



RGB Sensor (Qwiic) - BH1749NUC

SPX-14733 ROHS

Need to autonomously monitor for that specific color value? Want to hone in on that magenta ball? Or follow that aquamarine line? The BH1749NUC-based Qwiic RGB Sensor is here for all of your red, green, blue, and infrared color-sensing needs.

The **BH1749NUC** features an I²C interface and a programmable interrupt output. It senses red, green, blue, and infrared in its field-of-view, then reports each channel as a 16-bit value. Additionally, it features programmable IR and RGB gains and a variable measurement rate.

Also included on the breakout are individually-controllable white, red, green, and blue LEDs. The LEDs are managed with a **PCA9536** 4-channel I/O expander. The paired LEDs and I/O expander allow you to customize illumination on your objects of interest with a simple I²C interface -- no extra GPIO-control required!

Check out the documents section for a pair of Arduino libraries -- for both the BH1749NUC and PCA9536 IC's -- and a handful of examples to help get you started.

The Qwiic RGB Sensor uses our simple Qwiic interface, so it requires no voltage translation and no figuring out which pin is SDA or SCL; just plug it in and go! As with any Qwiic board, this product includes a pair of Qwiic connectors to support a chain of multiple sensors.

We do not plan to regularly produce SparkX products so get them while they're hot!

Experimental Product: SparkX products are rapidly produced to bring you the most cutting edge technology as it becomes available. These products are tested but come with no guarantees. Live technical support is not available for SparkX products. Head on over to our **forum** for support or to ask a question.

FEATURES

- Red, green, blue, and infrared (IR) color sensing
 - o 16-bit digital outputs
 - o Programmable RGB/IR gains, measurement rate
 - o Programmable interrupt for data-ready or out-of-threshold readings
- Separately-controllable white, red, green, and blue LEDs
 - o Managed via I²C I/O expander (PCA9536)
- I²C Interface
 - o BH1749NUC addresses: 0x39 (default), 0x38
 - o PCA9536 address: 0x41
- 2x Qwiic Connection Ports
- Operating voltage: 2.3 to 3.6V (3.3V recommended)

