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TCS3200 Color Sensor

TCS3200 Color Sensor is a complete color detector, including a 4 white LEDs and TAOS TCS3200 RGB sensor chip which is a programmable color light-to-frequency converter. The TCS3200 can detect and measure a nearly limitless range of visible colors. It has an array of photo-detectors, each with either a red, green, or blue filter, or no filter (clear). The filters of each color are distributed evenly throughout the array to eliminate location bias among the colors. Internal to the device is an oscillator which produces a square-wave output whose frequency is proportional to the intensity of the chosen color.

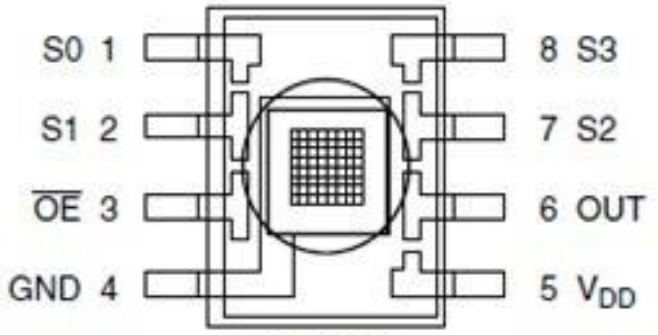
SPECIFICATIONS:

- Single-Supply Operation (2.7V to 5.5V)
- High-Resolution Conversion of Light Intensity to Frequency
- Programmable Color and Full-Scale Output Frequency
- Power Down Feature
- Communicates Directly to Microcontroller
- S0~S1: Output frequency scaling selection inputs
- S2~S3: Photodiode type selection inputs
- OUT Pin: Output frequency
- OE Pin: Output frequency enable pin (active low), can be impending when using
- Support LED lamp light supplement control
- Size: 28.4x28.4mm

APPLICATION:

- test strip reading
- sorting by color
- ambient light sensing and calibration
- color matching

PIN-OUTS:



TCS3200

Pin Name	I/O	DESCRIPTION
GND(4)		Power supply ground. All voltages are referenced to GND
OE(3)	I	Enable for fo (active low).
OUT	O	Output frequency (fo).
S0,S1（1，2）	I	Output frequency scaling selection inputs.
S2,S3（7，8）	I	Photodiode type selection inputs
VDD（5）		Supply voltage