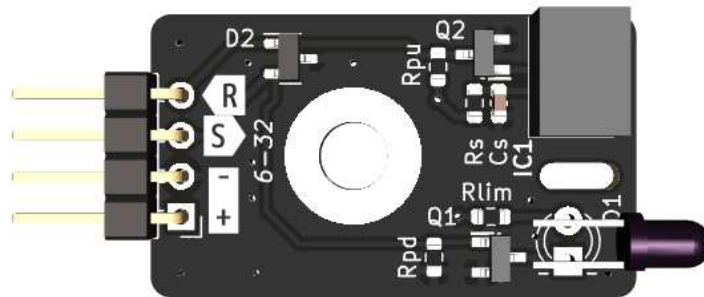


DR-4 Long Range IR Operating Guide

DESIGN GOALS

The DR-4 LRIR is a longer range reflective distance sensor showcasing the Vishay TSSP6038. The TSSP6038 includes a signal conditioning section to demodulate a 38kHz carrier for light source disturbance immunity (for example, changing sunlight or fluorescent illumination). An IR emitter and support circuitry complete this sensor evaluation solution.



DESIGN NOTES

Several features are included to make this sensor board a complete solution.

- Two Orderable Options:
 - DR-4D-LRIR
 - “digital” output from TSSP3068
 - DR-4A-LRIR
 - “analog” output from TSSP6P38
- ESD diodes on Send/Receive lines
- MOSFET buffers on input and output
 - Send is Active-High
 - Receive is Active-High
- Power supply filtering at IR Module for best performance
 - 3dB cutoff ~37Hz
- VLSB4940 high performance IR Emitter
 - 40mA at 5V supply
- Mounting holes and slots for IR blocking materials

HOOKUP

As noted on the terminal markings, there are four connections:

+	Supply	3.3-5V
-	Ground	GND
S	Send	Modulated 38kHz input to sensor
R	Receive	Demodulated output from sensor

