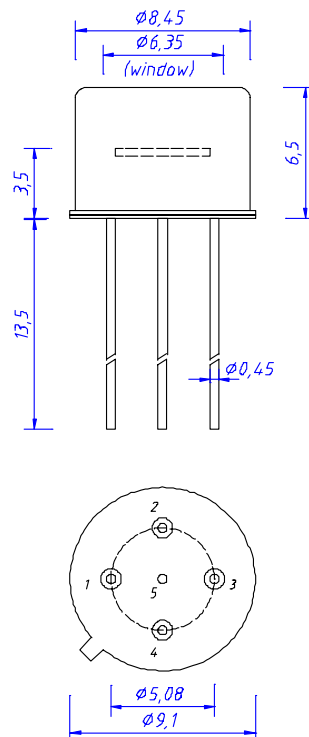


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 147 B**  
**JIC 148 B**  
**JIC 149 B**



- characteristics :**
- ◆ integrated UV-B filter
  - ◆ spectral range 280 ... 325 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,4/4/40 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-B-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 :

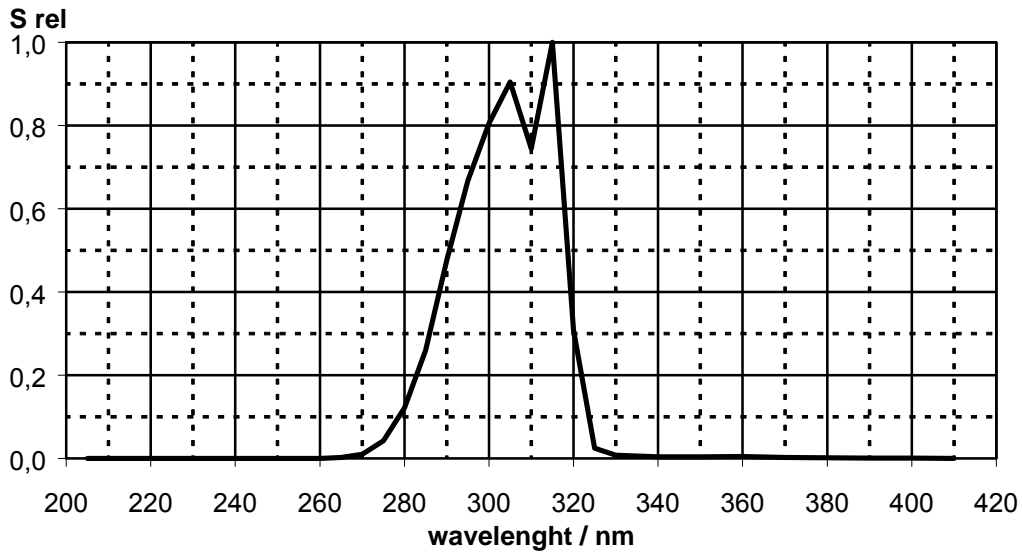
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC147B	JIC148B	JIC149B	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 315\text{ nm}$	0,4	4	40	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

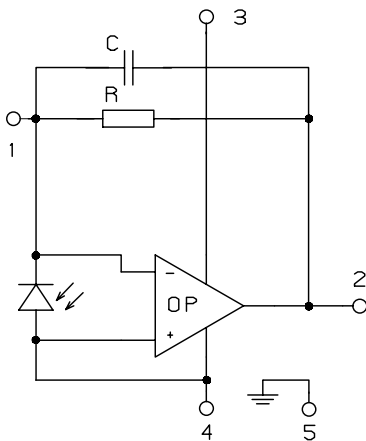
rev. 2 (05/2008)

# JIC 147 B, 148 B, 149 B

## relative spectral responsivity

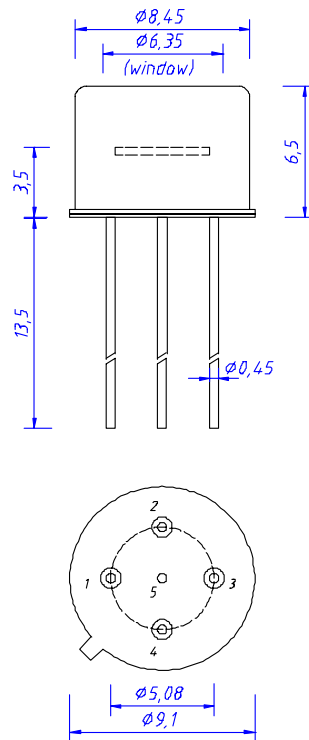


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 167 B**  
**JIC 168 B**  
**JIC 169 B**



- characteristics :**
- ◆ integrated UV-B filter
  - ◆ spectral range 280 ... 325 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,4/4/40 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:**

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 :**

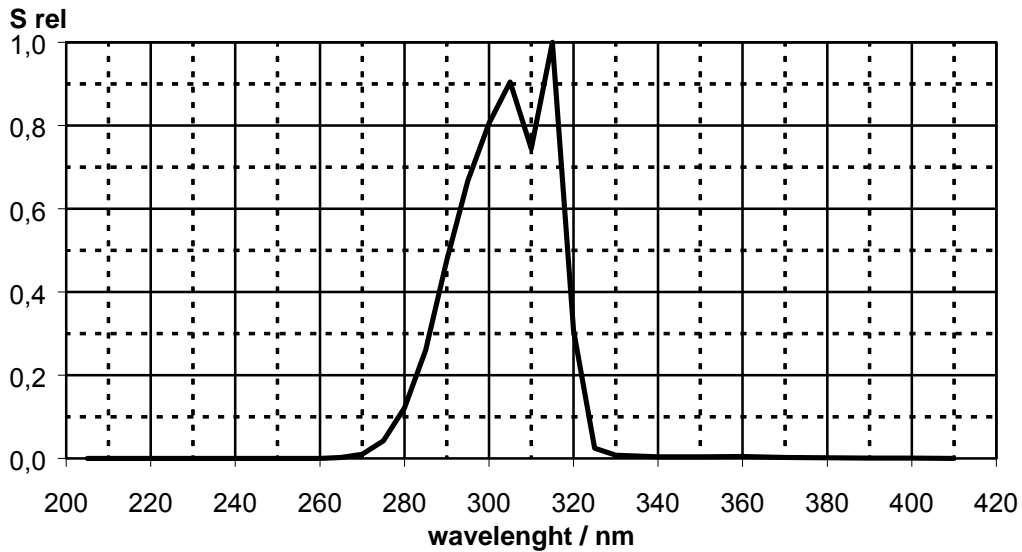
common test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V  
typ. values, maximum values in brackets

parameter	test condition	JIC167B	JIC168B	JIC169B	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. spectral responsivity	λ = 315 nm	0,4	4	40	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
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

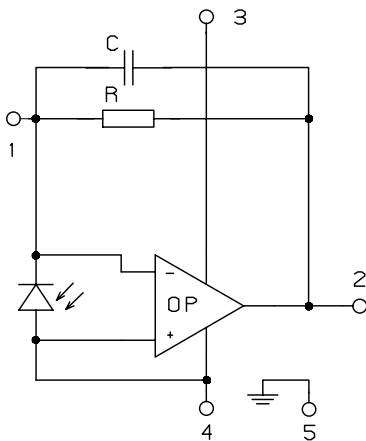
rev. 2 (05/2008)

# JIC 167 B, 168 B, 169 B

## relative spectral responsivity

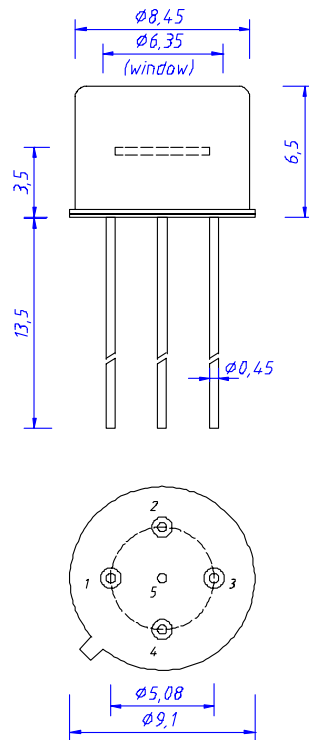


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 127 C**  
**JIC 128 C**  
**JIC 129 C**



- characteristics :**
- ◆ integrated UV-C filter
  - ◆ spectral range 210 ... 280 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,8/8/80 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:

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 :

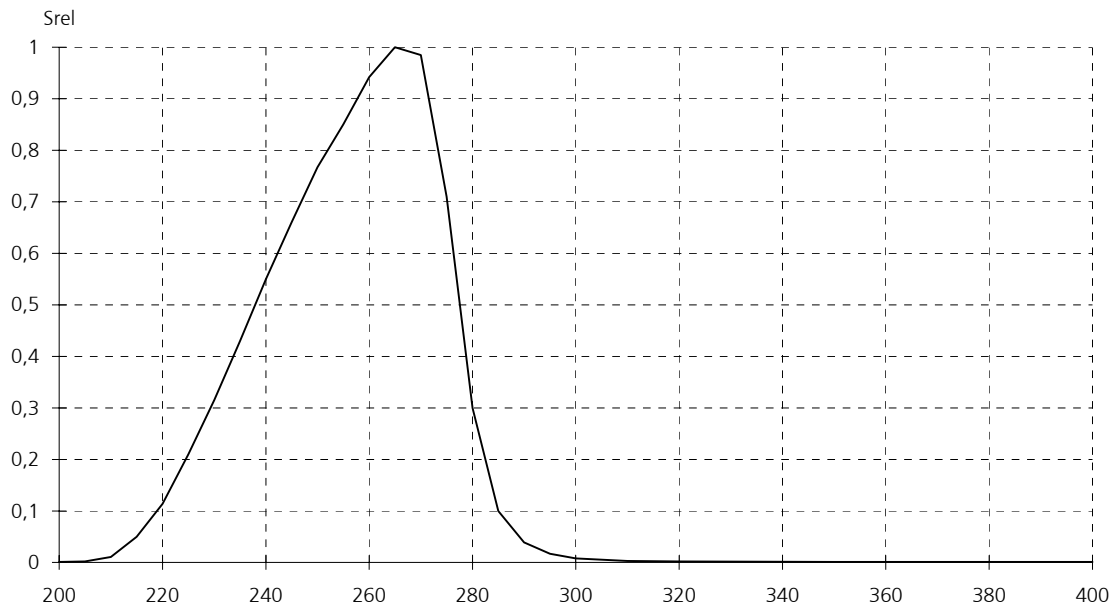
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC127C	JIC128C	JIC129C	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 254\text{ nm}$	0,6	6	60	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

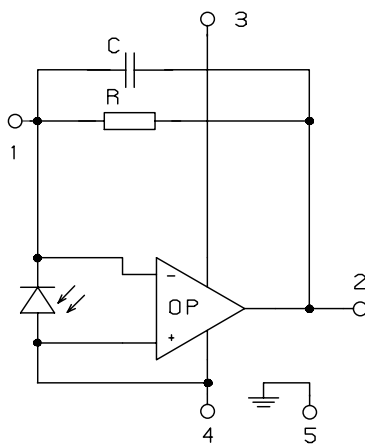
rev. 1 (03/2006)

# JIC 127 C, 128 C, 129 C

## relative spectral responsivity

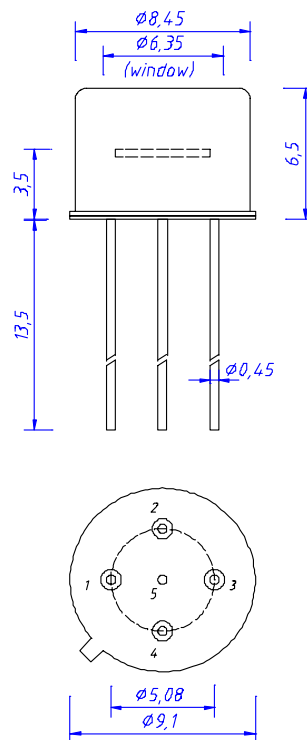


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 147 C**  
**JIC 148 C**  
**JIC 149 C**



- characteristics :**
- ◆ integrated UV-C filter
  - ◆ spectral range 210 ... 280 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,8/8/80 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:

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 :

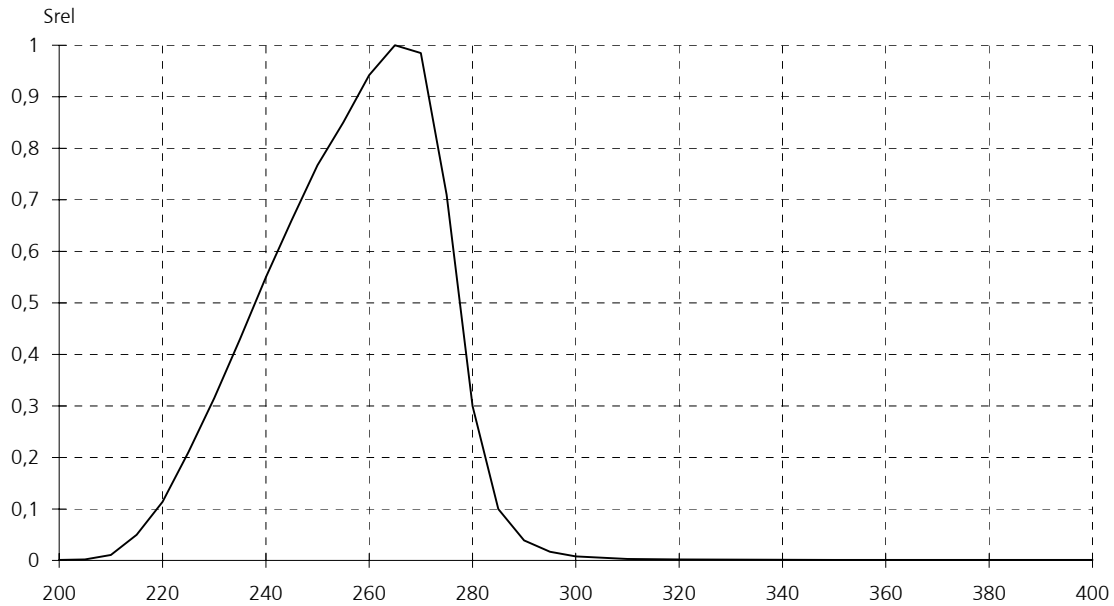
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC147C	JIC148C	JIC149C	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 254\text{ nm}$	0,6	6	60	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

