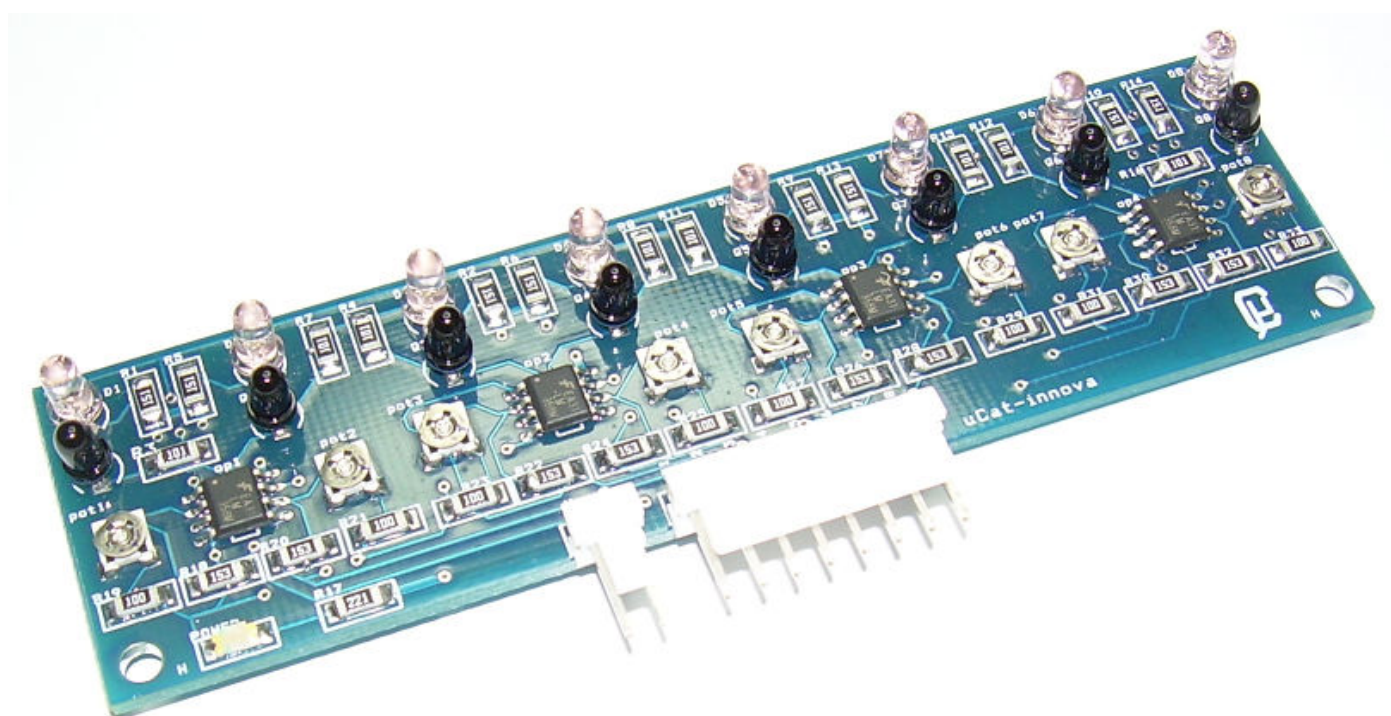




μCat-innova

Multiple Infrared sensor AstonGM06D002

User's Guide



NOTES:

Product version: Ver 1.0

Document version: Ver 1.0

Description

AstonGM06D002 is a distance sensor unit with 8 different sensors that can be separately calibrated, composed of a IR LED, Phototransistor, IC OPAMP and signal process circuit. The variety of the reflectivity of the object, the environment temperature and the operating duration are not influenced easily to the distance detection. This sensor has a gain regulated with the potentiometer; this doesn't work in all the range.

