

Datasheet

Light Sensor IF412

Light Sensor

ZU-02-412



Version 1.2

04.11.2016

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1 Revision History

Date	Rev. No.	Description	Page
24.10.2016	1.0	Initial version	All
27.10.2016	1.1	Corrected Weight	5
04.11.2016	1.2	Corrected CON1 Pinning	6



2 Overview

The Light Sensor with the "MAX44009-Sensor" is suitable for adjustment the backlight in order to reduce energy consumption, prolong the life of the battery and ensure optimum visibility at different light conditions. The Light Sensor MAX44009 is designed to detect spectral range in the same way as human eyes do.

3 General Features

- Power Supply: 1.7 to 3.6V
- Optimized to mimic the human eye's perception of ambient light
- Wide Lux Range from 0.045 to 188,000 Lux
- Light sensing or backlight sensing for DICOM Preset
- Interface: I²C

4 Absolute Maximum Ratings

Item	Symbol	Min.	Max.	Unit	Note
Supply Voltage	V _{IN}	-0.3	4	VDC	1, 2
Storage Temperature	T _{ST}	-30	+90	°C	-
Operating Temperature	T _{OP}	-25	+85	°C	-

Note (1): Within operating temperature range.

Note (2): Permanent damage to the device may occur if maximum values are exceeded.

5 Electrical Specification

Item	Symbol	Min.	Typ.	Max.	Unit	Remarks
Supply Voltage	V _{IN}	1.7	3.3	3.6	VDC	
Supply Current	I _{IN}	-	0.65	-	μA	
Serial-Clock Frequency	F _{SCL}	-	-	400	kHz	

