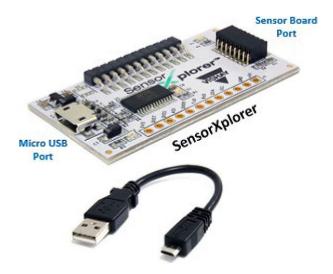# Sensor Board Guide for VEML6035-SB

INTRODUCTION

The sensor board gives you the opportunity to evaluate the digital sensor. With a sensor board you can evaluate the sensor without thinking about a hardware solution for your development kit. If you also want to start directly with the evaluation of the sensor, you can easily purchase the complete system solution from Vishay including the SensorXplorer and a software module for the sensor. Then you can immediately start to evaluate the properties of the sensor itself.

SensorXplorer™

The SensorXplorer is a demonstration kit designed to help evaluate Vishay's digital sensors featured on Vishay's sensor boards. These boards, along with their respective software modules, can be used to demonstrate and test each sensor's functionalities, allowing the user to quickly understand how various settings affect the sensor's results. The SensorXplorer board includes an USB to I2C interface chip, a 3.3 V regulator, several indicator LEDs, as well as multiple GPIOs to control the functionality of each board and allow data to be read and displayed on a PC. To get an overview of available sensor boards, as well as to download the software modules and board design files, please visit: www.vishay.com/optoelectronics/SensorXplorer. Here you will also find a link next to each board showing its availability at each of our distributors.

For more information about the SensorXplorer find the installation guide by following this link: www.vishay.com/doc?84922

Find all information where you can purchase a SensorXplorer or a specific sensor board by following this link: www.vishay.com/optoelectronics/SensorXplorer

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USING THE SENSOR BOARD WITH THE SensorXplorer

When using the complete Vishay solution with the SensorXplorer and sensor board you just need to install the software of the SensorXplorer when using first time on your PC. After that you need to connect the SensorXplorer with your PC and the sensor board with the SensorXplorer. Then start the demosoftware which you can find on our website by following this link: www.vishay.com/landingpage/SensorXplorer/
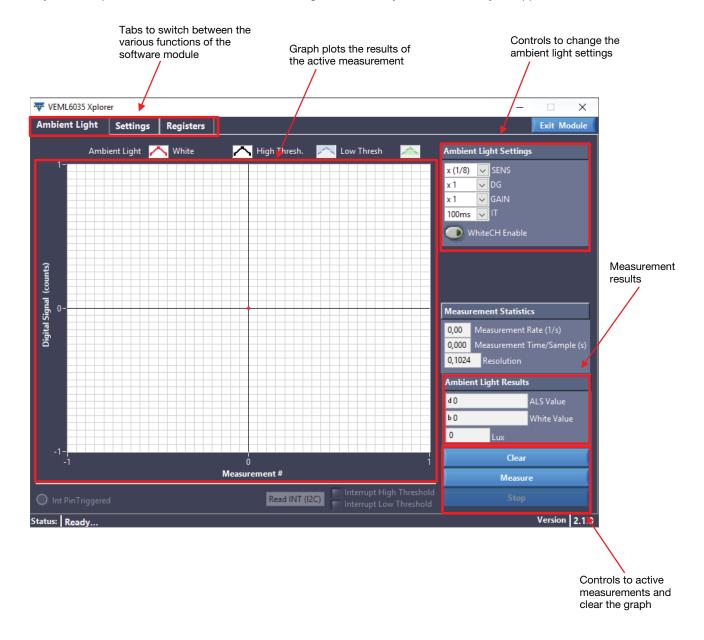
Now you can explore the sensor with its different settings and how they fit at its best for your application.