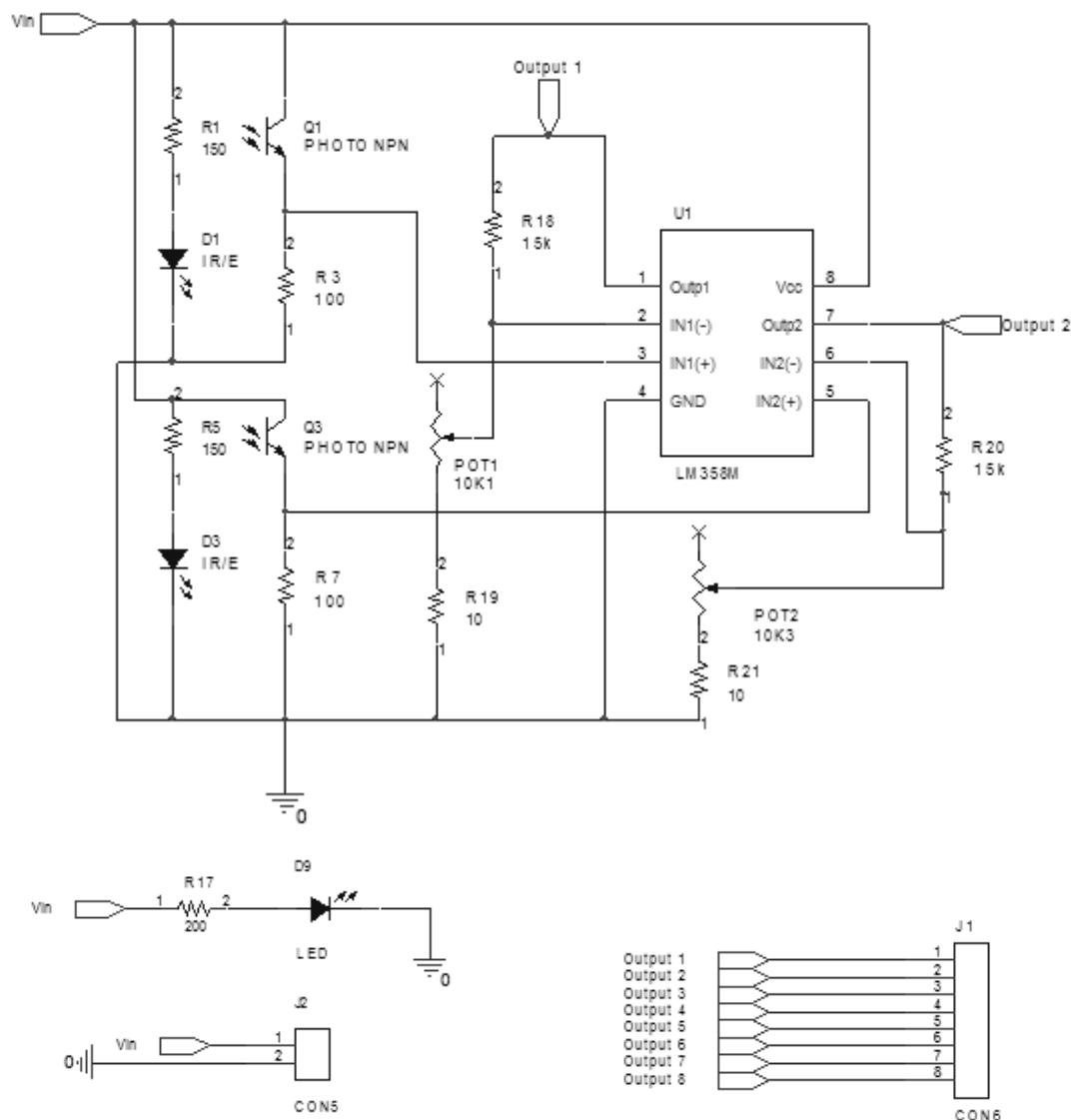
Features

1. Distance measuring range: 0 to 20cm
2. Analog output type
3. Package size: 99×28.5×9.8 mm
4. Consumption current: Typ. 164 mA
5. Supply voltage: 4.5 to 5.5 V
6. Sensing Angle: no greater than 18°