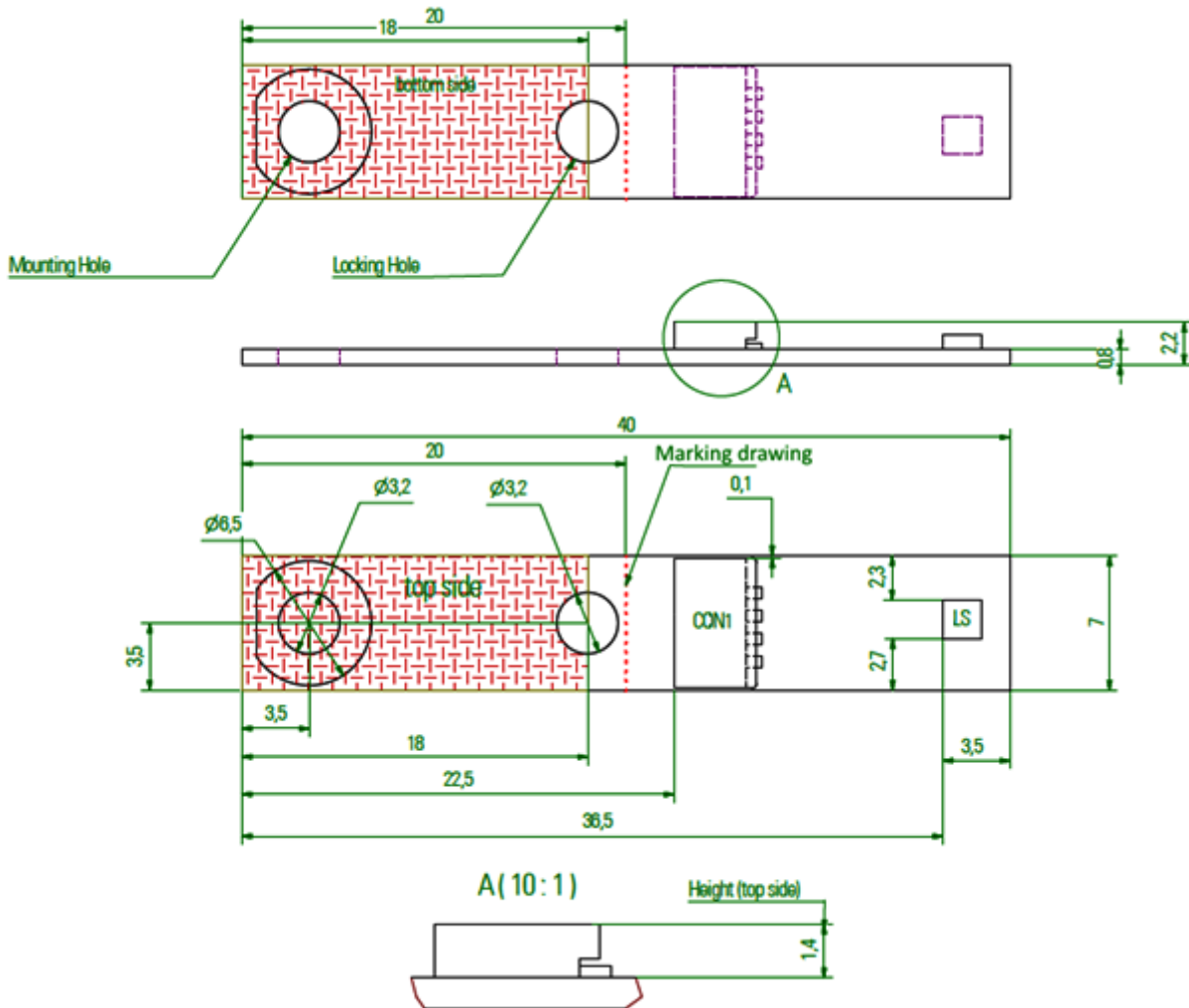
6 MAX44009 read and write address

SLAVE ADDRESS FOR WRITING	SLAVE ADDRESS FOR READING
1001 0100 ⁽²⁾	1001 0101 ⁽²⁾



7 Mechanical Specification

The Light Sensor Board is a PCB with a mounting hole and an additional locking hole to prevent the sensor PCB from rotating when the screw is fastened. Alternatively, the sensor PCB can be glued on a flat surface with double-sided adhesive tape. There are no components on the bottom side.

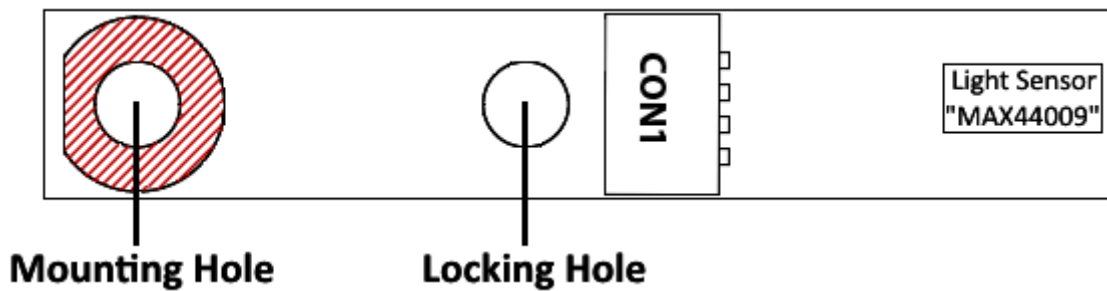


Item	Description	Remarks
Length	40 mm	± 0.2 mm
Width	7.0 mm	± 0.2 mm
Height (top side)	CON1	1.4 mm + 0.3 mm
	LS	0.6 mm + 0.3 mm
Height (PCB)	0.8 mm	± 0.1 mm
Height (bottom side)	0 mm	No components on bottom side, to be mounted on flat surface
Weight	5 g	



8 Connector Overview

Connector	Description	Type	Matching Part	Manufacturer
CON1	Power and I ² C Connector	BM04B-ACHSS-A-GAN-TF(LF)(SN)	ACHR-04V-A-S	JST



7.1 CON1: Power and I²C Connector

CON1: Power and I ² C Connector		
Pin	Signal	Description
1	V _{IN}	Power Supply Input
2	GND	Ground
3	SCL	Serial Clock
4	SDA	Serial Data

9 Ordering Information

Part Number	Description
ZU-02-412	IF412-00 Light Sensor
KA-30-786	Cable Prisma / IF412 800 mm



10 News and Updates

The latest version of documents, drivers and software packages can be found at:

German Site <http://www.datadisplay-group.de/service/downloads/>

English Site <http://www.datadisplay-group.com/service/downloads/>

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