FORTEC ELEKTRONIK AG

DATA DISPLAY GROUP

Datasheet

Light Sensor IF412

Light Sensor

ZU-02-412

Version 1.2

04.11.2016

Table of Contents

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

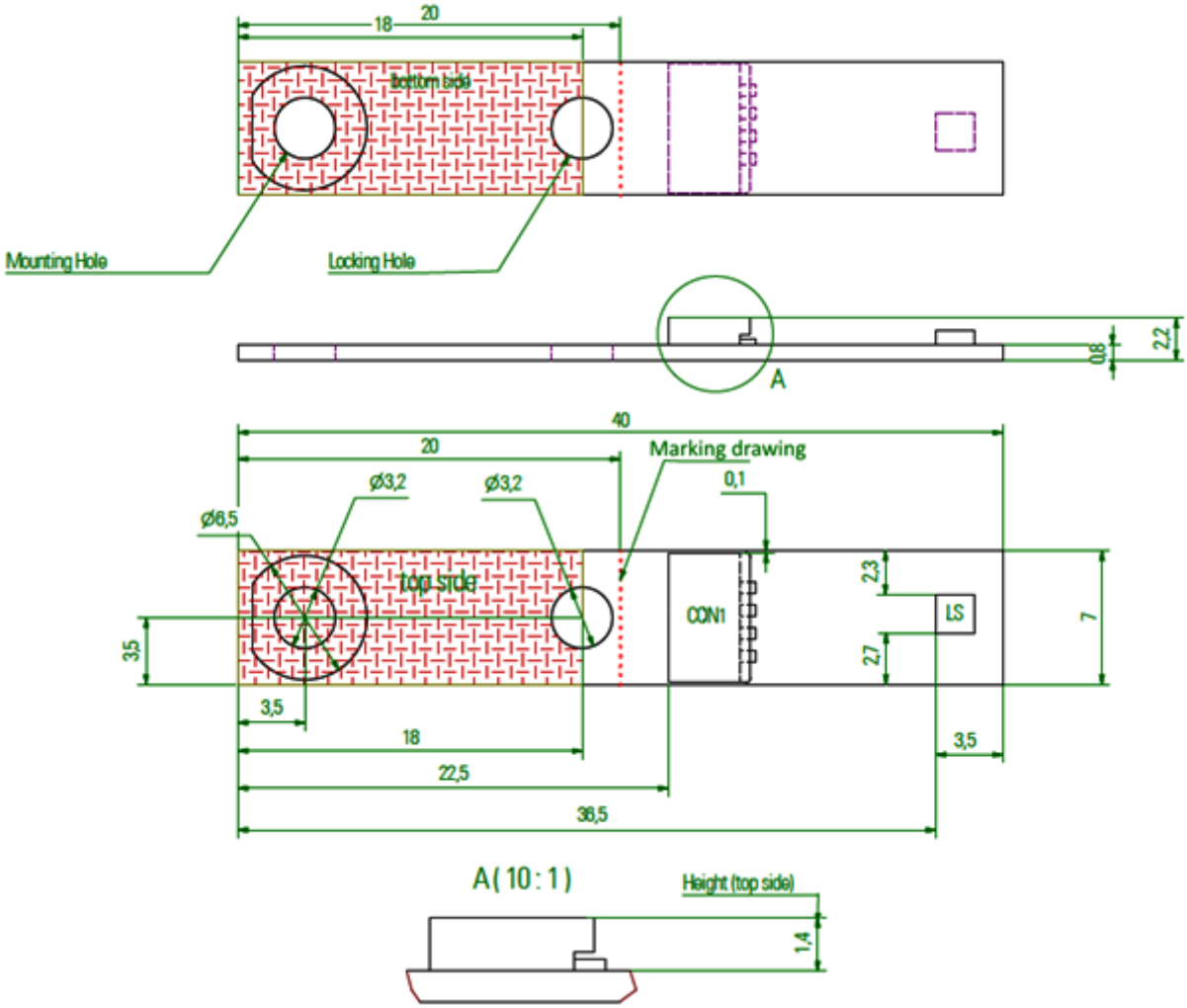
Item	Symbol	Min.	Typ.	Max.	Unit	Remarks
Supply Voltage	V_{IN}	1.7	3.3	3.6	VDC	
Supply Current	I_{IN}	-	0.65	-	µA	
Serial-Clock Frequency	F_{SCL}	-	-	400	kHz	

