

XYZ Tristimulus Color Sensor

www.ams.com/TCS3430



TCS3430 – XYZ Tristimulus Color Sensor

- On-chip interference filter technology enables accurate XYZ tristimulus color and ambient light sensing
- Includes two additional infrared channels which enable light source identification
- Provides accurate CIE 1931 xy chromaticity coordinate values

We provide innovative analog solutions to the most challenging applications in sensor and sensor interfaces, power management, and wireless.

General Description

The device features advanced digital Ambient Light Sensing (ALS) and CIE 1931 Tristimulus Color Sensing (XYZ). Each of the channels has a filter to control its optical response, which allows the device to accurately measure ambient light and sense color. These measurements are used to calculate chromaticity, illuminance and color temperature, all of which are used to support various potential applications.

The TCS3430 is ideally suited for use in smartphone applications to improve color measurement and intensity of ambient light conditions. The sensor can also be used to assist the smartphone camera sensor with color sensing of ambient light to enhance and improve picture white balance to deliver more realistic and vibrant images.

Applications

- Display brightness and color control for power management and best viewing experience
- Improved white balance and image correction for cameras
- Camera flash color control

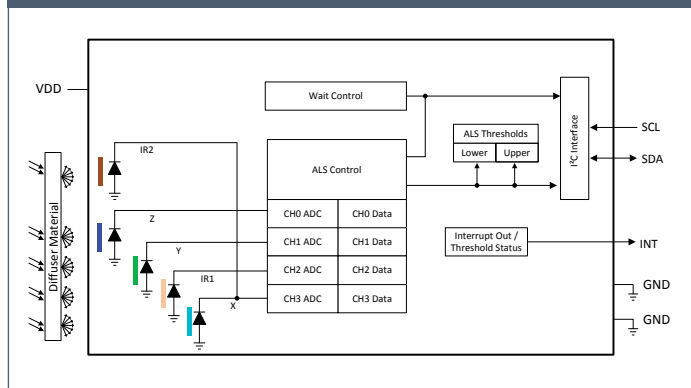
Features

- Capable of $\pm 10\%$ illuminance and correlated color temperature accuracy
- Small footprint and low profile package: 2.41x1.75x1.00mm
- Advanced interference filter technology, wide dynamic range and XYZ tristimulus filters
- 1.8V supply voltage and I²C bus

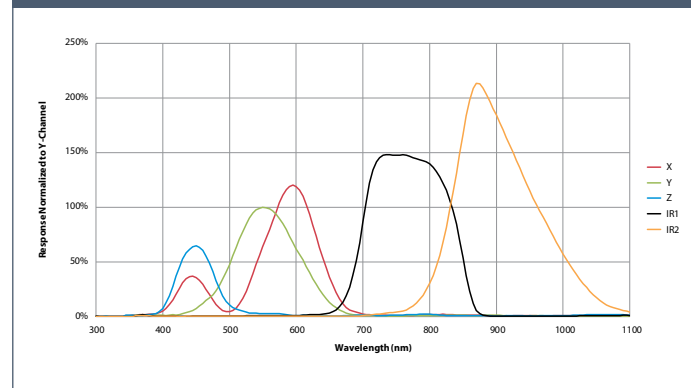
Ordering Code	Package-Leads	I ² C Interface	
		Address	Bus Voltage
TCS34303	Module – 8	0x39	1.8V
TCS34307*	Module – 8	0x29	1.8V

* Contact ams for availability

TCS3430 Block Diagram



TCS3430 Spectral Response



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