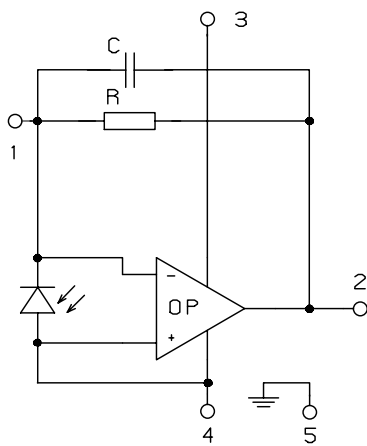
rev. 1 (03/2006)

# JIC 147 C, 148 C, 149 C

## relative spectral responsivity

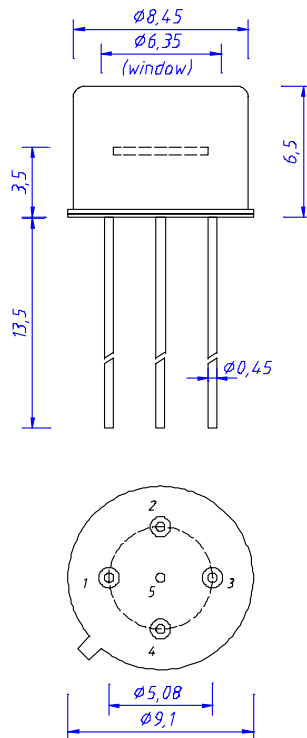


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 167 C**  
**JIC 168 C**  
**JIC 169 C**



- characteristics :**
- ◆ integrated UV-C filter
  - ◆ spectral range 210 ... 280 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,8/8/80 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:

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 :

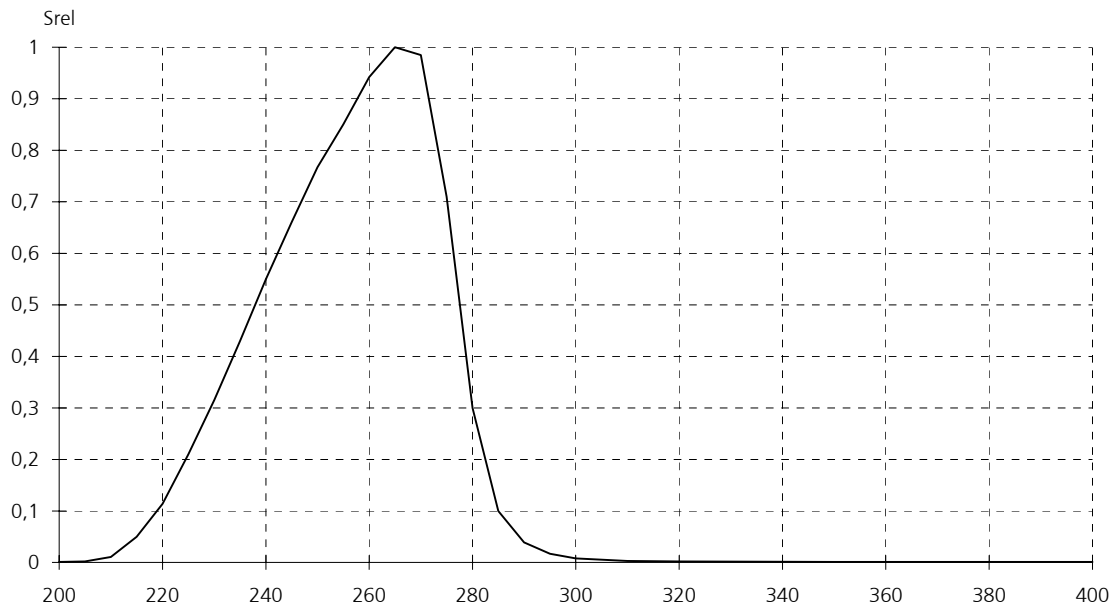
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC167C	JIC168C	JIC169C	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	$\pm 1$	$\pm 2$	$\pm 3$	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 254\text{ nm}$	0,6	6	60	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		$\pm 50$			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

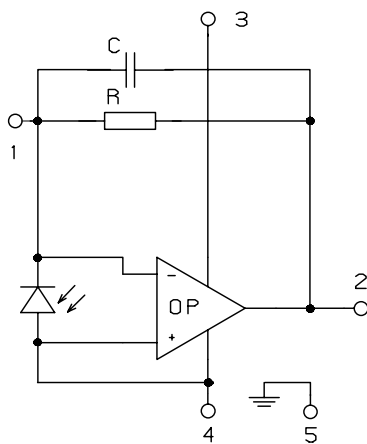
rev. 1 (03/2006)

# JIC 167 C, 168 C, 169 C

## relative spectral responsivity

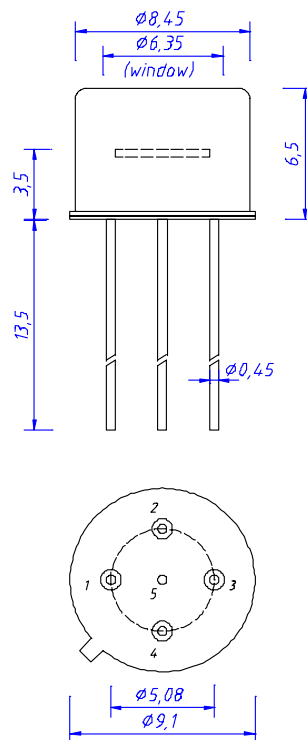


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 127 BC**  
**JIC 128 BC**  
**JIC 129 BC**



- characteristics :**
- ◆ integrated UV-BC filter
  - ◆ spectral range 280 ... 305 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,7/7/70 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 UV-BC part of UV-lamps
  - ◆ 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 :

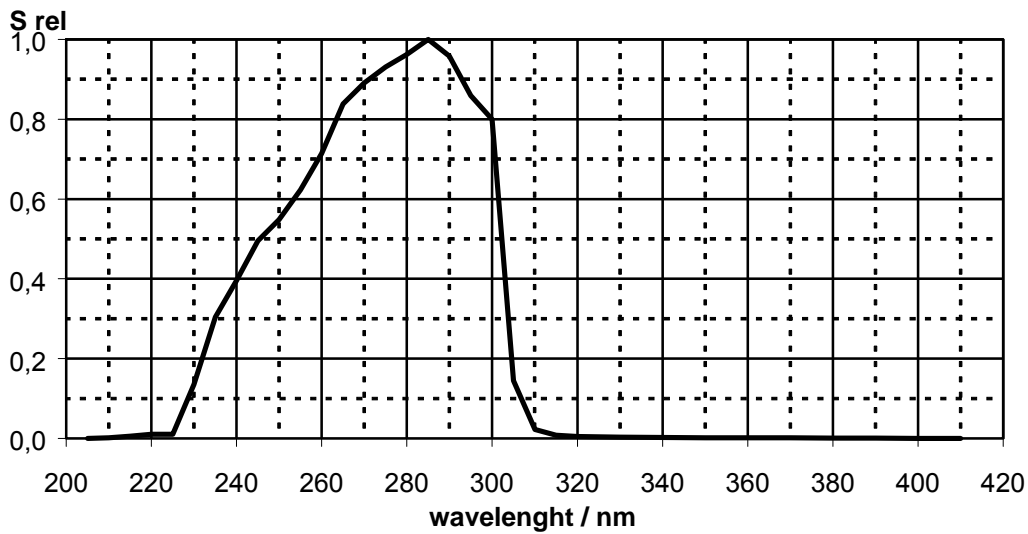
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC127BC	JIC128BC	JIC129BC	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. spectral responsivity	$\lambda = 254\text{ nm}$	0,7	7	70	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

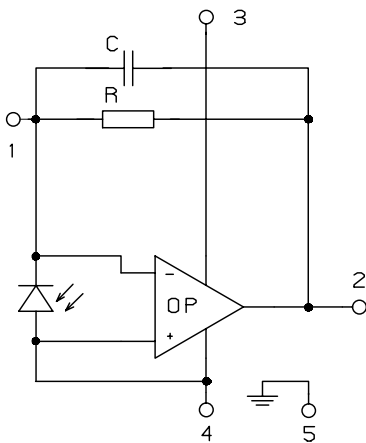
rev. 1 (03/2006)

# JIC 127 BC, 128 BC, 129 BC

## relative spectral responsivity

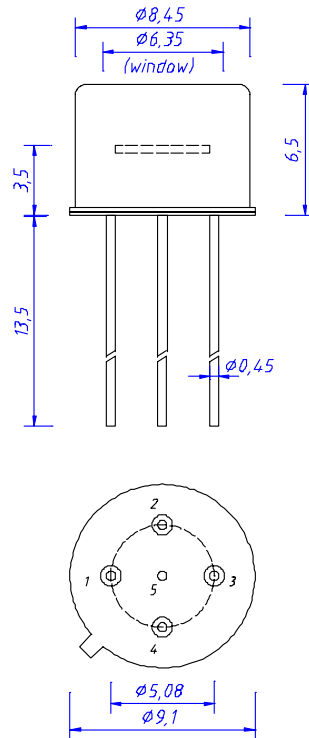


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 147 BC**  
**JIC 148 BC**  
**JIC 149 BC**



- characteristics :**
- ◆ integrated UV-BC filter
  - ◆ spectral range 280 ... 305 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,7/7/70 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-BC-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 :

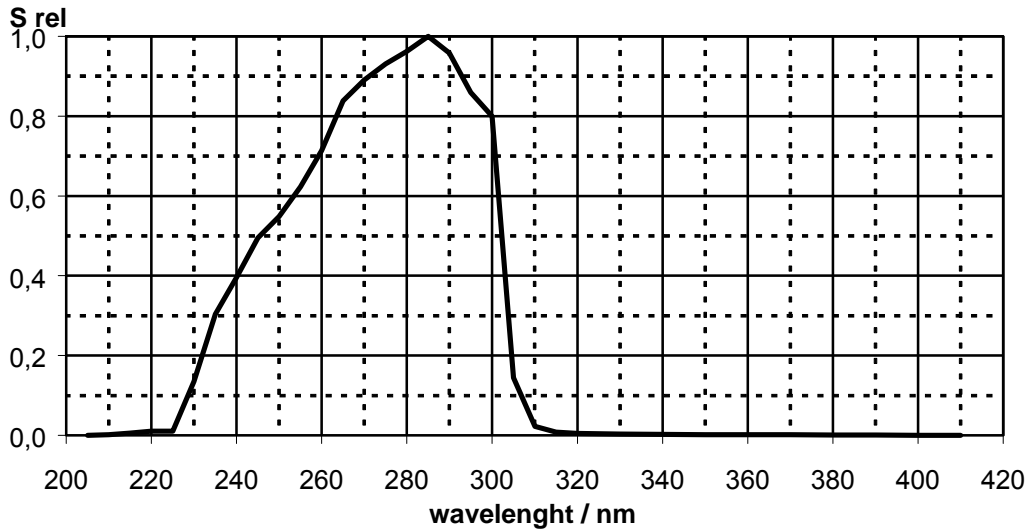
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC147BC	JIC148BC	JIC149BC	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 254\text{ nm}$	0,7	7	70	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)			V
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

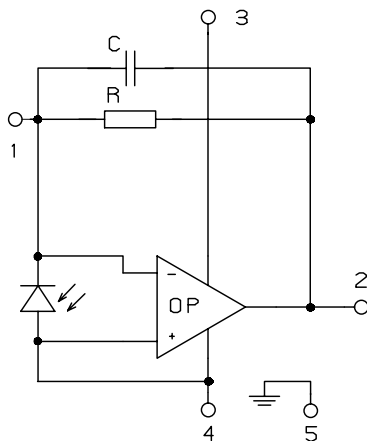
rev. 1 (03/2006)

# JIC 147 BC, 148 BC, 149 BC

## relative spectral responsivity

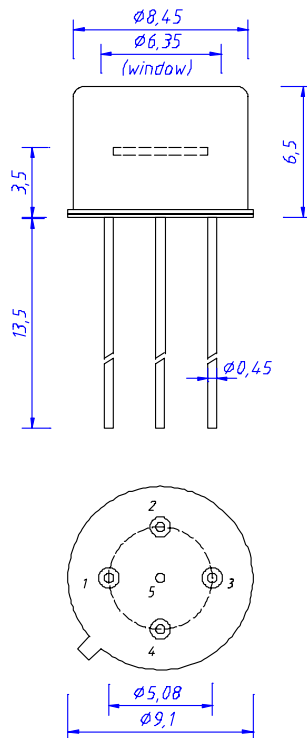


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 167 BC**  
**JIC 168 BC**  
**JIC 169 BC**



