

# ISL29101IROZ-EVALZ Evaluation Board User Guide

## Description

The [ISL29101](#) is a low light optimized analog output sensor. In normal operation, the device is intended to be mounted behind a smoked glass/plastic bezel, which normally significantly attenuates received light. The ISL29101 will typically saturate at full scale with an incident illumination of around 1500Lux, which is a fair deal lower than normal indoor ambient light conditions (2k to 10kLux).

The ISL29101IROZ-EVALZ evaluation board is an RoHS compliant evaluation board prepared to speed up part evaluation. Note that the sensing range for this device is from 0.5Lux to 10kLux typically and the device has been optimized for use with a 100kΩ output scaling resistor ( $R_{EXT}$ ). The device and the evaluation board will work from a 3V supply.

## Evaluation Package

- Evaluation Board ISL29101IROZ-EVALZ, populated with all required components

## Ordering Information

PART NUMBER	DESCRIPTION
ISL29101IROZ-EVALZ	Low Power, <1000Lux Optimized, Analog Output Ambient Light Sensor Evaluation Board

## Hardware Setup

The ISL29101 evaluation board comprises the sensor device itself and a 100kΩ resistor which sets the output scaling for the sensor. The part was characterized with the 100kΩ resistor. Larger or smaller values can be used, however, Intersil found that the 100kΩ value worked well under a variety of conditions. Note that with larger scale setting resistors the sensor is likely to prematurely saturate at relatively low light levels. Please check Page 6 of the [ISL29101](#) datasheet for a description of the output scaling factor relative to incident ambient light.

The jumpers and components on the printed circuit board (PCB) are as shown in [Table 1](#).

**TABLE 1. JUMPERS, COMPONENTS ON PCB**

JUMPER	DESCRIPTION
JP2	$R_{LOAD} = 100k\Omega$ (Optional, Do not populate)
JP3	$R_{LOAD} = 1k\Omega$ (Optional, Do not populate)
JP4	$R_{LOAD} = 10M\Omega$ (Optional, Do not populate)
JP6	$R_{EXT} = 100k\Omega$
JP7	$R_{EXT} = 1k\Omega$
JP8	$R_{EXT} = 100k\Omega$ (Optional, Do not populate)
C1	0.1μF
D1	Optional
L1	Optional

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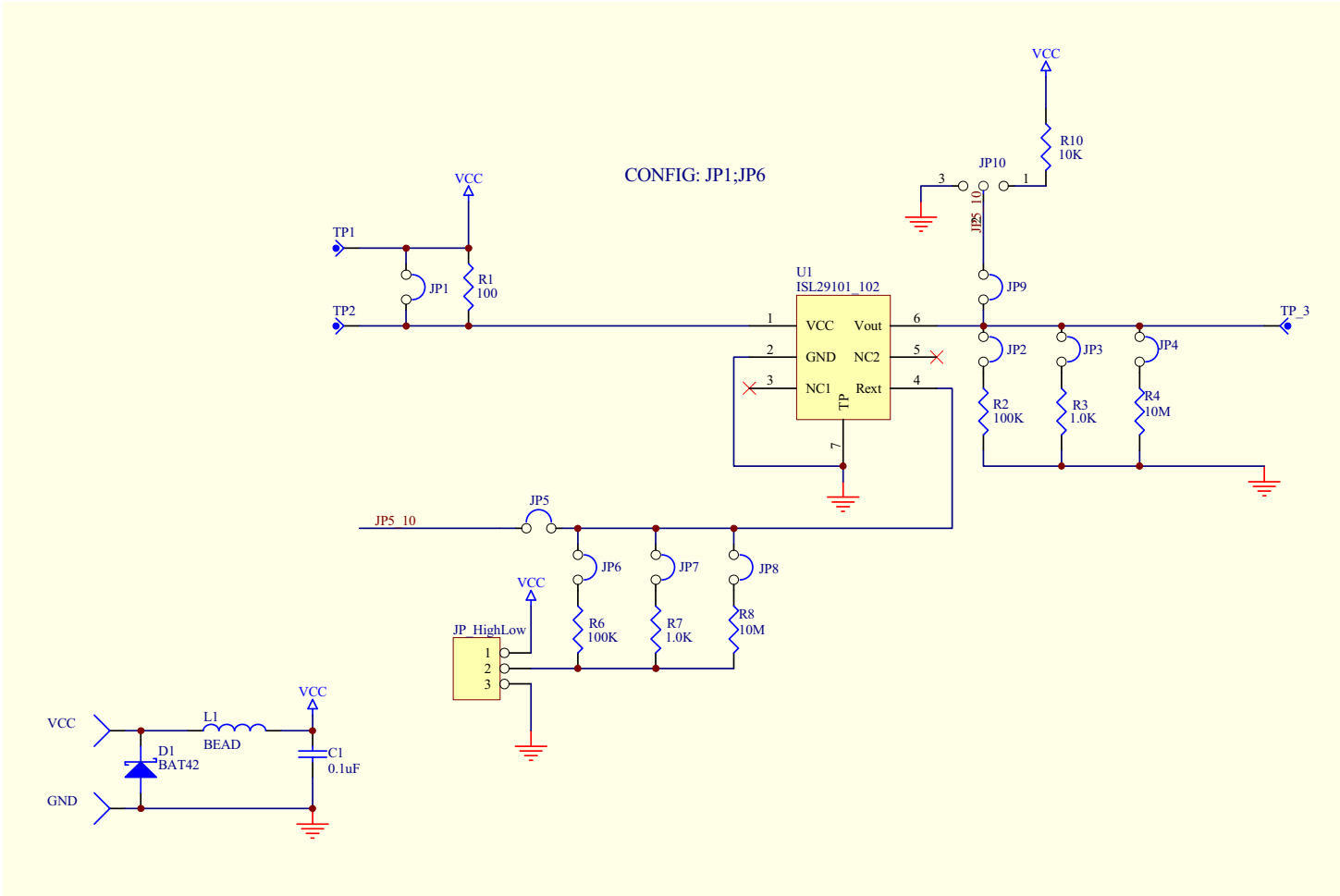


FIGURE 1. ISL29101IROZ-EVALZ EVALUATION BOARD SCHEMATIC