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GUVA-S12GM

- **Digital UVA Sensor**
- **Gallium Nitride Based Material**
- **UVA, 220 – 370 nm**
- **I2C Slave Interface, up to 400 kHz**
- **13 x 13 x 3 mm, 8-pin**

RoHS COMPLIANT

Description

GUVA-S12GM is a UVA Sensor working in the spectral range of 220 – 370 nm. It contains a GaN based SMD photodiode, amplifier, ADC, digital control logic and I2C interface circuit for UV measurement, on a 13x13 mm 8-pin PCB. **GUVA-S12GM** can acquire the intensity of UVA, respectively and outputs digital count according to each intensity. By using available power management mode, the power consumption can be reduced.

Features

- UV index measurement supported (1 ... 20)
- Programmable gain and integration time
- I2C slave interface, up to 400 kHz
- Power management modes
- Sleep current: 1 µA typical
- Supply voltage: 3.0 – 3.6 V

Absolute Maximum Ratings

Parameter	Symbol	Values	Unit
Operating Temperature	T_{CASE}	-30 – +85	°C
Storage Temperature	T_{STG}	-40 – +90	°C
Soldering Temperature *	T_{SLD}	260	°C

* must be completed within 10 seconds

Electro-Optical Characteristics

T_{CASE} = 25°C

Parameter	Values	Unit
Number of Output	1 (UVA)	Channel
Output Resolution	10	bits
UV Index Range	0 – 20	
Configurable Gain	x1 – x128	
Sleep Mode Control	Enable	
Power Management	Normal, Sleep	
I2C Clock Frequency	up to 400 kHz	
Operating Current (typical)	300	µA
Deep Sleep Current	<1	µA
Supply Voltage	3.0 – 3.6	V
Chip Size	0.23 x 0.23	mm^2