- characteristics :**
- ◆ integrated UV-BC filter
  - ◆ spectral range 280 ... 305 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,7/7/70 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:**

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 :**

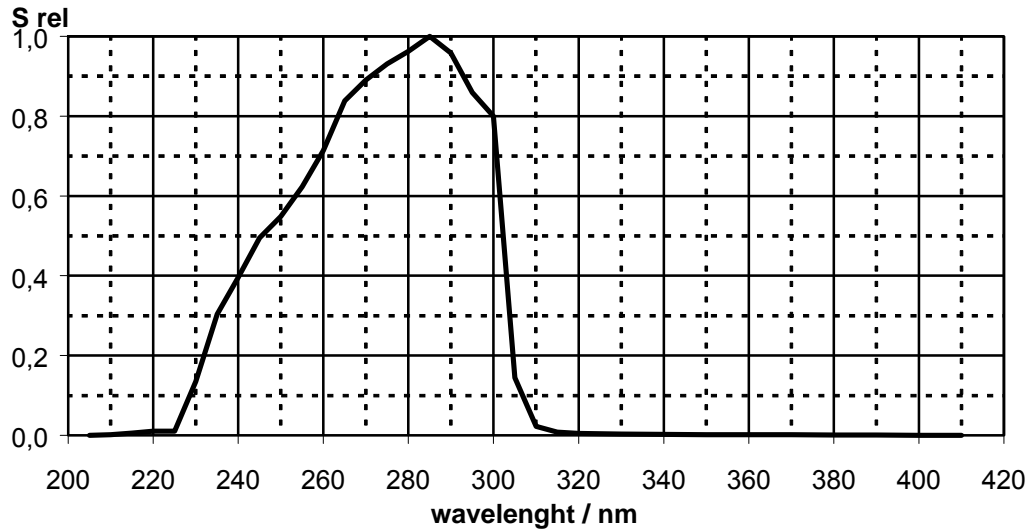
common test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V  
typ. values, maximum values in brackets

parameter	test condition	JIC167BC	JIC168BC	JIC169BC	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. spectral responsivity	λ = 254 nm	0,7	7	70	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
short current		± 50			mA
supply voltage		+ 2,7...+ 5			V
current consumption		750 (1100)			μA

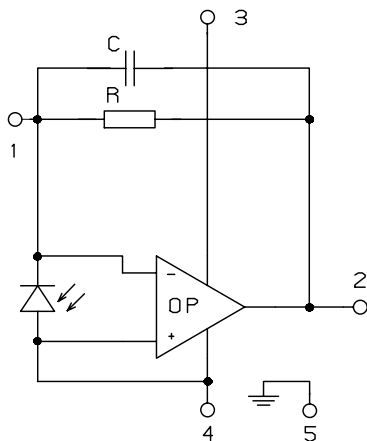
rev. 1 (03/2006)

# JIC 167 BC, 168 BC, 169 BC

## relative spectral responsivity

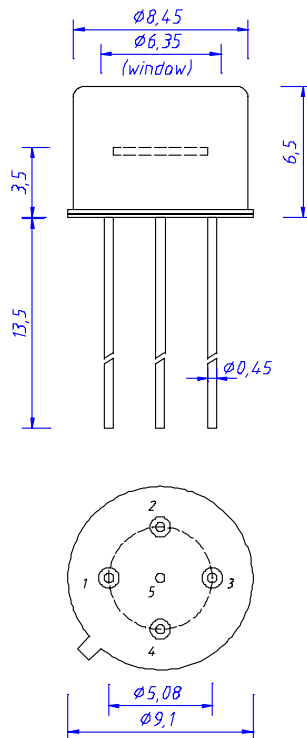


## pin configuration



- 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“.

# UV – Photodiode with integrated amplifier

## JIC 149 E



- characteristics :**
- ◆ SiC-photodiode with integrated special filter
  - ◆ response approximately (CIE 87)
  - ◆ optimized for solar application
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ extra sensor pin for external adjustment of gain and bandwidth
  - ◆ single supply voltage
  - ◆ sensor assembly isolated to ground
  - ◆ full hermetically sealed package
  - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ UV-measurement only
  - ◆ measurement of erythema efficient UV-part on natural sunlight

### absolute maximum ratings :

reverse voltage	20 V
operating temperature range	- 25 °C ... 70 °C
storage temperature range	-40 °C ... 100 °C
welding temperature (3s)	260 °C

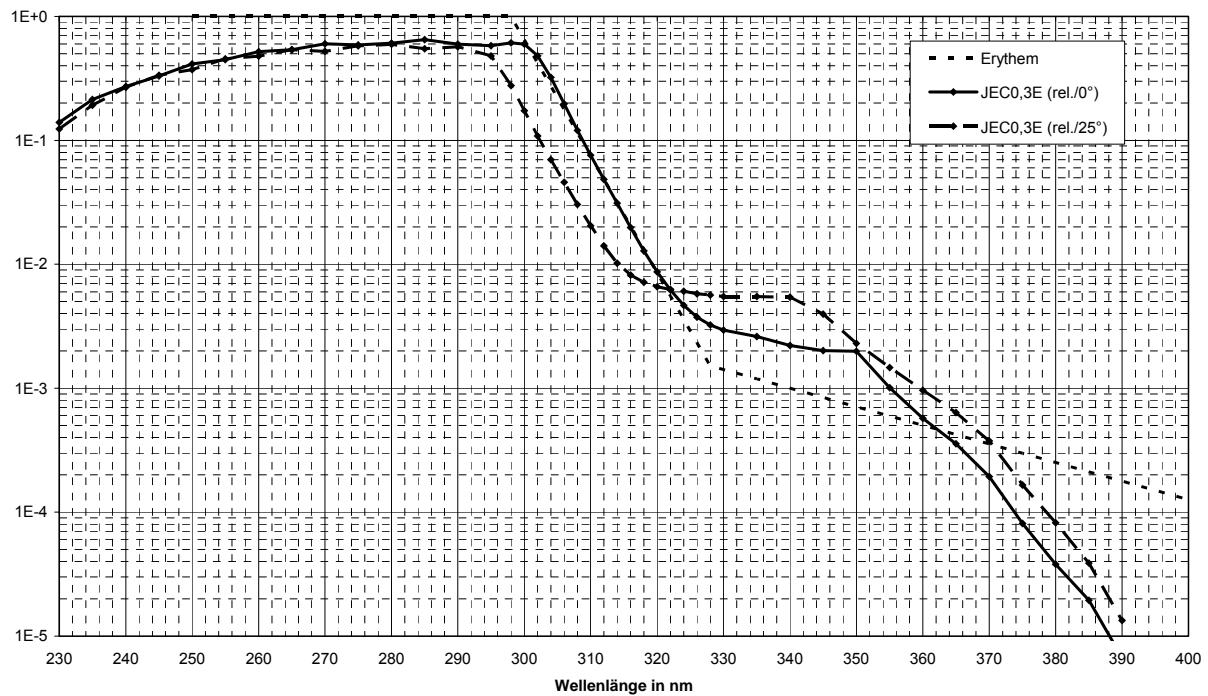
### technical data :

common test conditions if not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_R = 0\text{ V}$   
(typical values in brackets)

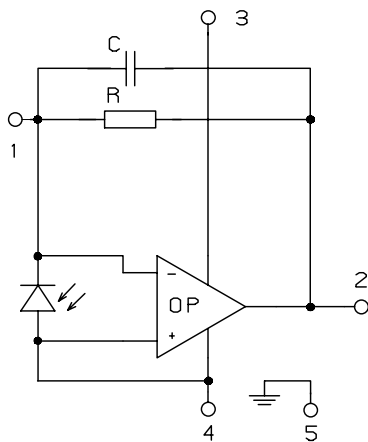
parameter	test condition	JIC 149E	unit
transimpedance		1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	$\pm 3$	mV
noise voltage	$B = 1\text{ kHz}$	1	mV <sub>rms</sub>
max. spectral response	$\lambda = 295\text{ nm}$	100	mV/nW
risetime		600	μs
bandwidth	- 3 dB	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,95 (+ 4,8)	V
short current		$\pm 50$	mA
supply voltage		+ 2,7...+ 5	V
current consumption		750 (1100)	μA

rev. 1 (06/2008)

## relative spectral response

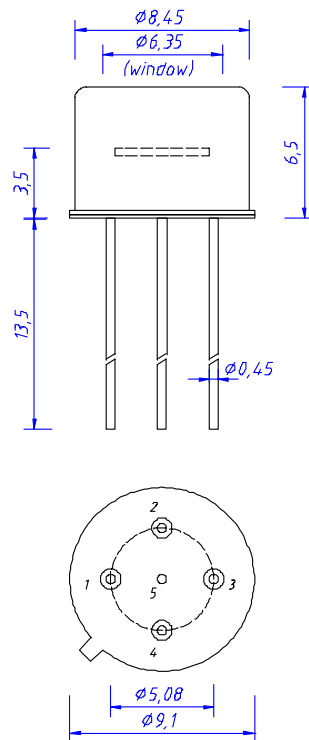


## internal circuit



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

## package dimension



## applicartion hints:

- If an external resistor for reduction of gain is used, please make sure that lenght of connectors is as short as possible to reduce noise and capacative interference.
- If internally adjusted gain is used only, please cut pin „1“.

# UV - Photodiode with integrated amplifier

JIC 129 L



- characteristics :**
- ◆ SiC-Photodiode with integrated current/voltage converter
  - ◆ very high UV-responsivity
  - ◆ enlargement of effective chiparea by integrated lense
  - ◆ very low visible and IR responsivity
  - ◆ extra sensor pin for external adjustment of gain and bandwidth
  - ◆ single supply voltage
  - ◆ low current consumption
  - ◆ sensor assembly isolated to ground
  - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ selective UV-measurements
  - ◆ flamedetection and -control
  - ◆ control of UV-lamps in water and surface disinfection
  - ◆ control of UV-lasers
  - ◆ control of irradiancy in varnish and adhesive hardening

**absolute maximum ratings :**

- ◆ supply voltage +5,5 V
- ◆ operating temperature range -25 °C ... +85 °C
- ◆ storage temperature range -40 °C ... +100 °C
- ◆ welding temperature (5s) 300 °C

**technical data :**

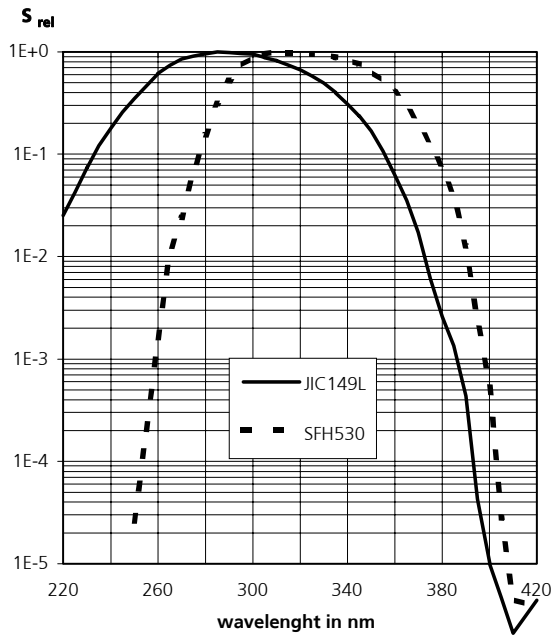
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$

parameters	test condition	min.	typ.	max.	unit
active area <sup>1)</sup>			2,75		mm <sup>2</sup>
feedback resistor		0,95	1,00	1,05	GΩ
dark offset voltage	E = 0 lx		± 0,5	± 2	mV
noise voltage	B = 1 kHz		0,1		mV <sub>rms</sub>
Maximum of spectral responsivity	S = S <sub>max</sub> λ = 285 nm		30		mV/nW
max. of spectral responsivity	λ = 310 nm	180	270	400	mV/ nW/mm <sup>2</sup>
selectivity	S <sub>400-1200nm</sub> / S <sub>310nm</sub>		< 10 <sup>-4</sup>		
rise time			20		ms
bandwidth	- 3 dB		15		Hz
opening angle	S=0,5*S <sub>max</sub>		± 5		Grad
saturation voltage	R <sub>L</sub> = 2 kΩ	+ 4,8	+ 4,95		V
short current			± 50		mA
operating voltage			+ 2,7...+ 5		V
current consumption			750 (1100)		μA

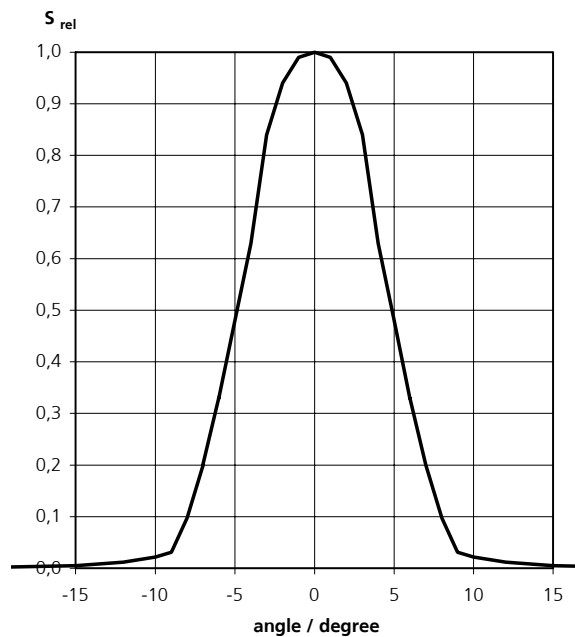
<sup>1)</sup> effektive active area because of focusing of light by the lense

rev 1 (03/2006)

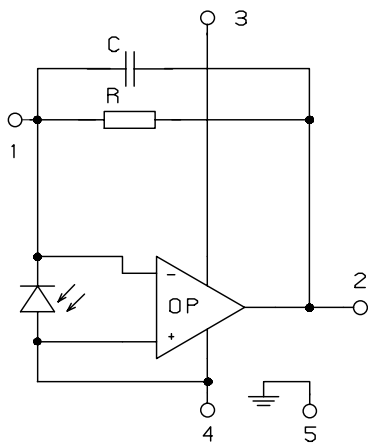
## relative spectral responsivity



## response characteristic

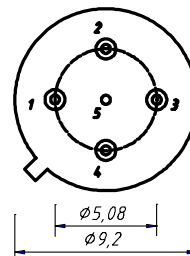
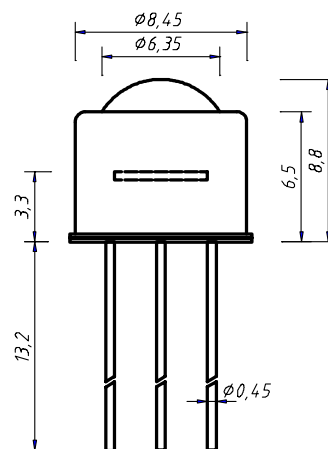


## internal circuit



- 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“.