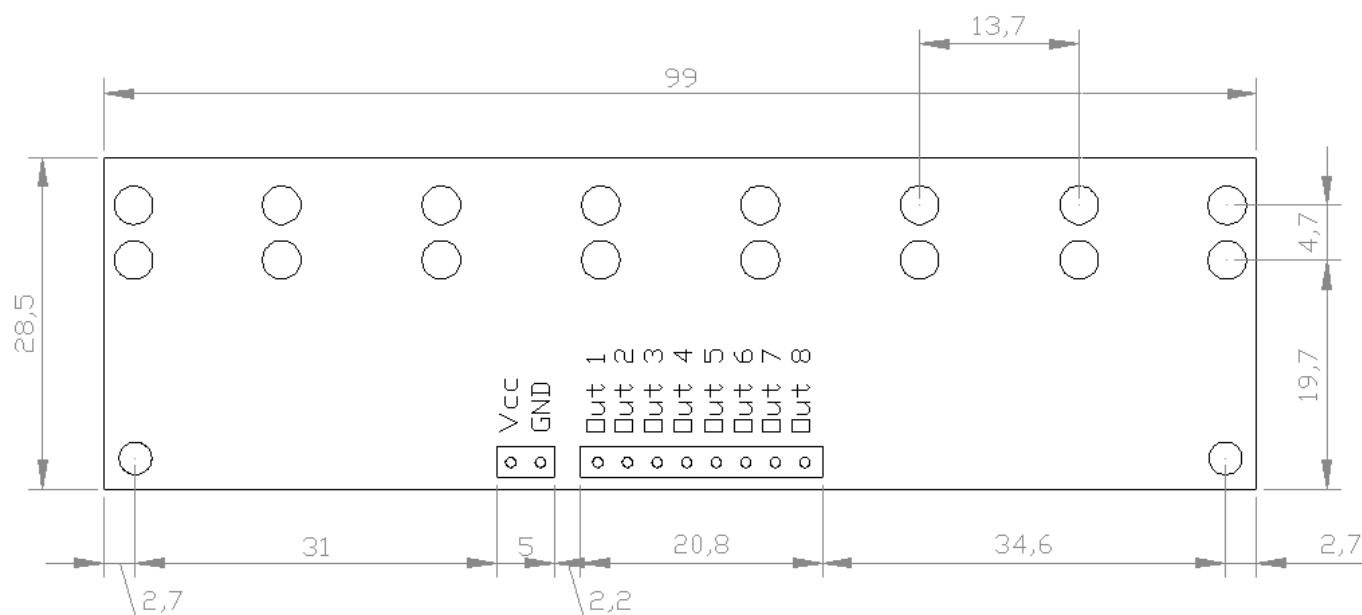
Applications

1. Switch
2. Detection distance.
3. Follow line
(Robot, colour detection)

Block Diagram



Outline Dimensions



Dimensions in mm

Absolute Maximum Ratings

(Ta=25°C, VCC=5V)

Parameter	Symbol	Rating	Unit
Supply voltage	VCC	1.5 to +7	V
Output terminal voltage	VO	0.007 to 3.8	V
Operating temperature	Topr	0 to +70	°C
Storage temperature	Tstg	-40 to +70	°C

