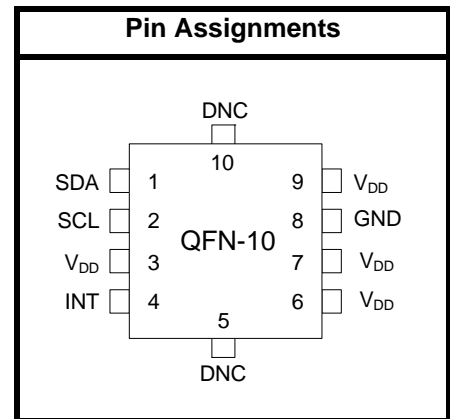


## UV INDEX AND AMBIENT LIGHT SENSOR IC WITH I<sup>2</sup>C INTERFACE

### Features

- Integrated UV index sensor
  - Digital UV Index register that can be read through I<sup>2</sup>C interface
  - Factory calibration to address part-to-part variation
- Integrated ambient light sensor
  - 100 mlx resolution possible, allowing operation under dark glass
  - 1 to 128 klx dynamic range possible across two ADC range settings
  - Accurate lux measurements with IR correction algorithm
- Industry's lowest power consumption
  - 1.71 to 3.6 V supply voltage
  - < 500 nA standby current
  - Internal and external wake support
  - Built-in voltage supply monitor and power-on reset controller
- I<sup>2</sup>C Serial communications
  - Up to 3.4 Mbps data rate
  - Slave mode hardware address decoding
- Small-outline 10-lead 2x2 mm QFN
- Temperature Range
  - -40 to +85 °C



### Applications

- Fitness/health electronics
- Smart watches
- Smartphone handsets
- Tablets
- Portable consumer electronics
- Display-backlighting control

### Description

The Si1132 is a low-power, ultraviolet (UV) index, and ambient light sensor with I<sup>2</sup>C digital interface and programmable-event interrupt output. This sensor IC includes an analog-to-digital converter, integrated high-sensitivity visible and infrared photodiodes, and digital signal processor. The Si1132 offers excellent performance under a wide dynamic range and a variety of light sources including direct sunlight. The Si1132 can also work under dark glass covers. The photodiode response and associated digital conversion circuitry provide excellent immunity to artificial light flicker noise and natural light flutter noise. The Si1132 devices are provided in a 10-lead 2x2 mm QFN package and are capable of operation from 1.71 to 3.6 V over the -40 to +85 °C temperature range.

# Si1132

## Functional Block Diagram

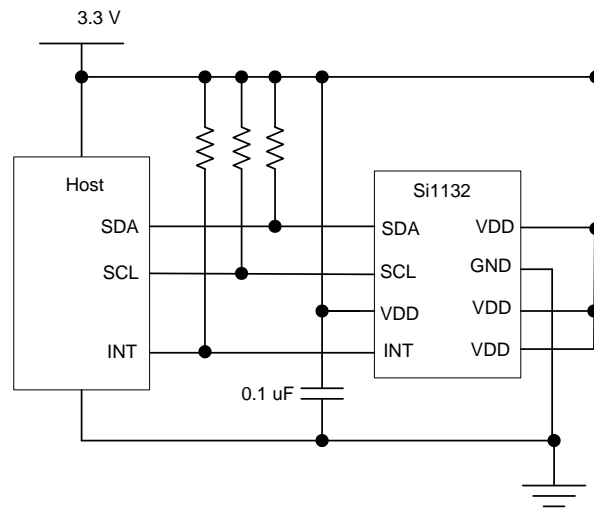
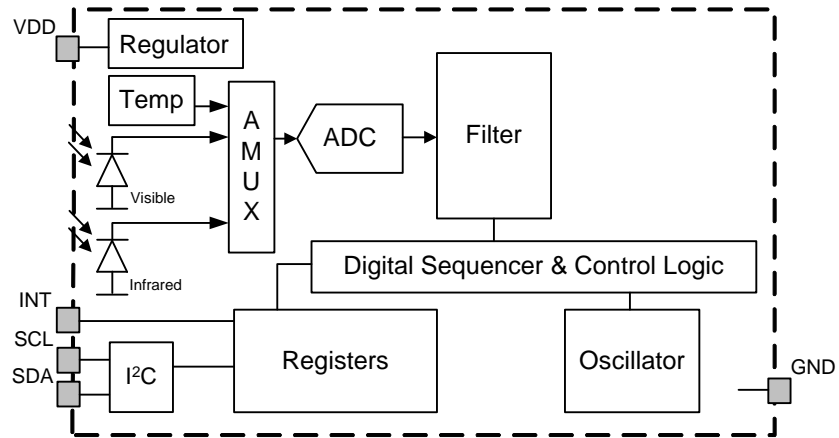


Figure 1. Si1132 Application