# UV - Photodiode with integrated amplifier

**JIC 149 L**  
**JIC 149 L-1**



- characteristics :**
- ◆ SiC-Photodiode with integrated current/voltage converter
  - ◆ very high UV-responsivity
  - ◆ enlargement of effective chiparea by integrated lense
  - ◆ very low visible and IR responsivity
  - ◆ extra sensor pin for external adjustment of gain and bandwidth
  - ◆ single supply voltage
  - ◆ low current consumption
  - ◆ sensor assembly isolated to ground
  - ◆ replacement for SFH 530 (Osram), but with better characteristics
  - ◆ option „-1“ with higher bandwidth
  - ◆ components are in conformity with RoHS and WEEE

- applications :**
- ◆ selective UV-measurements
  - ◆ flamedetection and -control
  - ◆ control of UV-lamps in water and surface disinfection
  - ◆ control of UV-lasers
  - ◆ control of irradiancy in varnish and adhesive hardening

**absolute maximum ratings :**

- ◆ supply voltage +5,5 V
- ◆ operating 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:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$

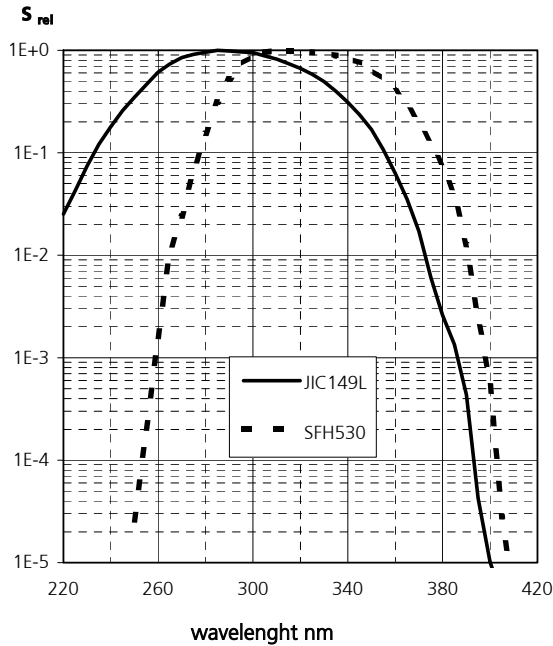
parameter	test condition	JIC149L	JIC149L-1	unit
active area <sup>1)</sup>		11	11	mm <sup>2</sup>
feedback resistor		1,0	1,0	GΩ
dark offset voltage	E = 0 lx	± 0,5 (± 2)	± 0,5 (± 2)	mV
noise voltage	B = 1 kHz	0,1	0,5	mV <sub>rms</sub>
maximum of spectral responsivity	S = S <sub>max</sub> λ = 285 nm	30	30	mV/nW
spectral responsivity	λ = 310 nm	270 (180-400)	270 (180-400)	mV/ nW/mm <sup>2</sup>
selectivity	S <sub>400-1200nm</sub> / S <sub>310nm</sub>	< 10 <sup>-4</sup>	< 10 <sup>-4</sup>	
rise time		20	0,6	ms
bandwidth	- 3 dB	15	500	Hz
opening angle	S=0,5*S <sub>max</sub>	± 5	± 5	Grad
saturation voltage	R <sub>L</sub> = 2 kΩ	+ 4,95	+ 4,95	V
short current		± 50	± 50	mA
operating voltage		+2,7...+5	+2,7...+5	V
current consumption		750 (1100)	750 (1100)	μA

<sup>1)</sup> effektive active area because of focusing of light by the lense

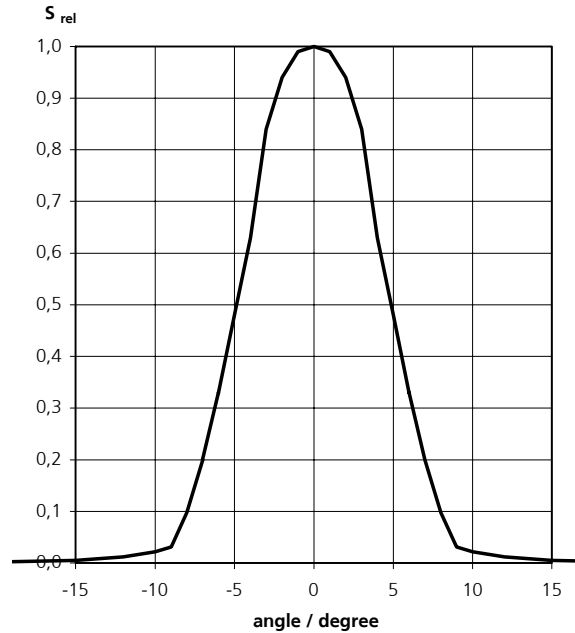
rev 1 (04/2008)

# JIC 149 L, JIC 149 L-1

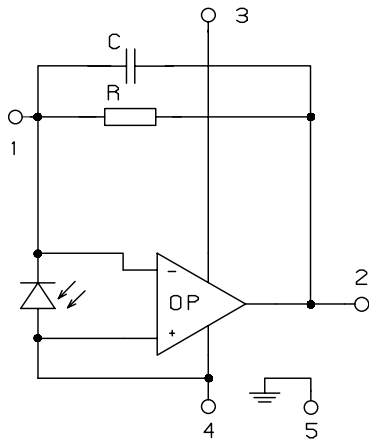
## relative spectral responsivity



## response characteristic

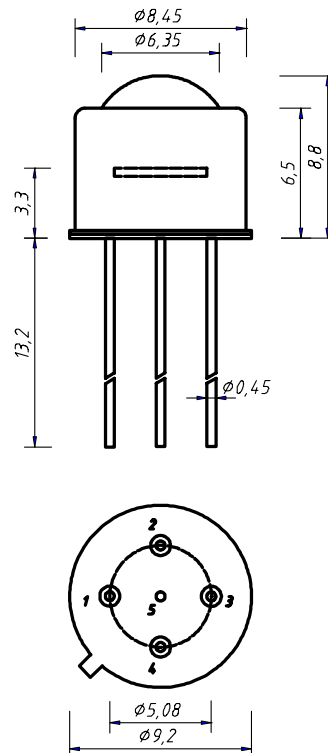


## internal circuit



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 317**  
**JIC 318**  
**JIC 319**



- characteristics :**
- ◆ spectral range 210 ... 390 nm
  - ◆ active area 0,055 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		+15	V
operating temperature range	-25 °C ... +85		°C
storage temperature range	-40 °C ... +100		°C
soldering temperature (5s)	300		°C

## technical data :

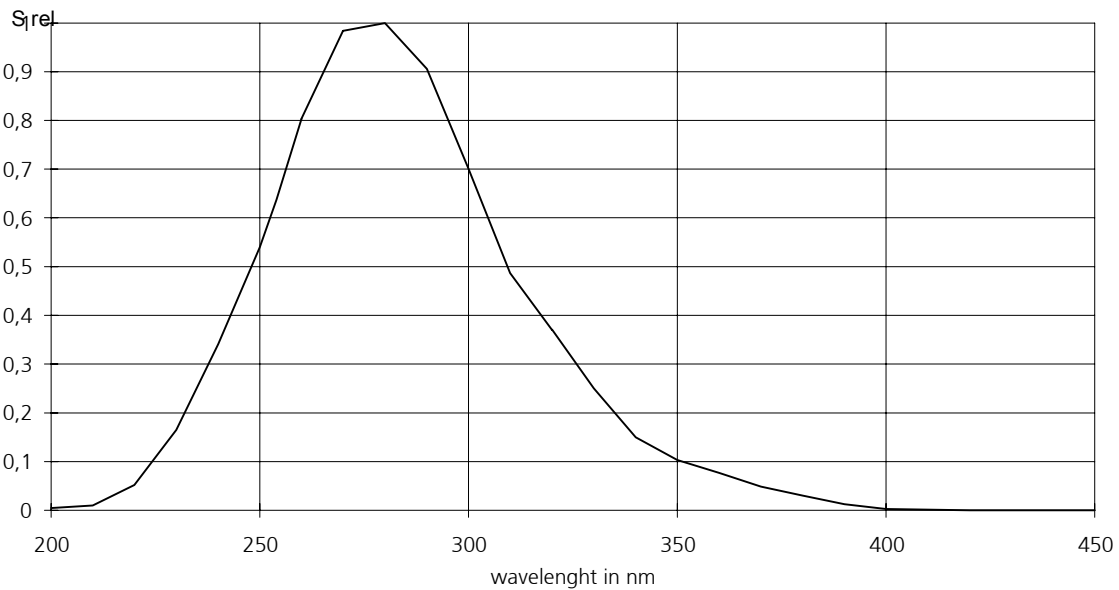
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC 317	JIC 318	JIC 319	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. of spectral responsivity	$\lambda = 280\text{ nm}$	1,2	12	120	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
shortcurrent		± 30			mA
operation voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

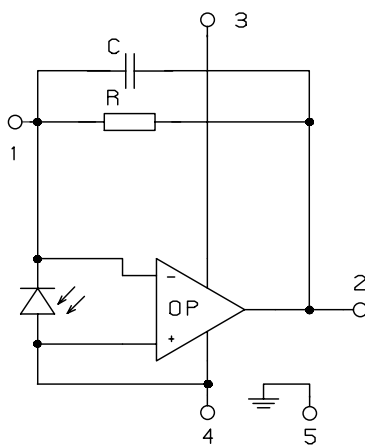
rev. 1 (07/2006)

# JIC 317, 318, 319

## relative spectral responsivity

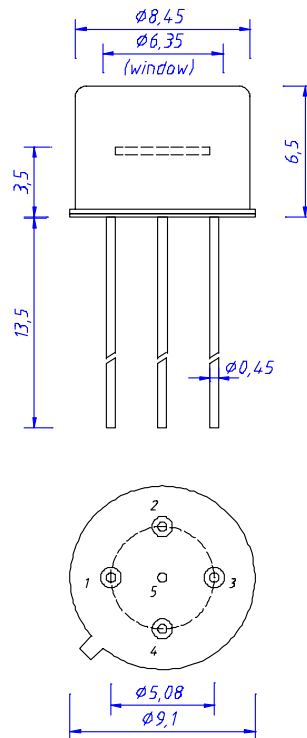


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 337**  
**JIC 338**  
**JIC 339**



- 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	+15	V
operating temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
soldering temperature (5s)	300	°C

## technical data :

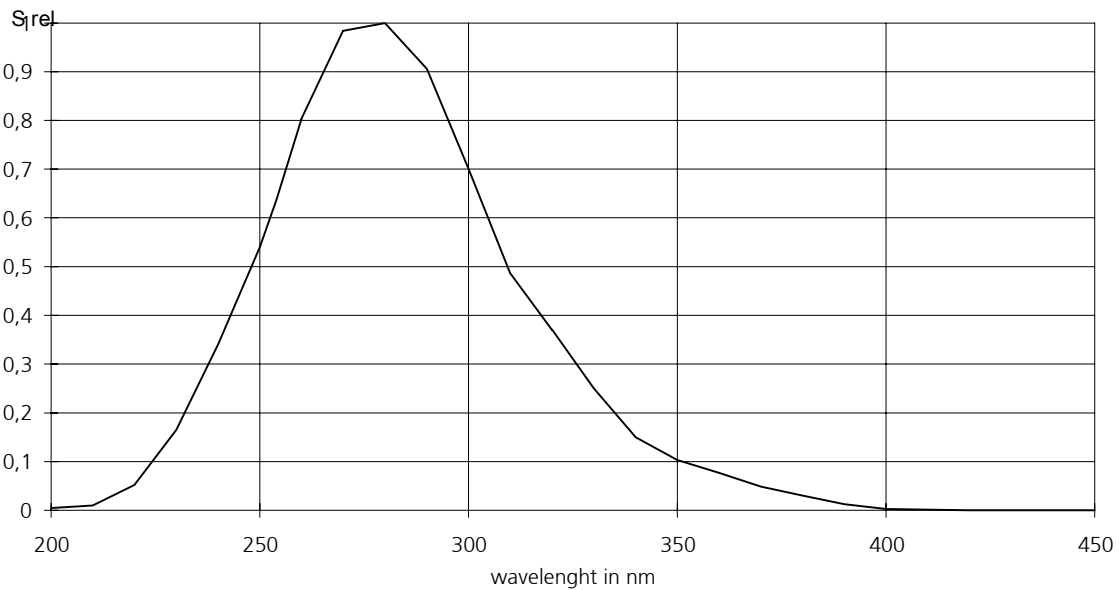
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC 337	JIC 338	JIC 339	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 10\text{ kHz}$	0,5	1	2	mV <sub>rms</sub>
max. of spectral responsivity	$\lambda = 280\text{ nm}$	1,2	12	120	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
shortcurrent		± 30			mA
operation voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

