

# L085-DEVKIT

## Brief

L085 is 5.3-130mm focal length (25x) motorized zoom lens is designed for 1/2.7" image sensors, has zoom/focus/iris functions, designed for 5M sensors.



## Specifications

### Optics

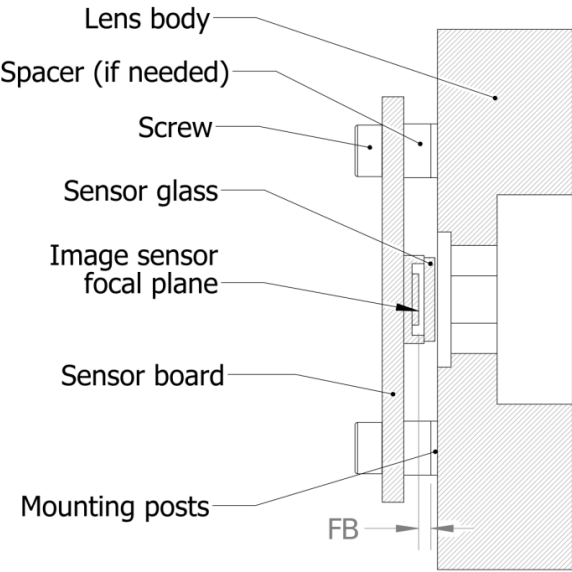
Image sensor	1/2.7" Effective image area > 6.8mm
Focal distance	5.3 ~ 130mm / $\pm 5\%$
Aperture	f/1.6 ~ f/4.3
Focus range	<ul style="list-style-type: none"><li>• WIDE: 0.1m - infinity</li><li>• TELE: 1.5m - infinity</li></ul>
Field of view (D=8.81mm)	<ul style="list-style-type: none"><li>• WIDE: 67.9°</li><li>• TELE: 2.8°</li></ul>

Distortion	<ul style="list-style-type: none"> <li>• WIDE: -2.9%</li> <li>• TELE: 0.3%</li> </ul>
Recommended image sensor	IMX335

