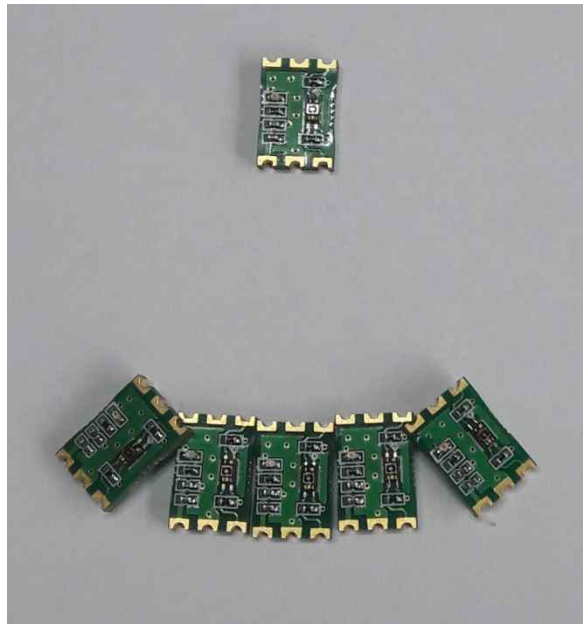


OSTSen-6075 User Guide



Ver 1.0

Onsystemech

1. OSTSen-6075 Overview

OSTSen-6075 is an UVA and UVB light sensing module, which is based on Vishay Semiconductors VEML6075. The VEML6075 senses UVA and UVB light and incorporates photodiode, amplifiers, and analog/digital circuits into a single chip using a CMOS process. When the UV sensor is applied, it is able to detect UVA and UVB intensity to provide a measure of the signal strength as well as allowing for UVI measurement.

The VEML6075 provides excellent temperature compensation capability for keeping the output stable under changing temperature. VEML6075's functionality is easily operated via the simple command format I2C (SMBus compatible) interface protocol. VEML6075's operating voltage ranged from 1.7V to 3.6V. VEML6075 is packaged in a lead (Pb)-free 4 pin OPLGA package which offers the best market-proven reliability.

2. Application

- Handheld device
- Notebook
- Consumer device
- Industrial and medical application

3. Features of VEML6075

- Package type : surface mount
- Dimensions (LxWxH): 2.0mm x 1.25mm x 1.0mm
- Integrated modules: ultraviolet sensor(UV), and signal conditioning IC
- Converts solar UV light intensity to digital data
- Excellent UVA and UVB sensitivity
- Reliable performance of UV radiation measurement under long time solar UV exposure
- 16-bit resolution per channel
- UVA and UVB individual channel solution
- Low power consumption I2C protocol (SMBus compatible) interface
- Package: OPLGA
- Temperature compensation: -40°C to 85°C
- Output type: I2C bus: -40°C to 85°C
- Operation voltage: 1.7V to 3.6V

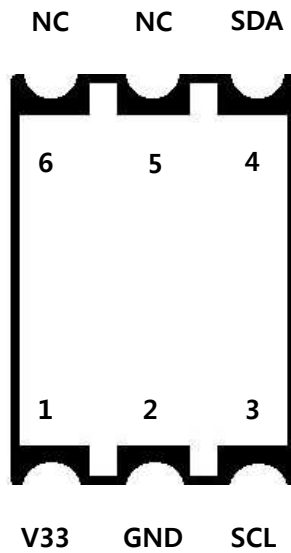
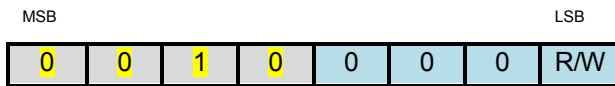
4. Application Information

4.1 Module Pin Out and Signal Description

Pin Number	Pin Name	Pin Description
1	V33	Power supply voltage (1.7V ~ 3.6V)
2	GND	Power supply ground
3	SCL	I2C serial clock (SCL) 7bit device address : 0x10
4	SDA	I2C serial data (SDA)
5,6	NC	Not Connect

