Color Sensor RGB Unit (TCS3472)

Description

COLOR is color recognition unit integrated **TCS3472**. Like its namesake, **COLOR** is able to detect color value and return RGB data to the host.

Identify color principle: In the TCS3472, a 3*4 array of filtered photodiodes and a 16 bit analog-to-digital converters are embedded. Of the 12 photodiodes, 3 have red filters, 3 have green filters, 3 have blue filters and 3 have no filter(clear).

When detecting the color of an object, TCS3472 returns data from four channels: red(R), green(G), blue(B) and clear(C)(non-filtered). The response from the red, green and blue channels (RGB) can be used to determine a particular source's chromaticity

coordinates (x, y).

Chromaticity Calculation Process Overview:

When we get coordinates (x, y), please reference the below figure so as to get the recommended color.

This Unit communicates with the M5Core via the GROVE A interface(I2C). Address is 0x29.

Product Features

- Detection range: -40℃~85℃
- GROVE interface, support UIFlow and Arduino
- Two Lego-compatible holes

Include

- 1x COLOR Unit
- 1x Grove Cable

Applications

- Product Color Verification
- Color tracking robot

Specification

Resources	Parameter
IC	TCS3472
Workingtemperaturerange	-40°C~85°C
Communicationmethod	IIC
net weight	4g
Gross weight	17g
Product Size	32.2*24.2*8.2mm
Package Size	67*53*12mm