

## Datasheet

Item no. 1567233

V1\_0917\_01\_en

### IR receiver, 2.7V-5.5V



This is a publication by Conrad Electronic SE, Klaus-Conrad-Str. 1, D-92240 Hirschau ([www.conrad.com](http://www.conrad.com)).

All rights including translation reserved. Reproduction by any method, e.g. photocopy, microfilming, or the capture in electronic data processing systems require the prior written approval by the editor. Reprinting, also in part, is prohibited. This publication represents the technical status at the time of printing.

© Copyright 2017 by Conrad Electronic SE.

## IR receiver, 2.7V-5.5V



*OS-1838*

### INFRARED RECEIVER MODULE

#### ● Description

The OS-1838 is miniaturized infrared receivers for remote control and other applications requiring improved ambient light rejection.

The separate PIN diode and preamplifier IC are assembled on a single leadframe.

The epoxy package contains a special IR filter.

This module has excellent performance even in disturbed ambient light applications and provides protection against uncontrolled output pulses.



#### ● Features

- Photo detector and preamplifier in one package
- Internal filter for PCM frequency.
- Inner shield, good anti-interference ability.
- High immunity against ambient light.
- Improved shielding against electric field disturbance
- 3.0V or 5.0V supply voltage; low power consumption.
- TTL and CMOS compatibility.
- Suitable transmission code: NEC code, RC5 code.

#### ● Applications:

1. Optical switch
2. Light detecting portion of remote control
  - AV instruments such as Audio, TV, VCR, CD, MD, DVD, etc.
  - Home appliances such as Air-conditioner, Fan, etc.
  - CATV set top boxes
  - Multi-media Equipment

#### ● Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ )

Parameter	Symbol	Ratings	Unit	Notice
Supply Voltage	$V_S$	2.7-5.5	V	—
Operating Temperature	$T_{opr}$	-20~+65	$^\circ\text{C}$	—
Storage Temperature	$T_{stg}$	-40~+85	$^\circ\text{C}$	—
Soldering Temperature	$T_{sd}$	260	$^\circ\text{C}$	4mm from mold body less than 5 sec

Distributed by Conrad Electronic SE, Hirschau, Germany

This is a publication by Conrad Electronic SE, Klaus-Conrad-Str. 1, D-92240 Hirschau (www.conrad.com).

All rights including translation reserved. Reproduction by any method, e.g. photocopy, microfilming, or the capture in electronic data processing systems require the prior written approval by the editor. Reprinting, also in part, is prohibited. This publication represents the technical status at the time of printing.

© Copyright 2017 by Conrad Electronic SE.

# Datasheet

Item no. 1567233

V1\_0917\_01\_en

## IR receiver, 2.7V-5.5V



● **Electrical And Optical Characteristics** (Ta=25°C)

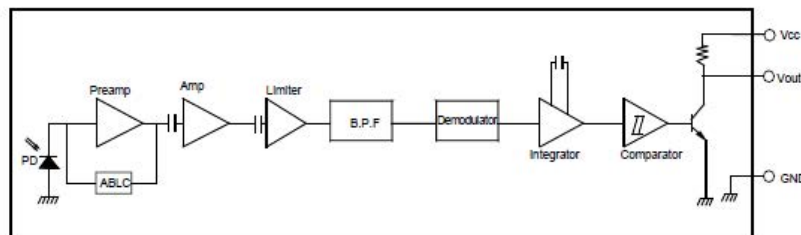
*OS-1838*

Parameter	Symbol	Ratings			Unit	Condition
		Min.	Typ.	Max.		
Supply Voltage	V <sub>S</sub>	2.7	--	5.5	V	
Supply Current	I <sub>CC</sub>	—	0.35	0.6	mA	I <sub>in</sub> =0uA, V <sub>CC</sub> =5V
Reception Distance	L <sub>0</sub>	16	—		m	At the ray axis*1
	L <sub>35</sub>	12	—	—		
B.P.F Center Frequency	f <sub>0</sub>	—	38	—	KHz	
Peak Wavelength	λ <sub>p</sub>	—	940	—	nm	
Half Angle	θ ±	—	35	—	deg	At the ray axis *1
High Level Pulse Width	T <sub>H</sub>	450	600	750	μS	At the ray axis *2
Low Level Pulse Width	T <sub>L</sub>	450	600	750	μS	
High Level Output Voltage	V <sub>H</sub>	4.5	—	—	V	
Low Level Output Voltage	V <sub>L</sub>	—	—	0.5	V	