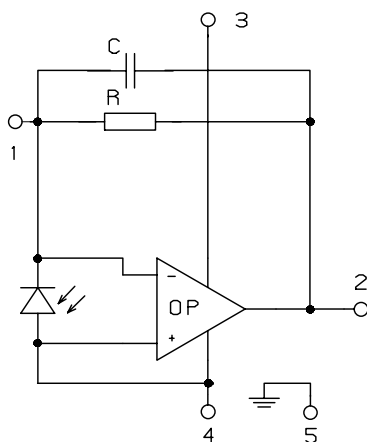
rev. 1 (07/2006)

# JIC 337, 338, 339

## relative spectral responsivity

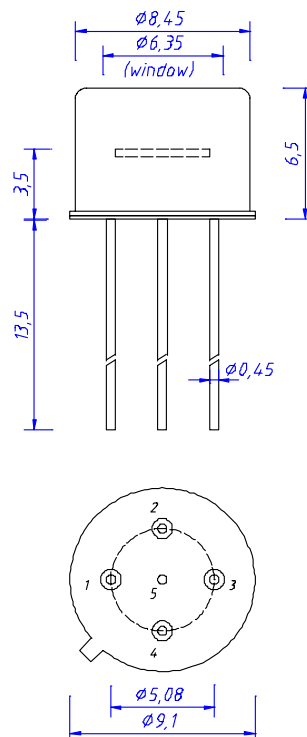


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 357**  
**JIC 358**  
**JIC 359**



- characteristics :**
- ◆ spectral range 210 ... 390 nm
  - ◆ active area 0,965 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		+15	V
operating temperature range	-25 °C ... +85		°C
storage temperature range	-40 °C ... +100		°C
soldering temperature (5s)	300		°C

## technical data :

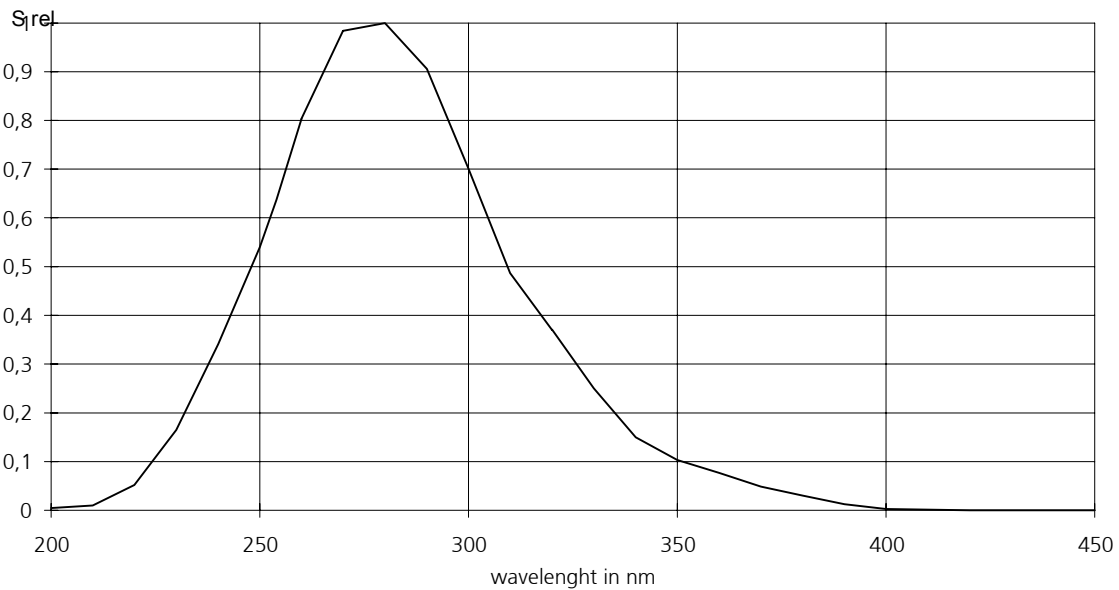
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC 357	JIC 358	JIC 359	unit
feed back resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 10\text{ kHz}$	0,5	1	2	mV <sub>rms</sub>
max. of spectral responsivity	$\lambda = 280\text{ nm}$	1,2	12	120	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
shortcurrent		± 30			mA
operation voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

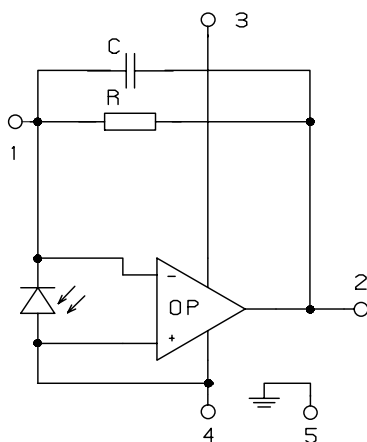
rev. 1 (07/2006)

# JIC 357, 358, 359

## relative spectral responsivity

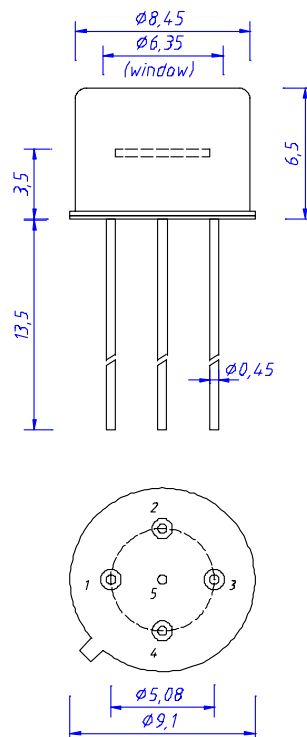


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 317 A**  
**JIC 318 A**  
**JIC 319 A**



- characteristics :**
- ◆ integrated UV-A filter
  - ◆ spectral range 315... 395 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ 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-measurement
  - ◆ control of UV-A part of UV-lamps
  - ◆ control of irradiancy in varnish and adhesive hardening

## absolute maximum ratings:

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

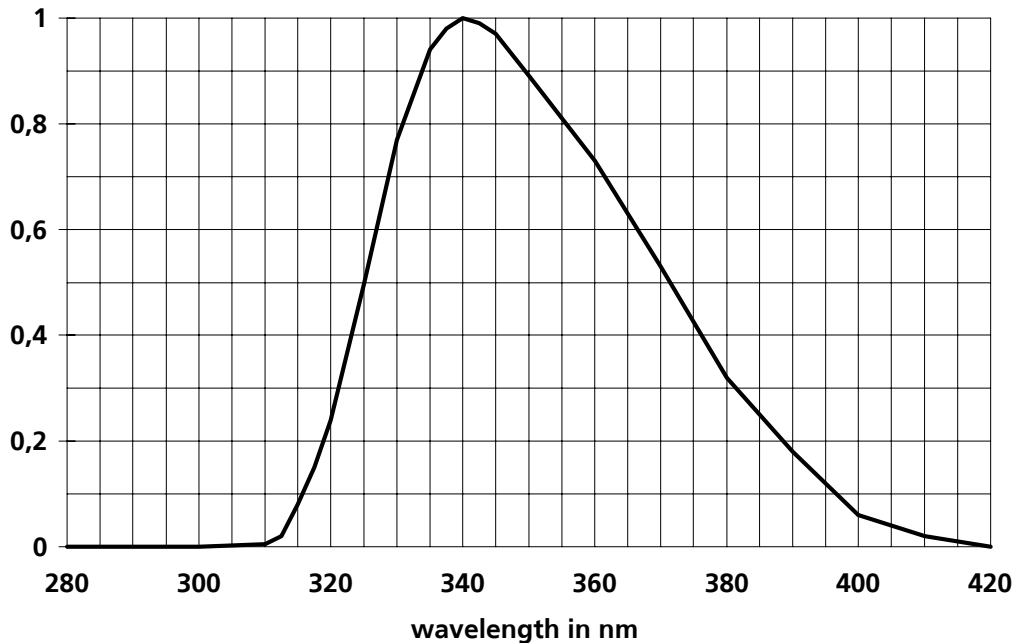
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC317A	JIC318A	JIC319A	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 340\text{ nm}$	0,3	3	30	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

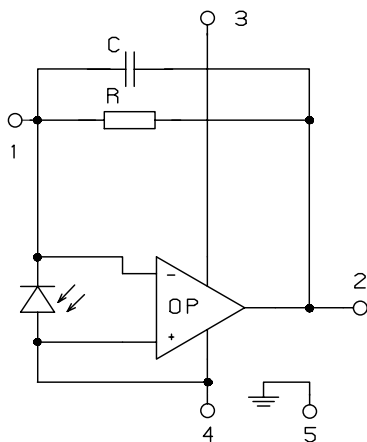
rev.1 (07/2006)

# JIC 317 A, 318 A, 319 A

## relative spectral responsivity

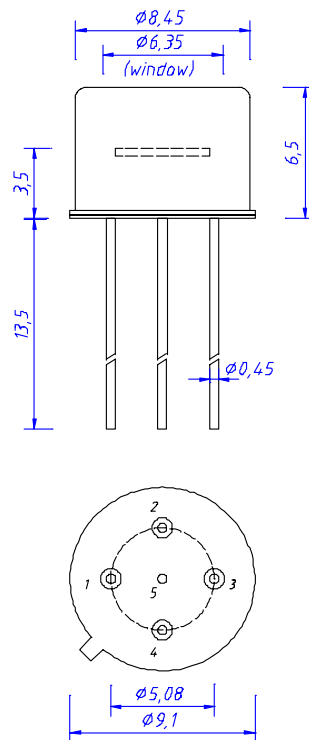


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 327 B**  
**JIC 328 B**  
**JIC 329 B**



- characteristics :**
- ◆ integrated UV-B filter
  - ◆ spectral range 280 ... 325 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,4/4/40 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 UV-B part of UV-lamps
  - ◆ control of irradiancy in varnish and adhesive hardening

## absolute maximum ratings:

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

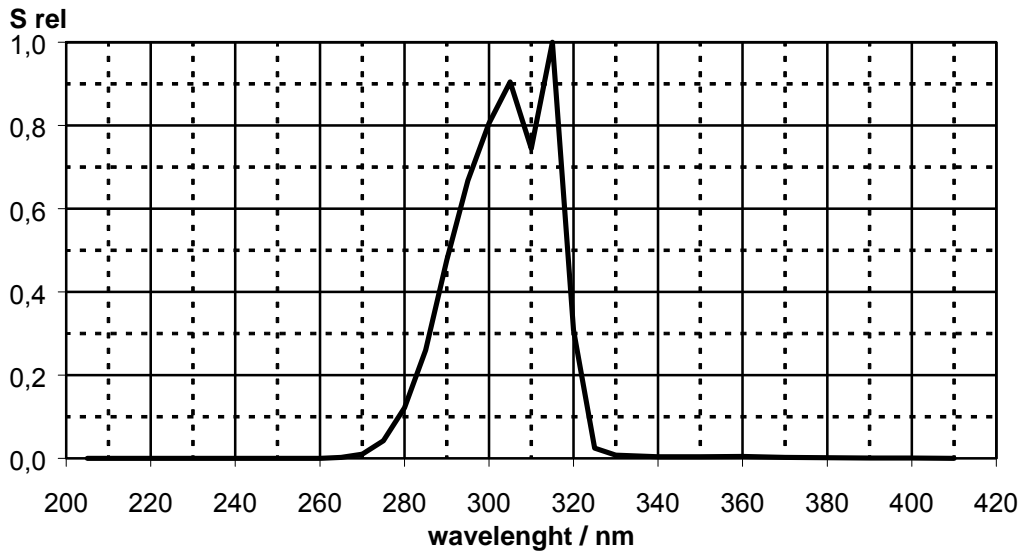
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameters	test condition	JIC327B	JIC328B	JIC329B	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. spectral responsivity	$\lambda = 315\text{ nm}$	0,4	4	40	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

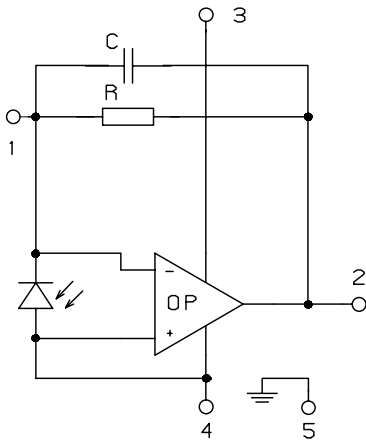
rev. 1 (07/2006)