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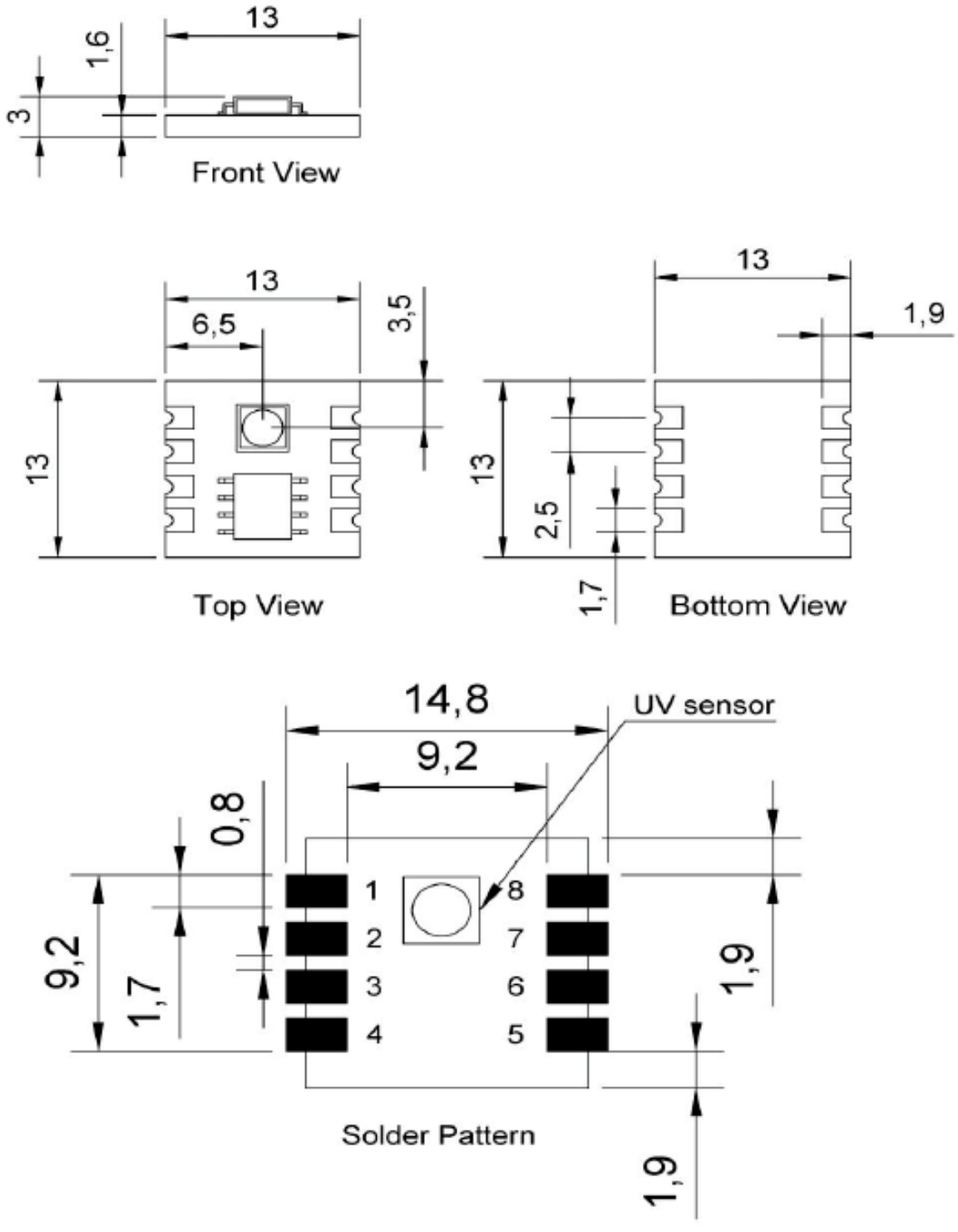
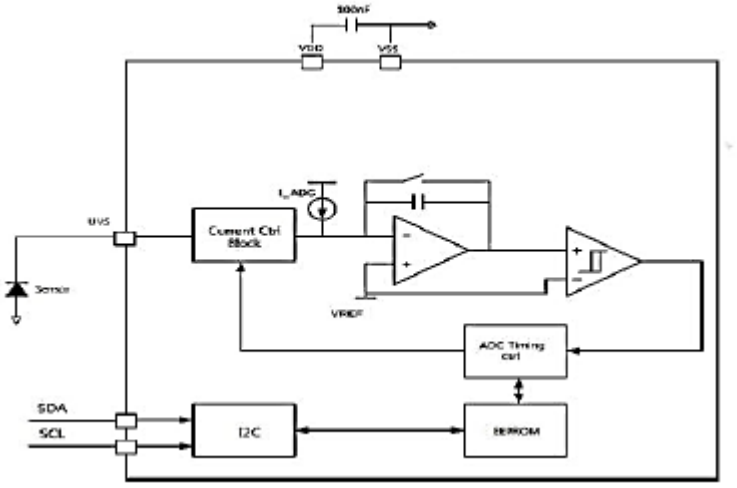
Package and Port Description

Outline Dimensions

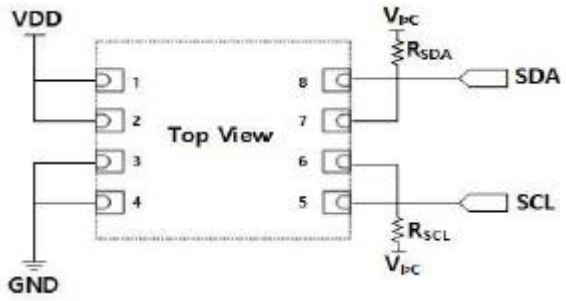


13 x 13 x 3 mm

Function Block Diagram



Application Circuit



Pin Description

Pin Number	Pin Name	Description
1, 2	VDD	Supply Voltage
3, 4	GND	GND
5, 6	SCL	I2C clock line
7, 8	SDA	I2C data line

Caution

ESD can damage the device hence please avoid ESD.