\*1: The ray receiving surface at a vertex and relation to the ray axis in the range of θ=0° and θ=45°

\*2: A range from 30cm to the arrival distance. Average value of 50 pulses

● **BLOCK DIAGRAM**



Distributed by Conrad Electronic SE, Hirschau, Germany

This is a publication by Conrad Electronic SE, Klaus-Conrad-Str. 1, D-92240 Hirschau (www.conrad.com).

All rights including translation reserved. Reproduction by any method, e.g. photocopy, microfilming, or the capture in electronic data processing systems require the prior written approval by the editor. Reprinting, also in part, is prohibited. This publication represents the technical status at the time of printing.

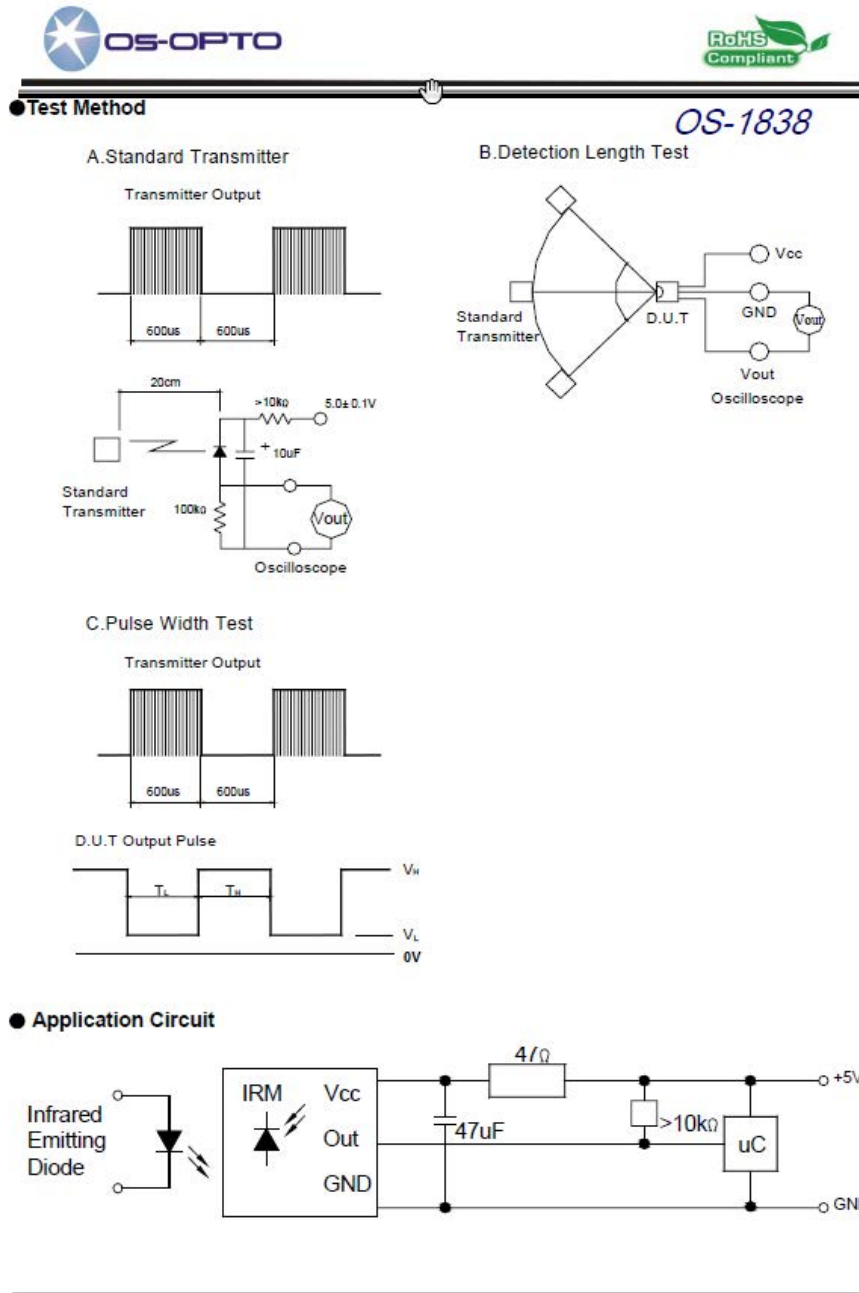
© Copyright 2017 by Conrad Electronic SE.