HOW TO USE THE DEMOSOFTWARE

When using the complete Vishay solution with the SensorXplorer and sensor board you just need to install the software of the SensorXplorer when using first time on your PC. After that you need to connect the SensorXplorer with your PC and the sensor board with the SensorXplorer. Then start the demosoftware which you can find on our website by following this link: www.vishay.com/landingpage/SensorXplorer/

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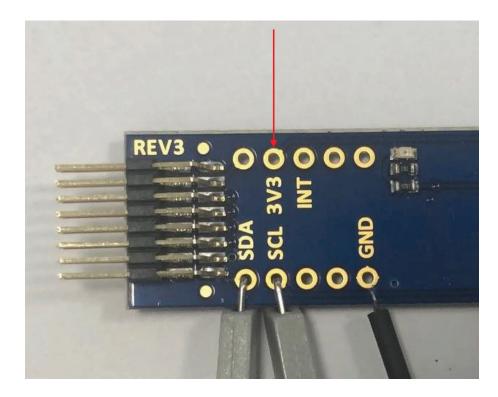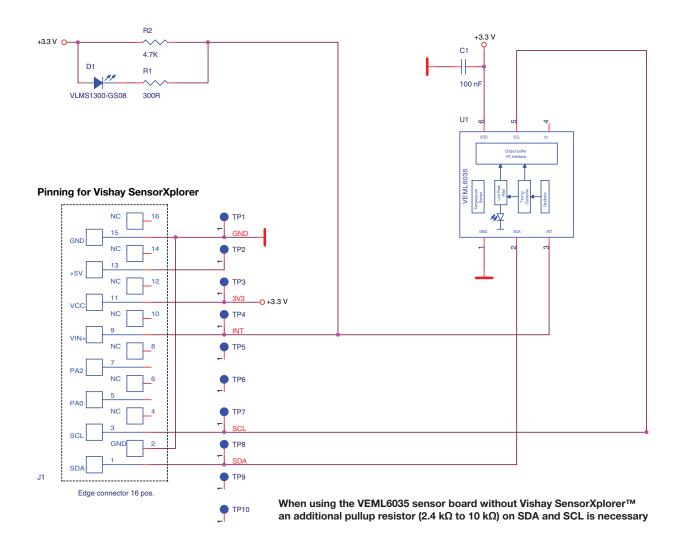
For technical questions, contact: sensorstechsupport@vishay.com

USING THE SENSOR BOARD FOR ITSELF

If you want to use the sensor board within your own application and with own self-written software for communication with the sensor you just need to connect the board to power (3.3 V, GND) and the I^{2}C-lines (SDA, SCL) as you can see in the figure below.
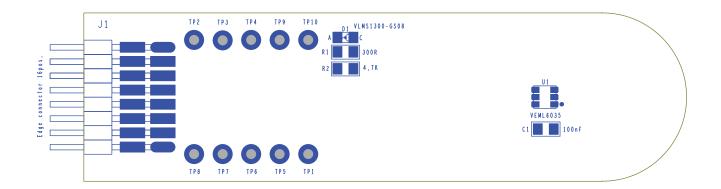
For technical questions, contact: sensorstechsupport@vishay.com

SCHEMATIC OF THE VEML6035 SENSOR BOARD

Pinning for Vishay SensorXplorer

Edge connector 16 pos.

When using the VEML6035 sensor board without Vishay SensorXplorer™ an additional pullup resistor (2.4 kΩ to 10 kΩ) on SDA and SCL is necessary

ASSEMBLY OF THE VEML6035 SENSOR BOARD

VEML6035 sensor board, rev. 3.0

Assembly top

BILL OF MATERIALS					
ITEM	QUANTITY	REFERENCE	COMPONENT CLASS	VALUE	PACKAGE
1	1	C1	Capacitor NP	100 nF	SMC0603
2	1	D1	LED red	VLMS1300	SMD0603
3	1	R1	Resistor	300 Ω	SMR0603
4	1	R2	Resistor	4.7 kΩ	SMR0603
5	1	U1	Sensor	VEML6035	SMD
6	1	J1	Edge connector	2 x 8 pos.	SMD header strip