6 MAX44009 read and write address

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

7 Mechanical Specification

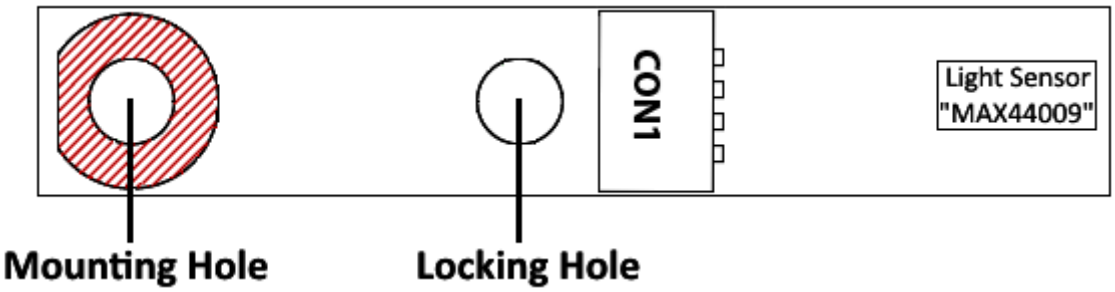
The Light Sensor Board is a PCB with a mounting hole and an additional locking hole to prevent the sensor PCB from rotating when the screw is fastened. Alternatively, the sensor PCB can be glued on a flat surface with double-sided adhesive tape. There are no components on the bottom side.



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 I²C Connector	BM04B-ACHSS-A-GAN-TF(LF)(SN)	ACHR-04V-A-S	JST



7.1 CON1: Power and I²C Connector

CON1: Power and I²C 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/

Our company network supports you worldwide with offices in Germany, Great Britain, Turkey and the USA. For more information please contact:

DATA DISPLAY GROUP

A FORTEC GROUP MEMBER

Distec GmbH
Augsburger Str. 2b
82110 Germering
Germany

Phone: +49 (0)89 / 89 43 63-0
Fax: +49 (0)89 / 89 43 63-131
E-Mail: info@datadisplay-group.de
Internet: www.datadisplay-group.de

FORTEC Elektronik AG
Lechwiesenstr. 9
86899 Landsberg am Lech
Germany

Phone: +49 (0)8191 / 911 72-0
Fax: +49 (0)8191 / 217 70
E-Mail: sales@fortecag.de
Internet: www.fortecag.de

Display Technology Ltd.
5 The Oaks Business Village
Revenge Road, Lordswood
Chatham, Kent, ME5 8LF
United Kingdom
Phone: +44 (0)1634 / 67 27 55
Fax: +44 (0)1634 / 67 27 54
E-Mail: info@displaytechnology.co.uk
Internet: www.datadisplay-group.com

Apollo Display Technologies, Corp.
87 Raynor Avenue,
Unit 1Ronkonkoma,
NY 11779
United States of America
Phone: +1 631 / 580-43 60
Fax: +1 631 / 580-43 70
E-Mail: info@apollodisplays.com
Internet: www.apollodisplays.com

Sales Partner:

DATA DISPLAY BİLİŞİM TEKNOLOJİLERİ İÇ VE DIŞ TİCARET LİMİTED ŞİRKETİ
Barbaros Mh. Ak Zambak Sk. A Blok D:143
34376 Ataşehir / Istanbul
Turkey
Phone: +90 (0)216 / 688 04 68
Fax: +90 (0)216 / 688 04 69
E-Mail: info@data-display.com.tr
Internet: www.data-display.com.tr