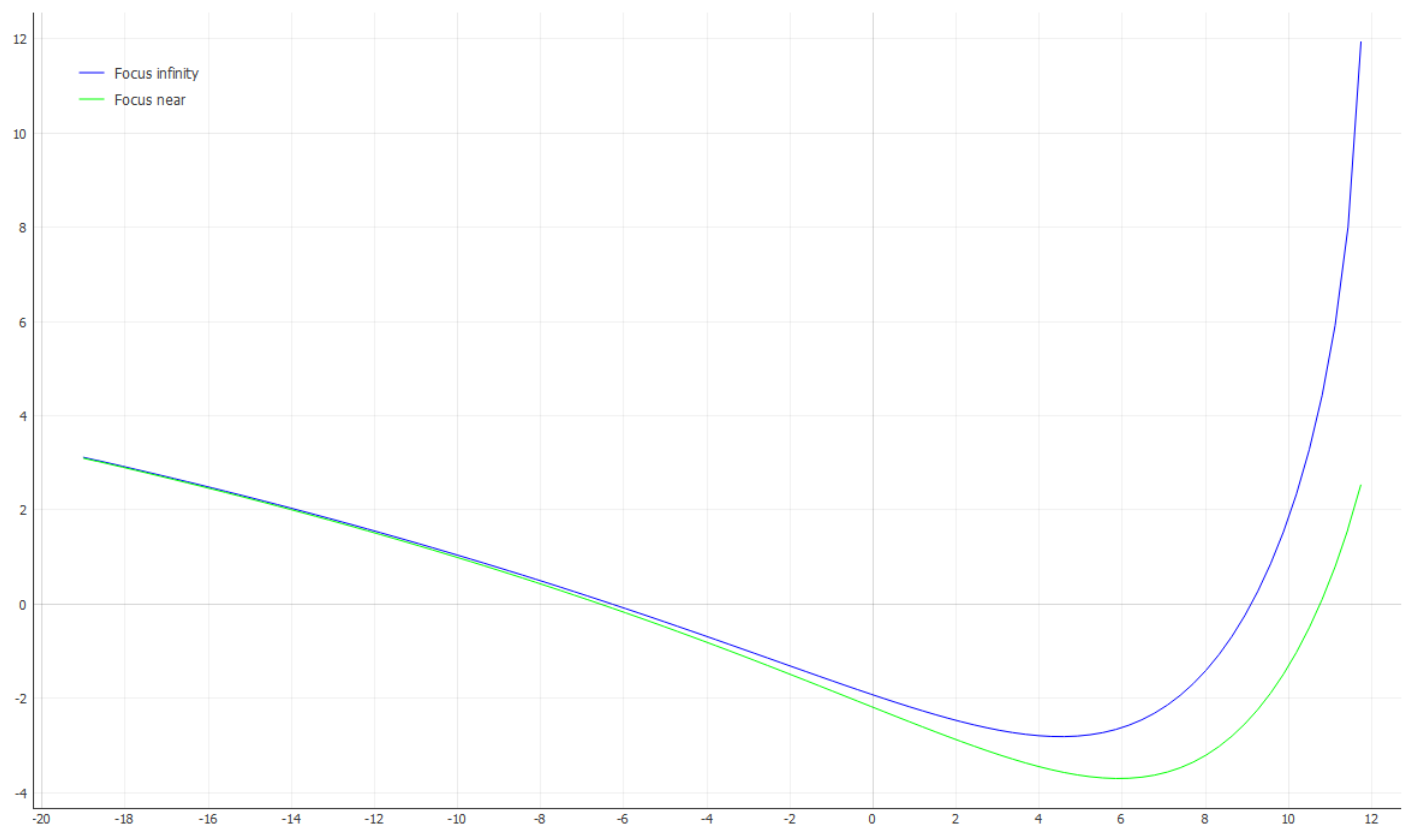
## Mechanics

Flange back ( <b>FB</b> , see diagram below)	-0.325mm (in glass t=0.3 IRCF)
Lens zoom structure	The stepper motor is directly connected to the screw
Lens focusing structure	The stepper motor is directly connected to the screw
Lens size	<ul style="list-style-type: none"> <li>• Length: 92.49mm</li> <li>• Width: 50.1mm</li> <li>• Height: 43.8mm</li> <li>• Front end diameter: 44.6mm</li> </ul>
Weight	116g (+controller 7.8g)

In order to accommodate different image sensors, the focal distance is set back by flange back (FB) distance. The actual distance for a specific sensor has to be calculated and spacers used. If the image plane is not set correctly, focus irregularities in the projected picture are expected.

