

# Gobotics Specification Sheet

Description: Color sensor board with LEDs

Gobotics #:

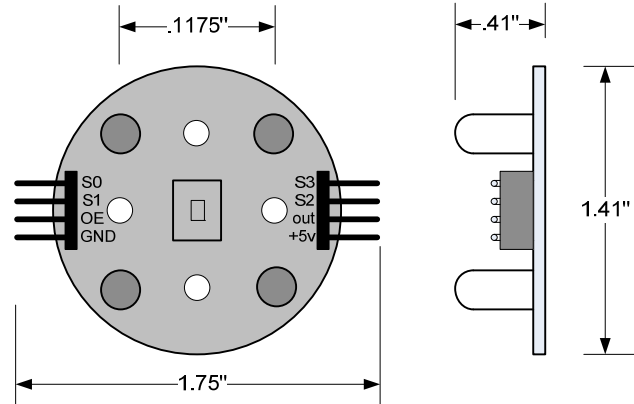
008-01-SB20

## GENERAL DESCRIPTION

This color sensor from RobotBase supports the TCS3210 color sensor IC from TAOS. The TCS3210 color sensor performs color detection by means of 64 embedded photodiodes, where four sets of 16 photodiodes have red, green, blue and clear filters respectively. The sensor board comes complete with the TCS3210 sensor IC, and four high brightness white LED light sources to illuminate the surface under test.

The color sensor board is controlled using standard microprocessor port pins. All pins of the TCS3210 are available via two connectors, each having four .100 spaced pins. The port pins select the desired frequency range, as well as the desired set of filtered photodiodes to sample. Light is sampled by the TCS3210, and a square wave with a frequency proportional to the amount of light received is presented on the output.

To use the color sensor board in an application, the user should be able to measure the frequency of the output pulse. The frequency may be scaled depending on the application using port pin control, which provides center frequencies of 600Khz, 120Khz and 12Khz respectively. The user application should sense each color light by selecting each colored sensor in succession. An output enable pin and a power down mode is also supported. The board has four mounting holes of .125" diameter.



Gobotics #008-01-SB20  
RobotBase: RB-02S035

S0	S1	OUTPUT FREQUENCY SCALING
L	L	Power down mode
L	H	2% (12Khz)
H	L	20% (120Khz)
H	H	100% (600khz)

E	S2	S3	Photodiode Filter Selection
1	X	X	Sensor disabled
0	L	L	RED selected
0	L	H	BLUE selected
0	H	L	CLEAR (no filter selected)
0	H	H	GREEN selected

## DETAILED SPECIFICATIONS

Rated Input Voltage (V): 5VDC

Rated Input current (A):



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REV

A

CHANGE NOTICE

None

DRAWING NO

008-01-SB20-D

SHEET

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