- **VEML6075 7bit I2C Device Address : 0x10**

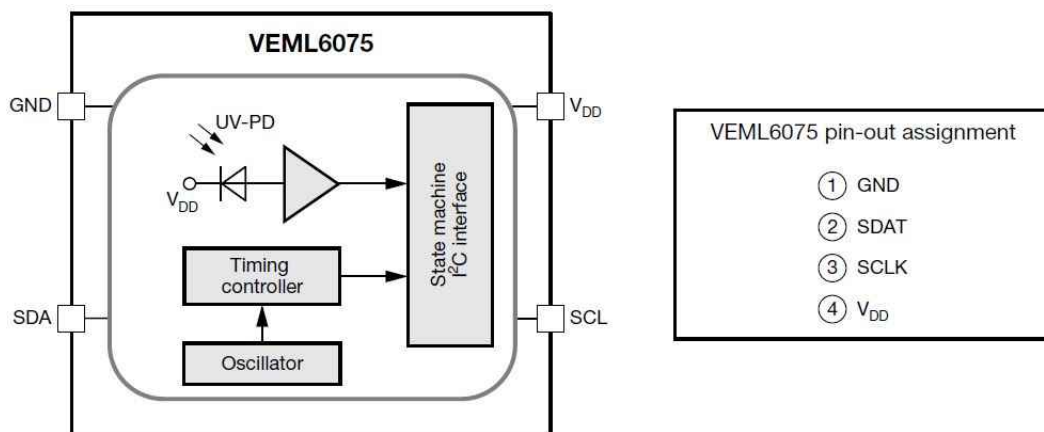
Device Address Data for Read/Write functions:



< Top View >

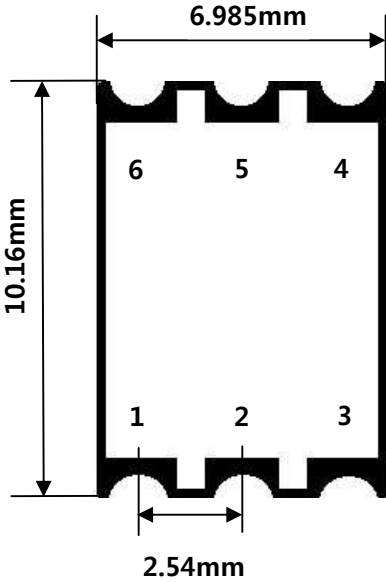
4.2 VEML6075 Pin out and Signal Description

Pin Number	Pin Name	Pin Description
1	GND	Ground
2	SDA	I2C serial data
3	SCL	I2C serial clock
4	VDD	Power supply (1.7V to 3.6V)



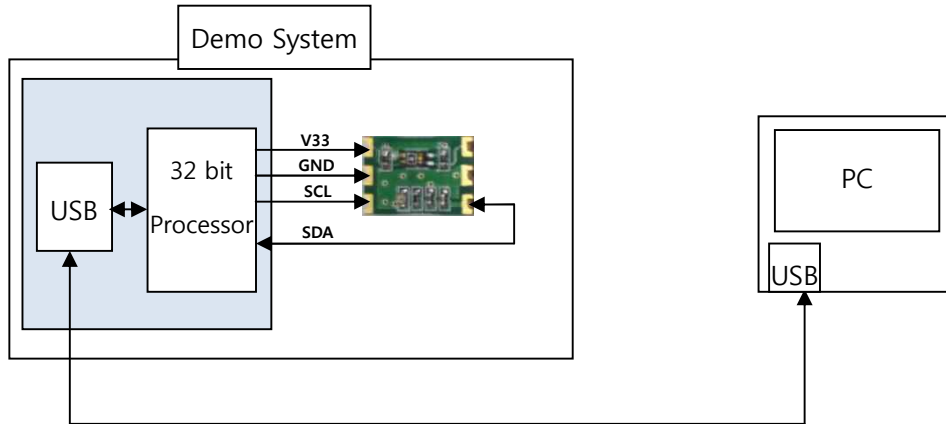
< VEML6075 Pinout (top view) >

5. Module Dimension



< OSTSen-6075 module >

6. Demo System



OSTSen-6075 Data Display on PC



7. Reference

- 1) <https://www.vishay.com/product?docid=84304>
 - 2) <https://www.vishay.com/docs/84304/veml6075.pdf>
 - 3) <https://github.com/schizobovine/VEML6075>
 - 4) https://github.com/adafruit/Adafruit_VEML6070
- If you need some information or have some questions about OSTSen-6075, contact ostsen@naver.com.