# JIC 327 B, 328 B, 329 B

## relative spectral responsivity

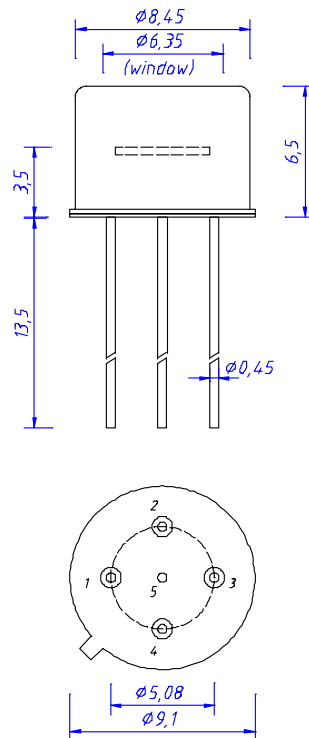


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 327 C**  
**JIC 328 C**  
**JIC 329 C**



- characteristics :**
- ◆ integrated UV-C filter
  - ◆ spectral range 210 ... 280 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,8/8/80 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:

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

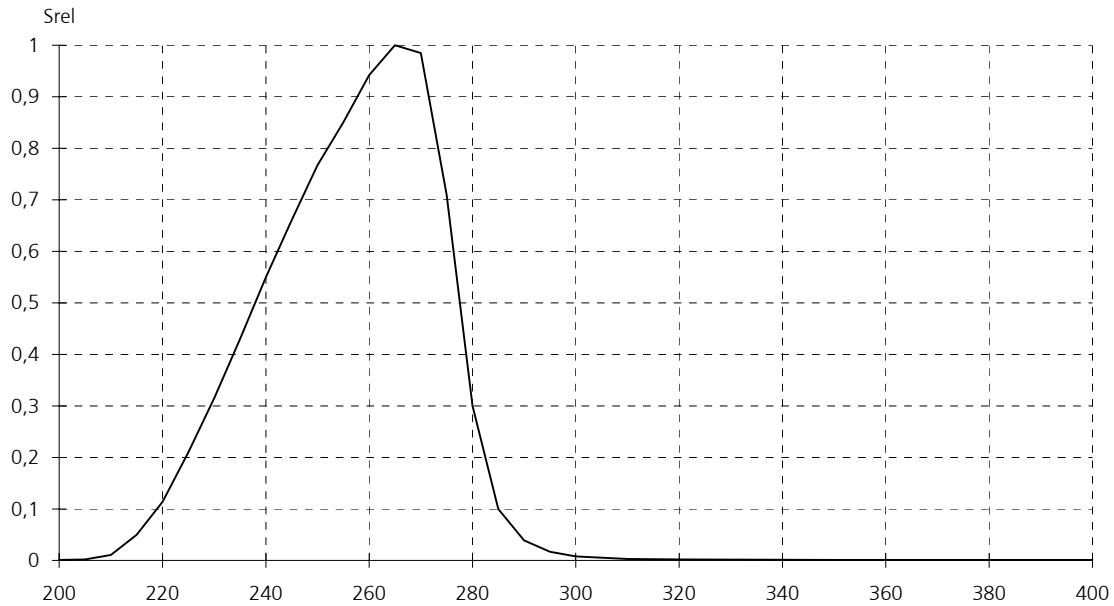
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC327C	JIC328C	JIC329C	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 254\text{ nm}$	0,6	6	60	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

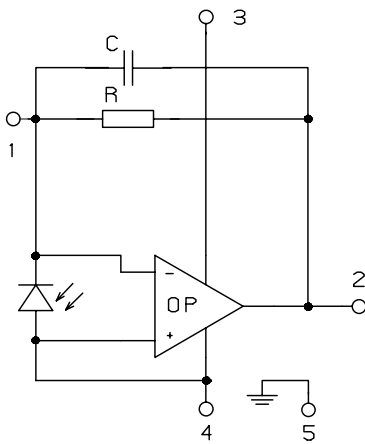
rev. 1 (07/2006)

# JIC 327 C, 328 C, 329 C

## relative spectral responsivity

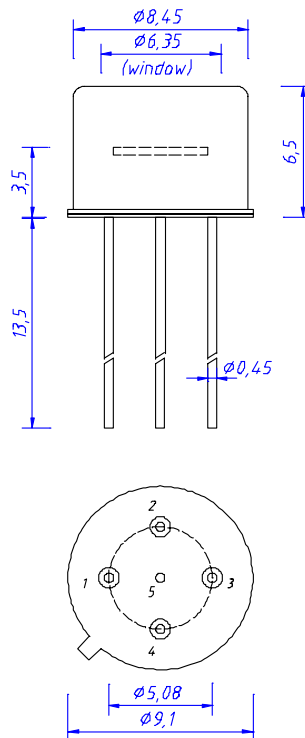


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 327 BC**  
**JIC 328 BC**  
**JIC 329 BC**



- characteristics :**
- ◆ integrated UV-BC filter
  - ◆ spectral range 280 ... 305 nm
  - ◆ active area 0,055 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,7/7/70 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 UV-BC part of UV-lamps
  - ◆ control of irradiancy in varnish and adhesive hardening

**absolute maximum ratings:**

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

**technical data :**

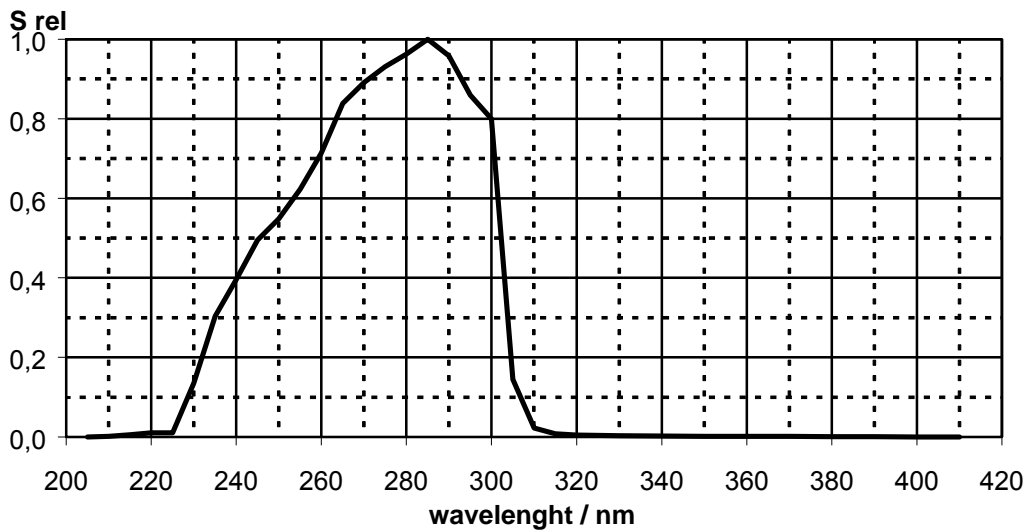
common test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V  
typ. values, maximum values in brackets

parameters	test condition	JIC327BC	JIC328BC	JIC329BC	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. spectral responsivity	λ = 254 nm	0,7	7	70	mV/nW
risetime		20	100	700	μs
bandwidth	- 3 dB	15	3	0,5	kHz
saturation voltage	R <sub>L</sub> = 2 kΩ	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

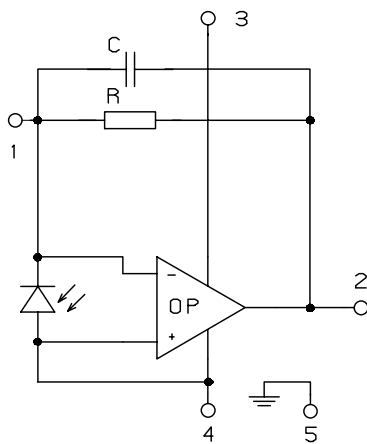
rev. 1 (07/2006)

# JIC 327 BC, 328 BC, 329 BC

## relative spectral responsivity

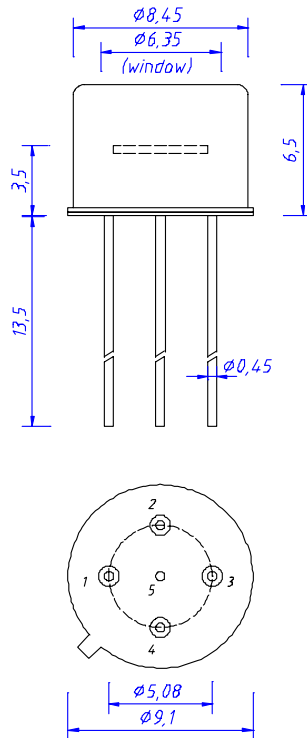


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 337 A**  
**JIC 338 A**  
**JIC 339 A**



- characteristics :**
- ◆ integrated UV-A filter
  - ◆ spectral range 315 ... 395 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ 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	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

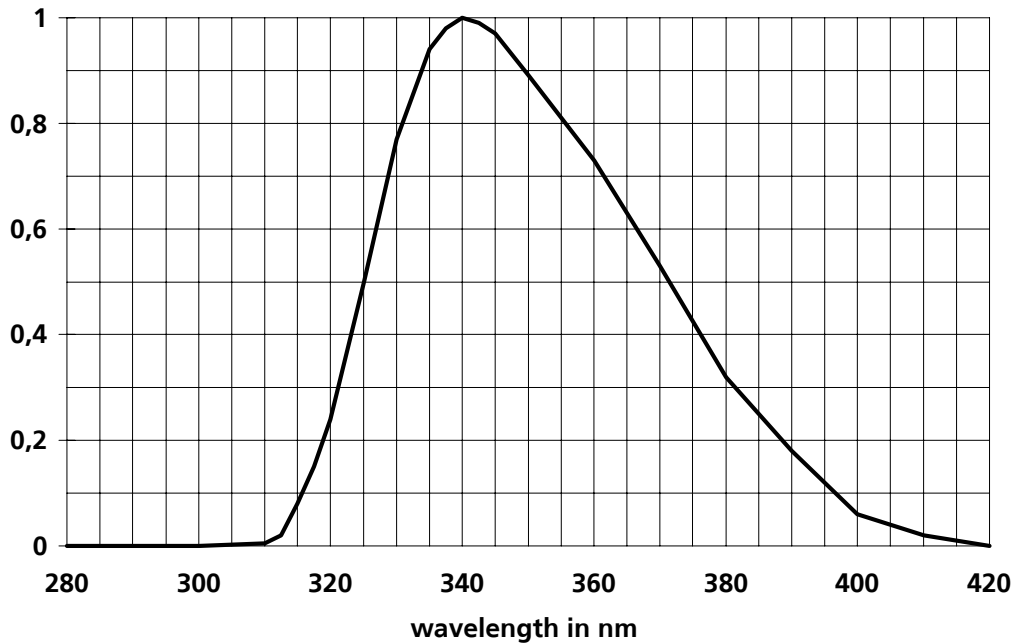
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC337A	JIC338A	JIC339A	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 340\text{ nm}$	0,3	3	30	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

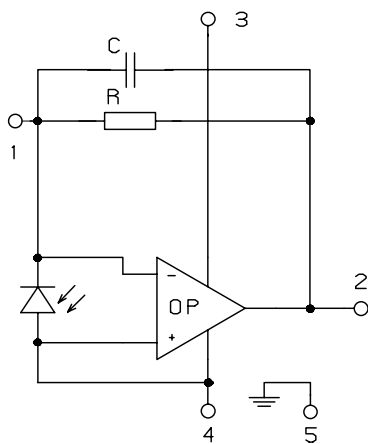
rev. 1 (07/2006)

# JIC 337 A, 338 A, 339 A

## relative spectral responsivity

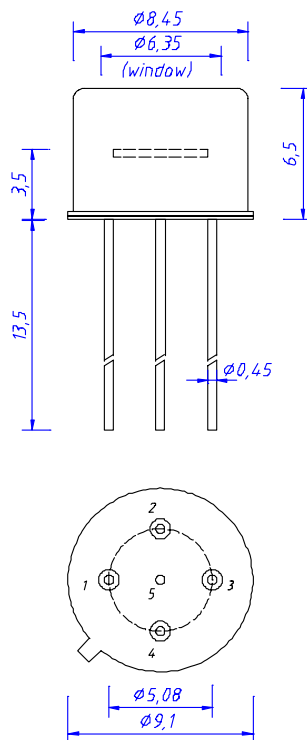


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 347 B**  
**JIC 348 B**  
**JIC 349 B**



- characteristics :**
- ◆ integrated UV-B filter
  - ◆ spectral range 280 ... 325 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,4/4/40 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-B-measurement
  - ◆ control of sterilization lamps
  - ◆ flamedetection and flamecontrol
  - ◆ control of irradiancy in varnish and adhesive hardening