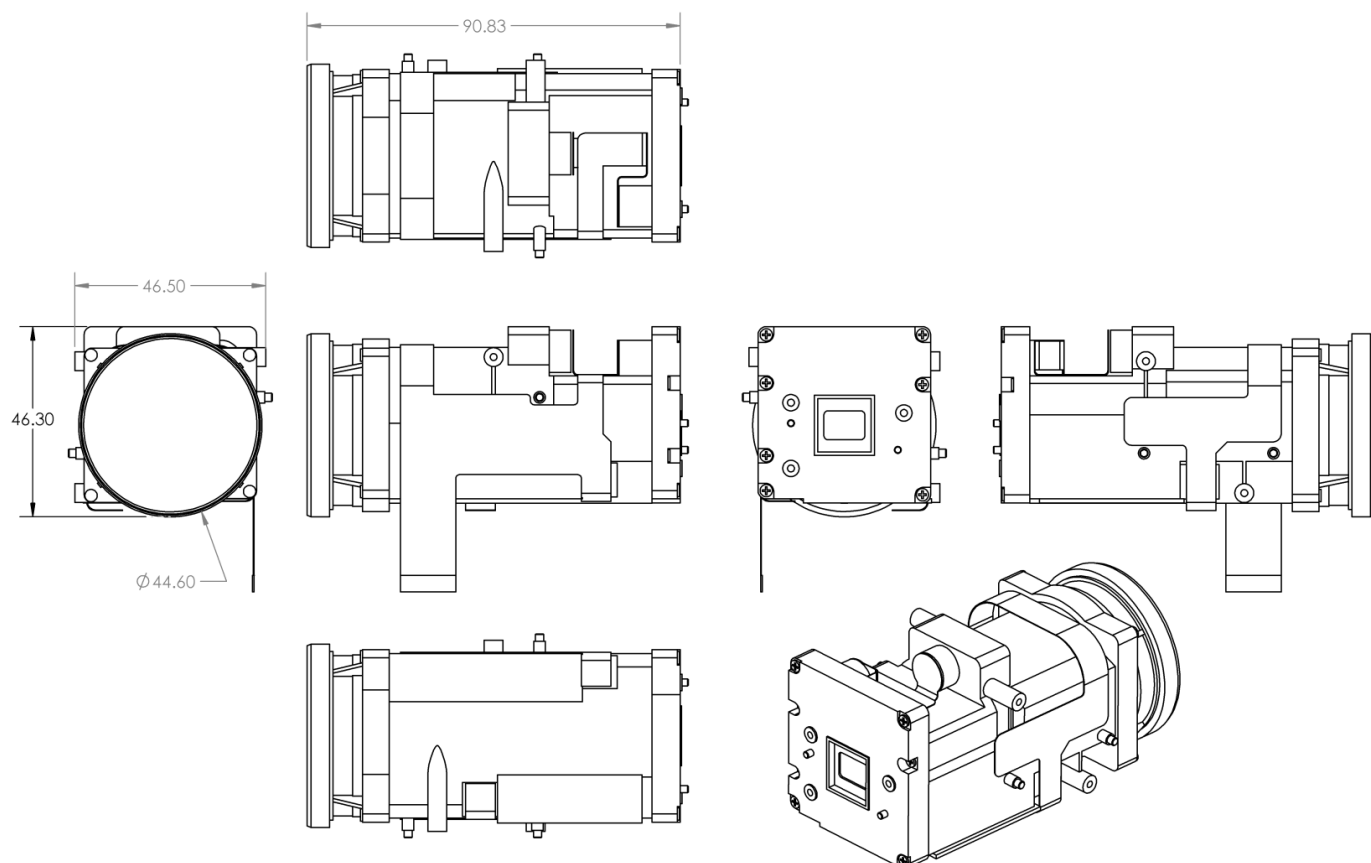


## Zoom-Focus curve diagram



Please check the software in the GitHub repository for more detailed table.

## Dimensions



# Wiring

Lens signals routed by 26 pin 0.5mm pitch FFC cable.

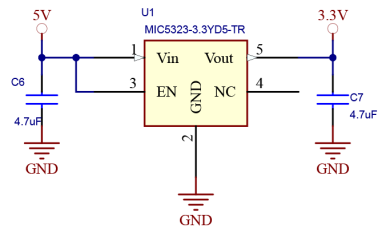
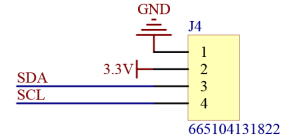
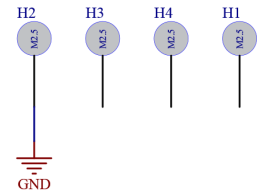
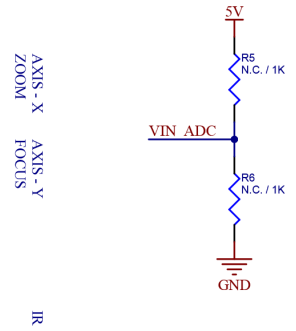
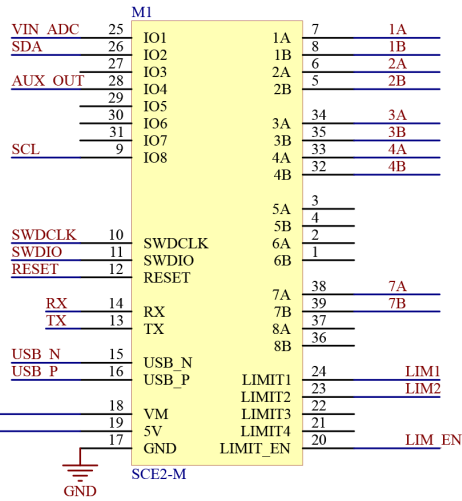
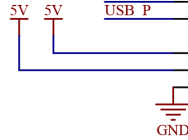
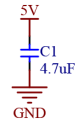
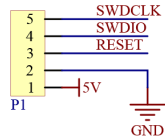
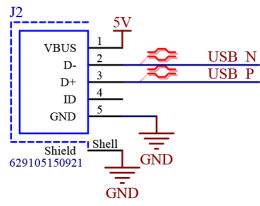
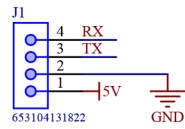
Nr	Function
1	ZOOM A+
2	ZOOM B+
3	ZOOM A-
4	ZOOM B-
5	IR-
6	IR+
7	N.C.
8	HALL+
9	BIAS+
10	HALL-
11	BIAS-
12	N.C.
13	IRIS DRIVE+
14	IRIS DRIVE-
15	IRIS CONT+
16	IRIS CONT-
17	Focus RST