# Datasheet

Item no. 1567233

V1\_0917\_01\_en

## IR receiver, 2.7V-5.5V



# Datasheet

Item no. 1567233

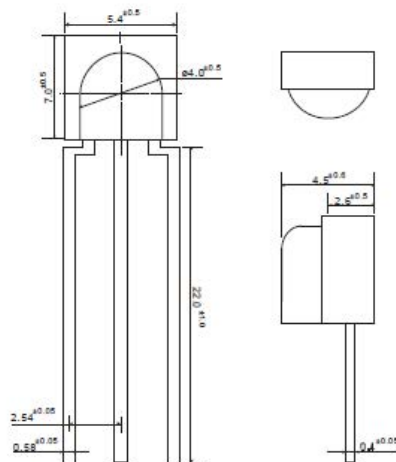
V1\_0917\_01\_en

## IR receiver, 2.7V-5.5V



● Package Dimensions:

*OS-1838*



**NOTES:**

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.30\text{mm}$  (0.012") unless otherwise specified.
3. Specifications are subject to change without notice.

Distributed by Conrad Electronic SE, Hirschau, Germany

This is a publication by Conrad Electronic SE, Klaus-Conrad-Str. 1, D-92240 Hirschau ([www.conrad.com](http://www.conrad.com)).

All rights including translation reserved. Reproduction by any method, e.g. photocopy, microfilming, or the capture in electronic data processing systems require the prior written approval by the editor. Reprinting, also in part, is prohibited. This publication represents the technical status at the time of printing.

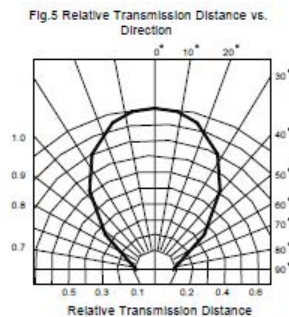
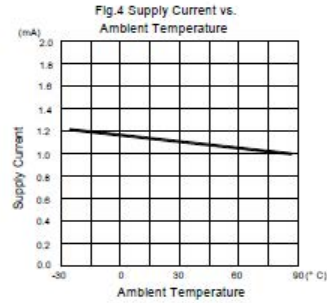
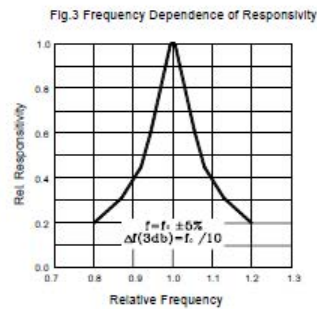
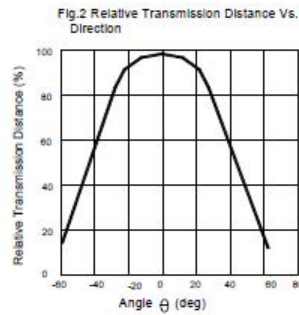
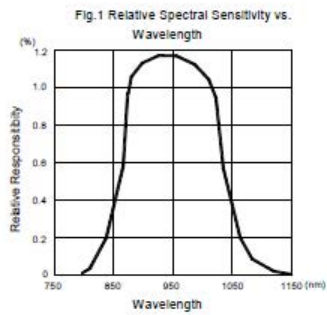
© Copyright 2017 by Conrad Electronic SE.

## IR receiver, 2.7V-5.5V



OS-1838

● **Electrical And Optical Curves**( $T_a=25^\circ\text{C}$ )



Distributed by Conrad Electronic SE, Hirschau, Germany

This is a publication by Conrad Electronic SE, Klaus-Conrad-Str. 1, D-92240 Hirschau (www.conrad.com).

All rights including translation reserved. Reproduction by any method, e.g. photocopy, microfilming, or the capture in electronic data processing systems require the prior written approval by the editor. Reprinting, also in part, is prohibited. This publication represents the technical status at the time of printing.

© Copyright 2017 by Conrad Electronic SE.