## absolute maximum ratings:

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

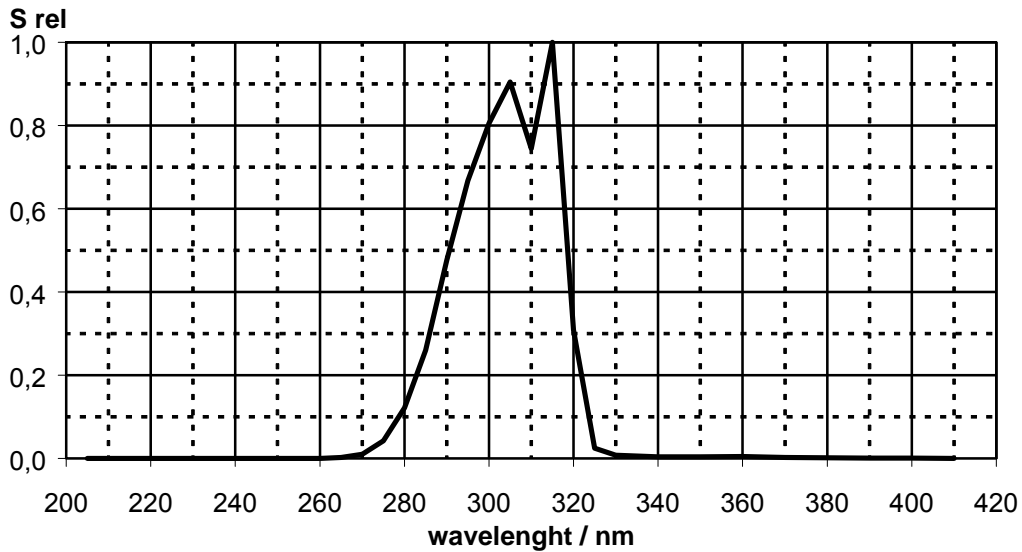
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC347B	JIC348B	JIC349B	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 315\text{ nm}$	0,4	4	40	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

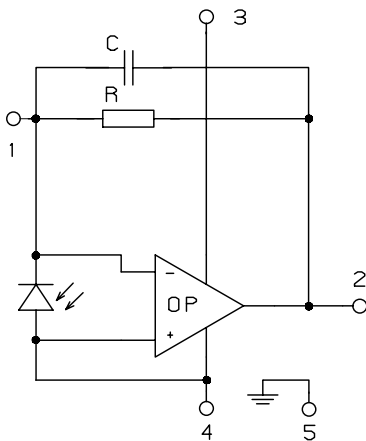
rev. 2 (05/2008)

# JIC 347 B, 348 B, 349 B

## relative spectral responsivity

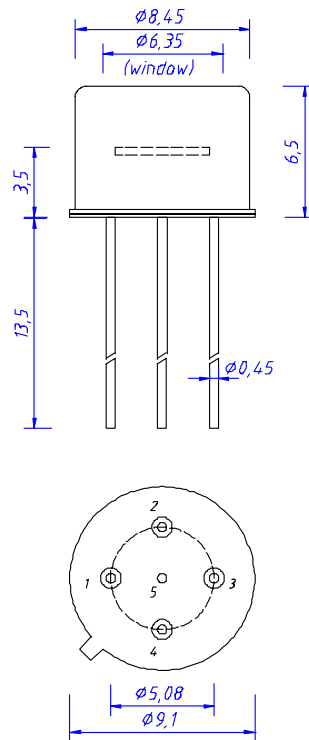


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 347 C**  
**JIC 348 C**  
**JIC 349 C**



- characteristics :**
- ◆ integrated UV-C filter
  - ◆ spectral range 210 ... 280 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,8/8/80 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:**

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

**technical data :**

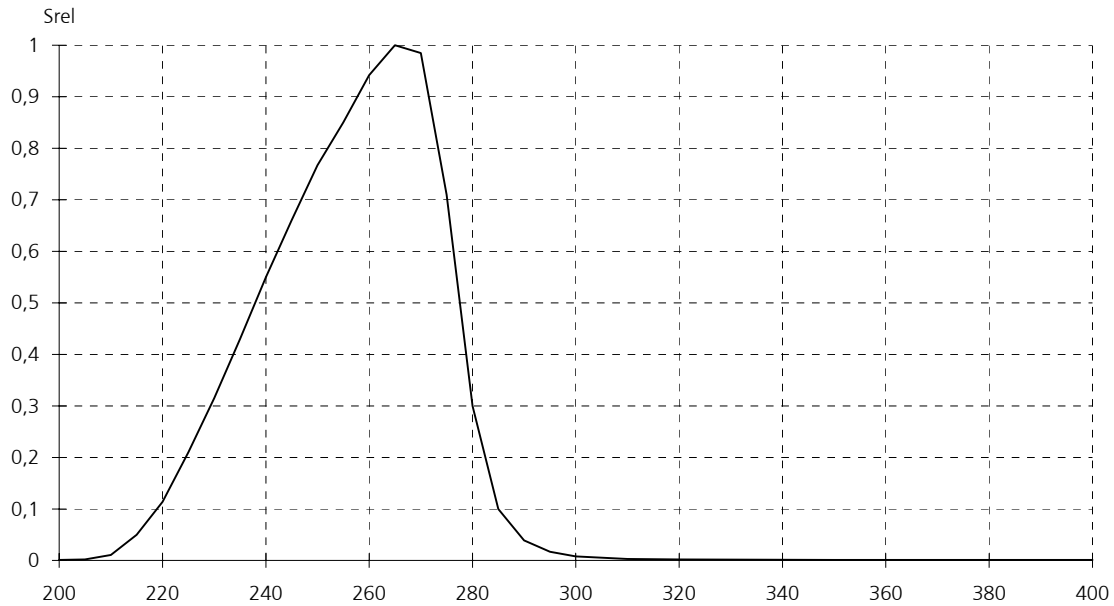
common test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V  
typ. values, maximum values in brackets

parameter	test condition	JIC347C	JIC348C	JIC349C	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. spectral responsivity	λ = 254 nm	0,6	6	60	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	R <sub>L</sub> = 2 kΩ	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

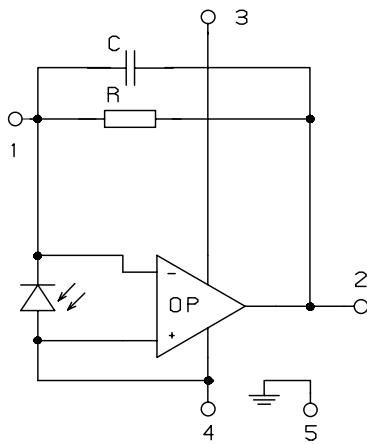
rev. 1 (07/2006)

# JIC 347 C, 348 C, 349 C

## relative spectral responsivity

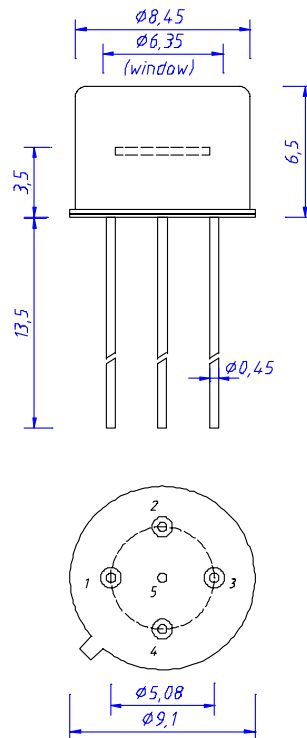


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 347 BC**  
**JIC 348 BC**  
**JIC 349 BC**



- characteristics :**
- ◆ integrated UV-BC filter
  - ◆ spectral range 280 ... 305 nm
  - ◆ active area 0,22 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,7/7/70 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-BC-measurement
  - ◆ control of sterilization lamps
  - ◆ flamedetection and flamecontrol
  - ◆ control of irradiancy in varnish and adhesive hardening

**absolute maximum ratings:**

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

**technical data :**

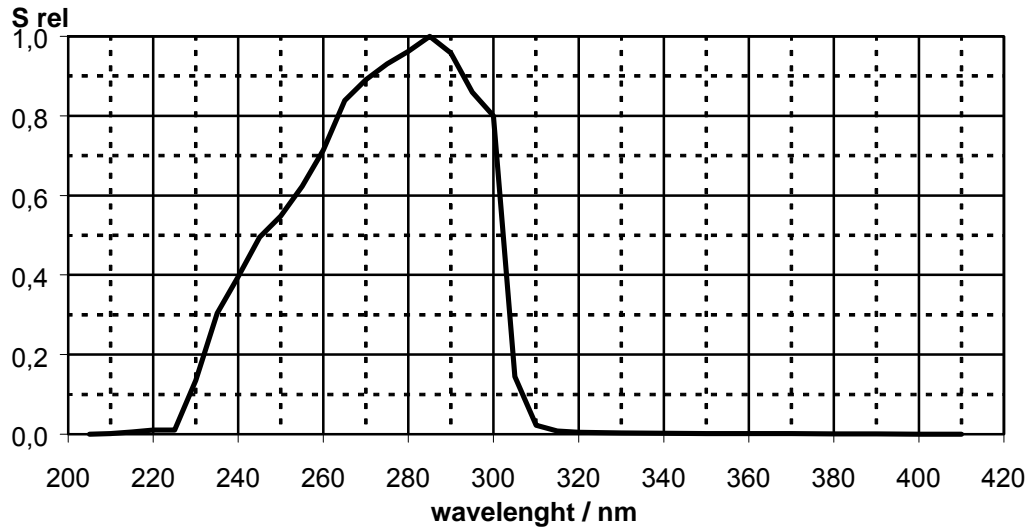
common test conditions, as not otherwise specified: T<sub>A</sub> = 25 °C, V<sub>S</sub> = +5 V  
typ. values, maximum values in brackets

parameter	test condition	JIC347BC	JIC348BC	JIC349BC	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. spectral responsivity	λ = 254 nm	0,7	7	70	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	R <sub>L</sub> = 2 kΩ	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

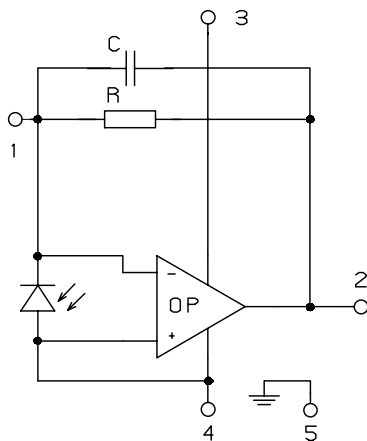
rev. 1 (07/2006)

# JIC 347 BC, 348 BC, 349 BC

## relative spectral responsivity

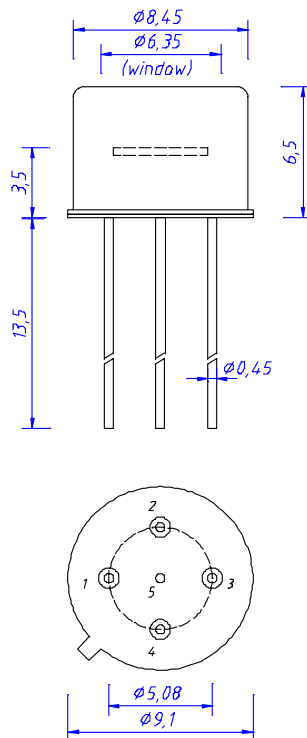


## pin configuration



- 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”.

# UV - Photodetector with integrated amplifier

**JIC 357 A**  
**JIC 358 A**  
**JIC 359 A**



- characteristics :**
- ◆ integrated UV-A filter
  - ◆ spectral range 315 ... 395 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ 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	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

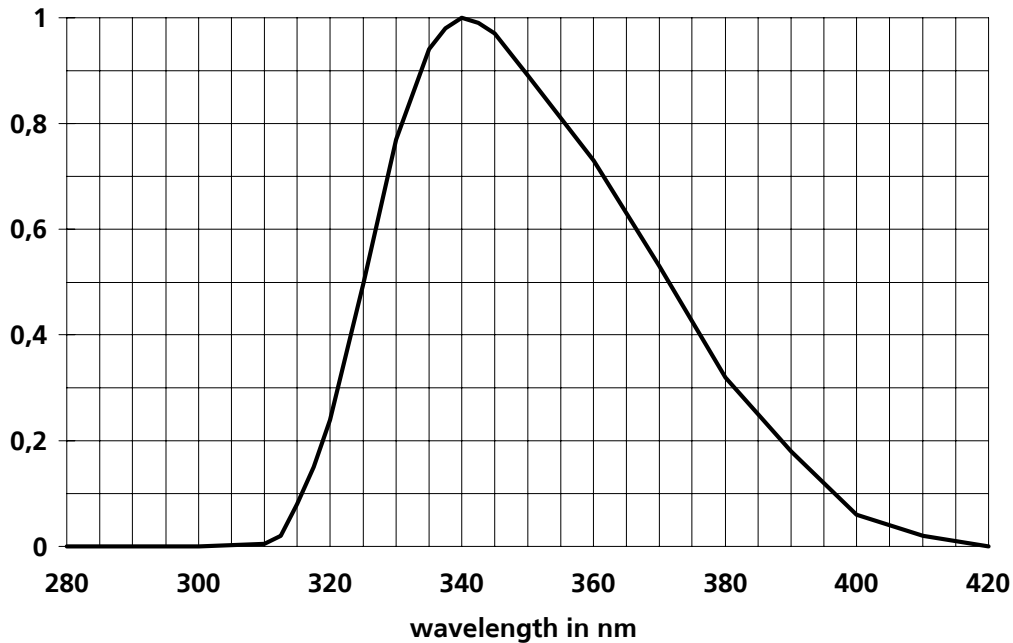
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC357A	JIC358A	JIC359A	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 340\text{ nm}$	0,3	3	30	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

