Gravity: TCS3430 Tristimulus Color Sensor

INTRODUCTION

Devices with True Tone technology like Apple iPad Pro, iPhone, and Macs usually feature sensors that measure the ambient light colour and brightness. The device then uses this information to automatically adjust its display, so it can correct white points and illumination based on your environmental lighting in order to render the right kinds of white under any conditions. And XYZ Tristimulus Color Sensor plays an important role in this technology.

TCS3430 features advanced digital ambient light sensing(ALS) and CIE 1931 tristimulus color sensing(XYZ). CIE1931 XYZ Tristimulus model is a kind of standard based on three different human cone cell types. The CIE XYZ color space encompasses all color sensations that are visible to a person with average eyesight. The spectral response of TCS3430 is almost the same as that of human eyes, which can realize the high-precision measurement of illumination and color temperature. What you see is what you measured!

The TCS3430 Tristimulus Color Sensor is ideally suited for the use in smartphone applications to improve color measurement and intensity of ambient light conditions. Also, it can be used in scenarios requiring a true-color viewing experience like online shopping(product color matching, reducing the return rate caused by color difference of images and real product).

FEATURES

XYZ Tristimulus Filter
Capable of ±10% illuminance and correlated color temperature accuracy
Wide dynamic range and high sensitivity
Programmable gain and integration time

APPLICATIONS

Color detection
Brightness detection
White balance detection
Color temperature measurement

SPECIFICATION

Power Supply: 3.3V~5V
Operating Current: ＜5mA
LED Operating Current: ＜15mA
I2C Address: 0x39
Operating Temperature Range: -30℃~85℃
Dimension: 22*27mm/0.87*1.06”

SHIPPING LIST

Gravity: TCS3430 Tristimulus Color Sensor x1
Gravity-4P I2C/UART Sensor Connector x1