Electro-optical Characteristics

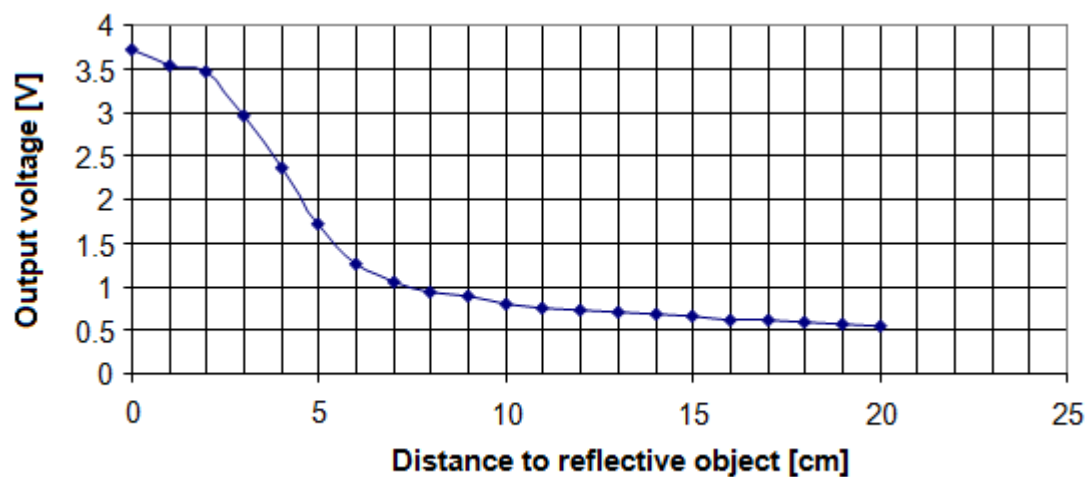
(Ta=25°C, VCC=5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Average supply current	ICC	—	163.3	164	165.8	mA
Measuring distance range	ΔL	—	0	—	20	cm
Output voltage	Vo	Depending of the gain	0.007	—	3.8	V
Output voltage differential	Δvo	Depending of the gain	0.038	1.75	2.7	V

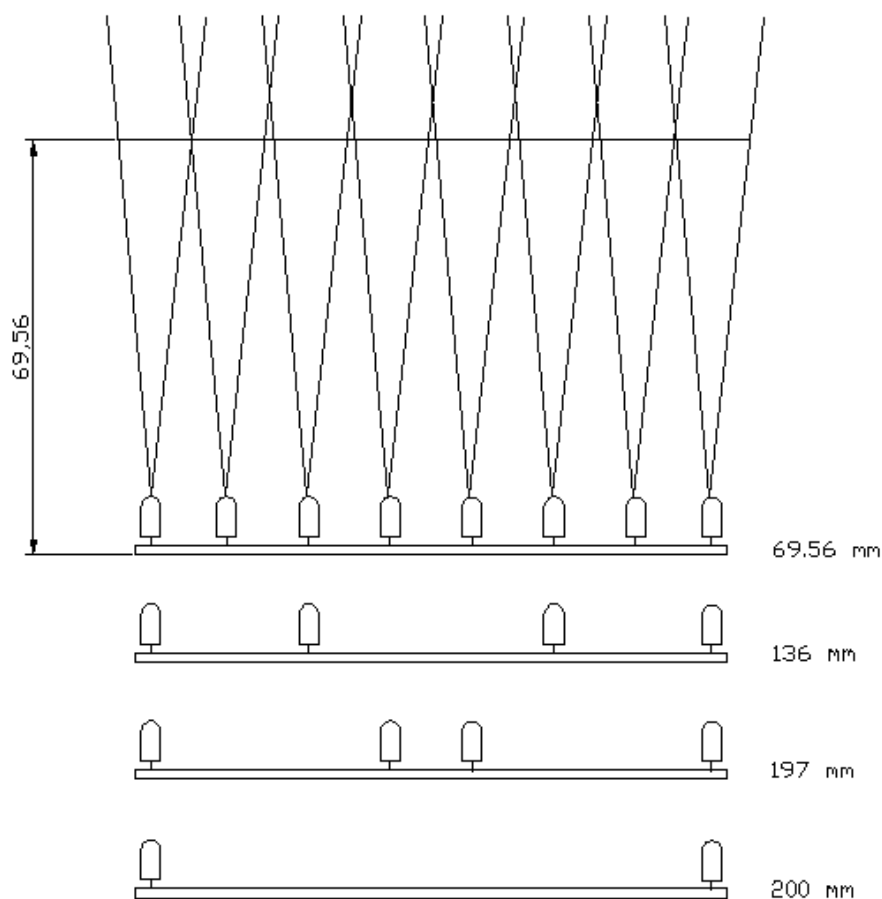
Recommended operating conditions

Parameter	Symbol	Conditions	Rating	Unit
Supply voltage	VCC		4.5 to 5.5	V

Example of distance measuring characteristics



Maxim distance recommended depending to the used sensors



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