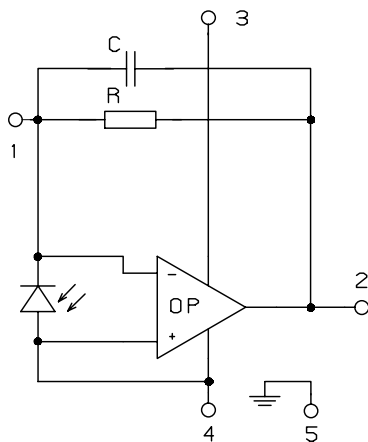
rev. 1 (07/2006)

# JIC 357 A, 358 A, 359 A

## relative spectral responsivity

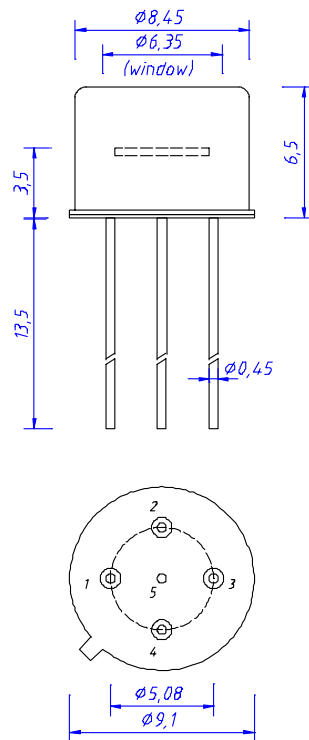


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 367 B**  
**JIC 368 B**  
**JIC 369 B**



- characteristics :**
- ◆ integrated UV-B filter
  - ◆ spectral range 280 ... 325 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,4/4/40 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:

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

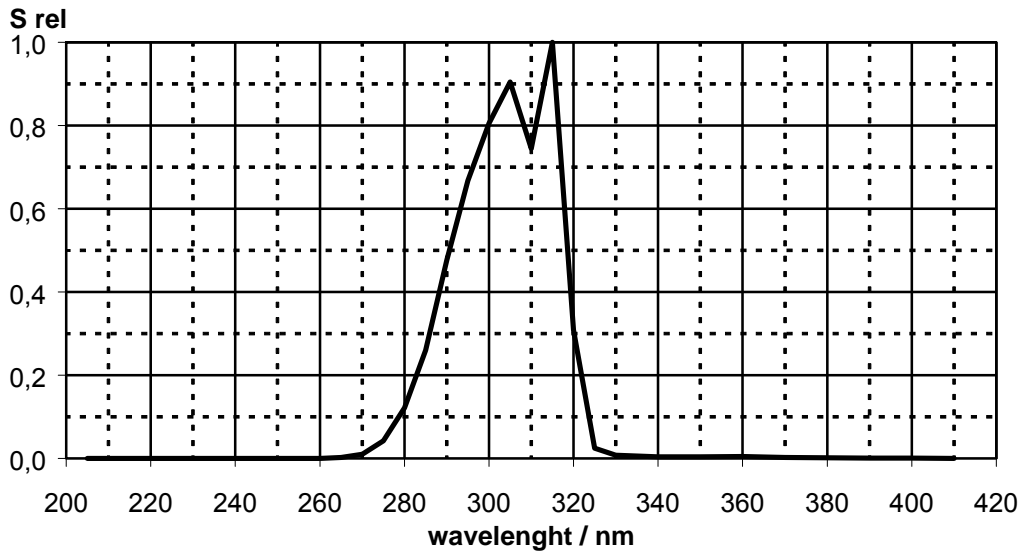
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC367B	JIC368B	JIC369B	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 315\text{ nm}$	0,4	4	40	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

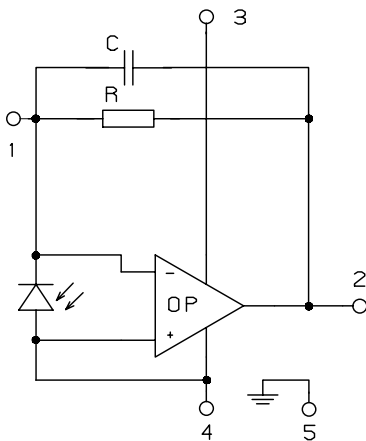
rev. 2 (05/2008)

# JIC 367 B, 368 B, 369 B

## relative spectral responsivity

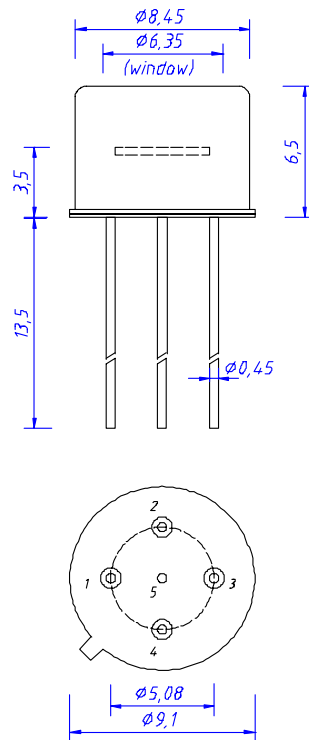


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 367 C**  
**JIC 368 C**  
**JIC 369 C**



- characteristics :**
- ◆ integrated UV-C filter
  - ◆ spectral range 210 ... 280 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,8/8/80 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:

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

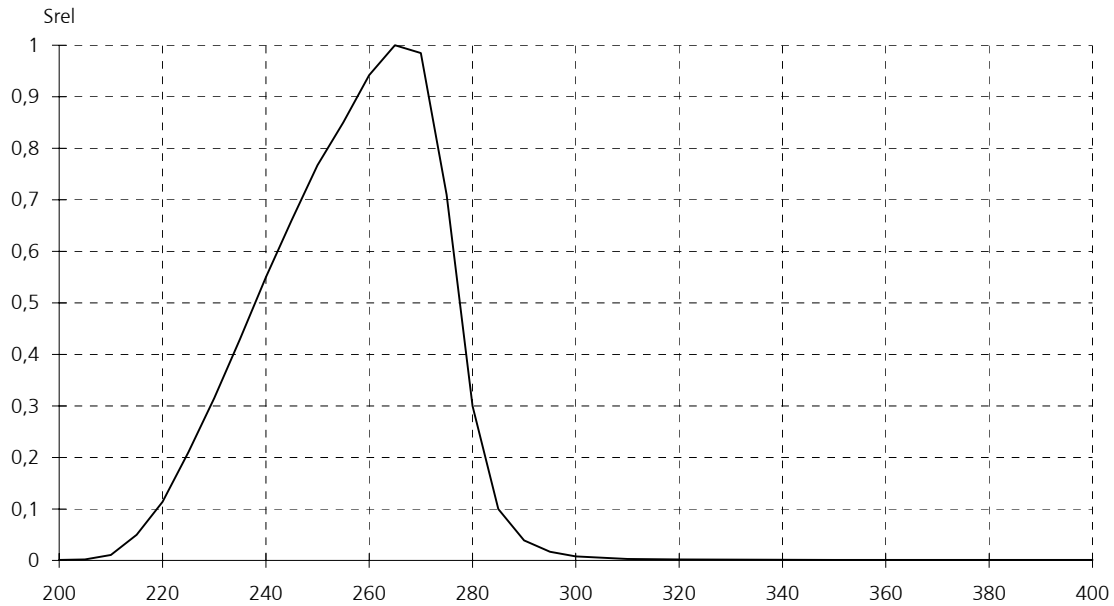
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC367C	JIC368C	JIC369C	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 254\text{ nm}$	0,6	6	60	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

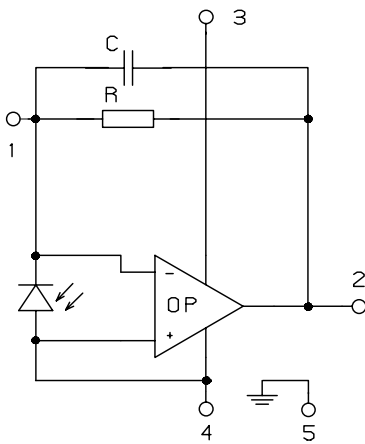
rev. 1 (07/2006)

# JIC 367 C, 368 C, 369 C

## relative spectral responsivity

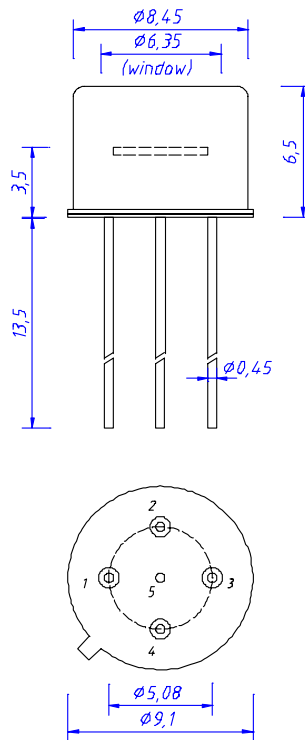


## pin configuration



- 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“.

# UV - Photodetector with integrated amplifier

**JIC 367 BC**  
**JIC 368 BC**  
**JIC 369 BC**



- characteristics :**
- ◆ integrated UV-BC filter
  - ◆ spectral range 280 ... 305 nm
  - ◆ active area 0,965 mm<sup>2</sup>
  - ◆ responsivity, decadic staggering 0,77770 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:

supply voltage	+15	V
working temperature range	-25 °C ... +85	°C
storage temperature range	-40 °C ... +100	°C
welding temperature (5s)	300	°C

## technical data :

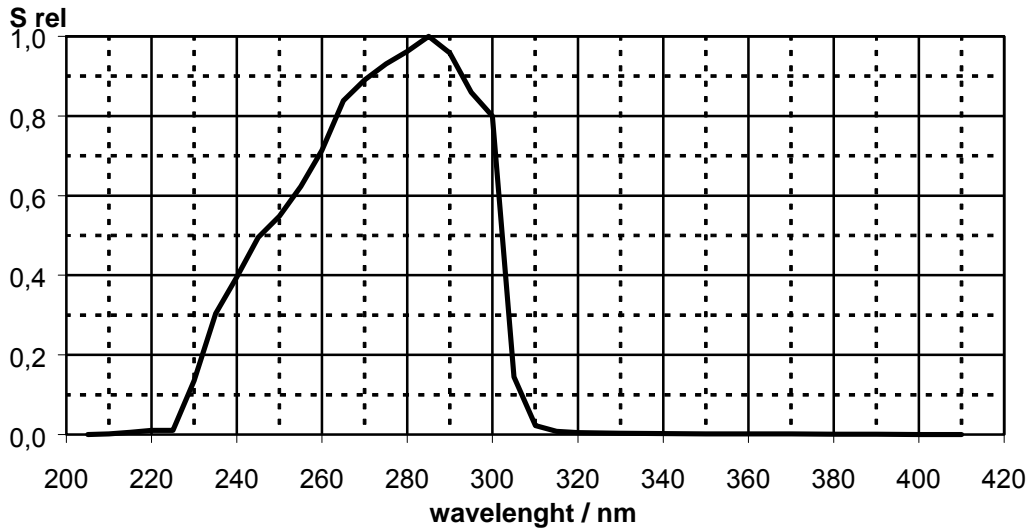
common test conditions, as not otherwise specified:  $T_A = 25\text{ °C}$ ,  $V_S = +5\text{ V}$   
typ. values, maximum values in brackets

parameter	test condition	JIC367BC	JIC368BC	JIC369BC	unit
feedback resistor		10	100	1.000	MΩ
dark offset voltage	$E = 0\text{ lx}$	± 1	± 2	± 3	mV
noise voltage	$B = 1\text{ kHz}$	1			mV <sub>rms</sub>
max. spectral responsivity	$\lambda = 254\text{ nm}$	0,7	7	70	mV/nW
risetime		30	150	600	μs
bandwidth	- 3 dB	10	2	0,5	kHz
saturation voltage	$R_L = 2\text{ k}\Omega$	+ 4,68 (+ 4,6)			V
short current		± 30			mA
supply voltage		+ 2,7...+ 13,2			V
current consumption		550 (660)			μA

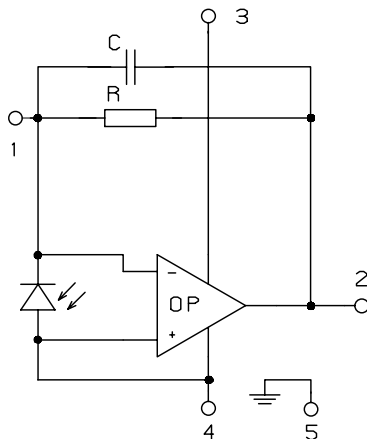
rev. 1 (07/2006)

# JIC 367 BC, 368 BC, 369 BC

## relative spectral responsivity

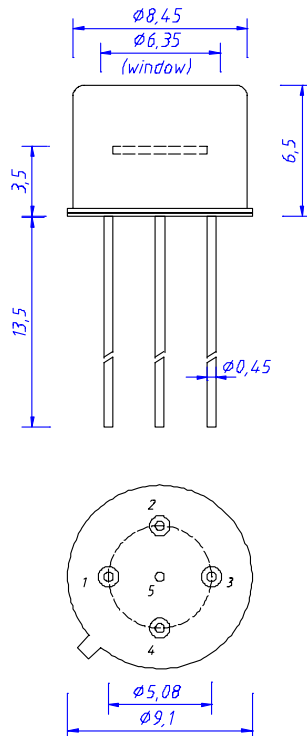


## pin configuration



- 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”.