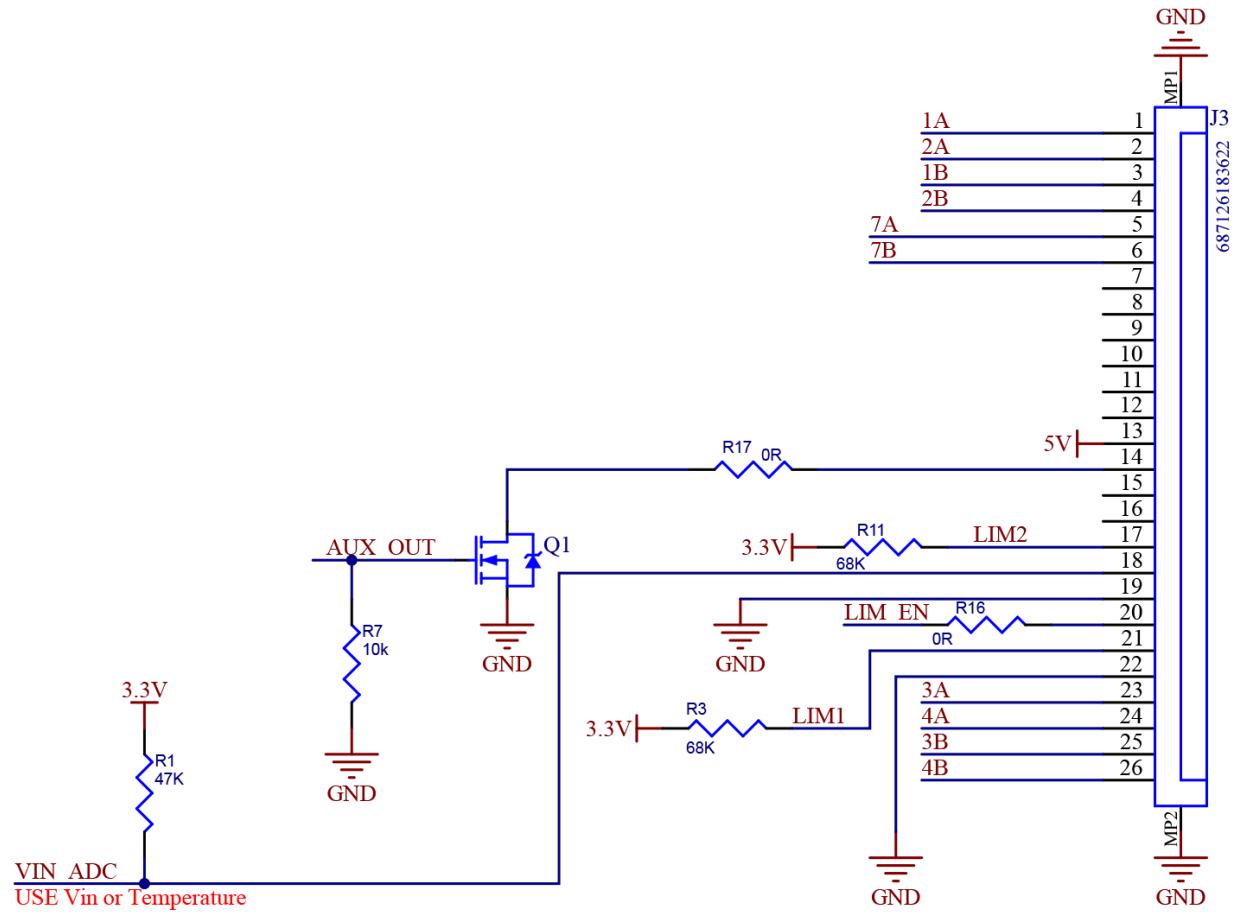
18	Therm1
19	Therm2
20	SENS VCC
21	Zoom RST
22	SENS GND
23	Focus A+
24	Focus B+
25	Focus A-
26	Focus B-

# Controller

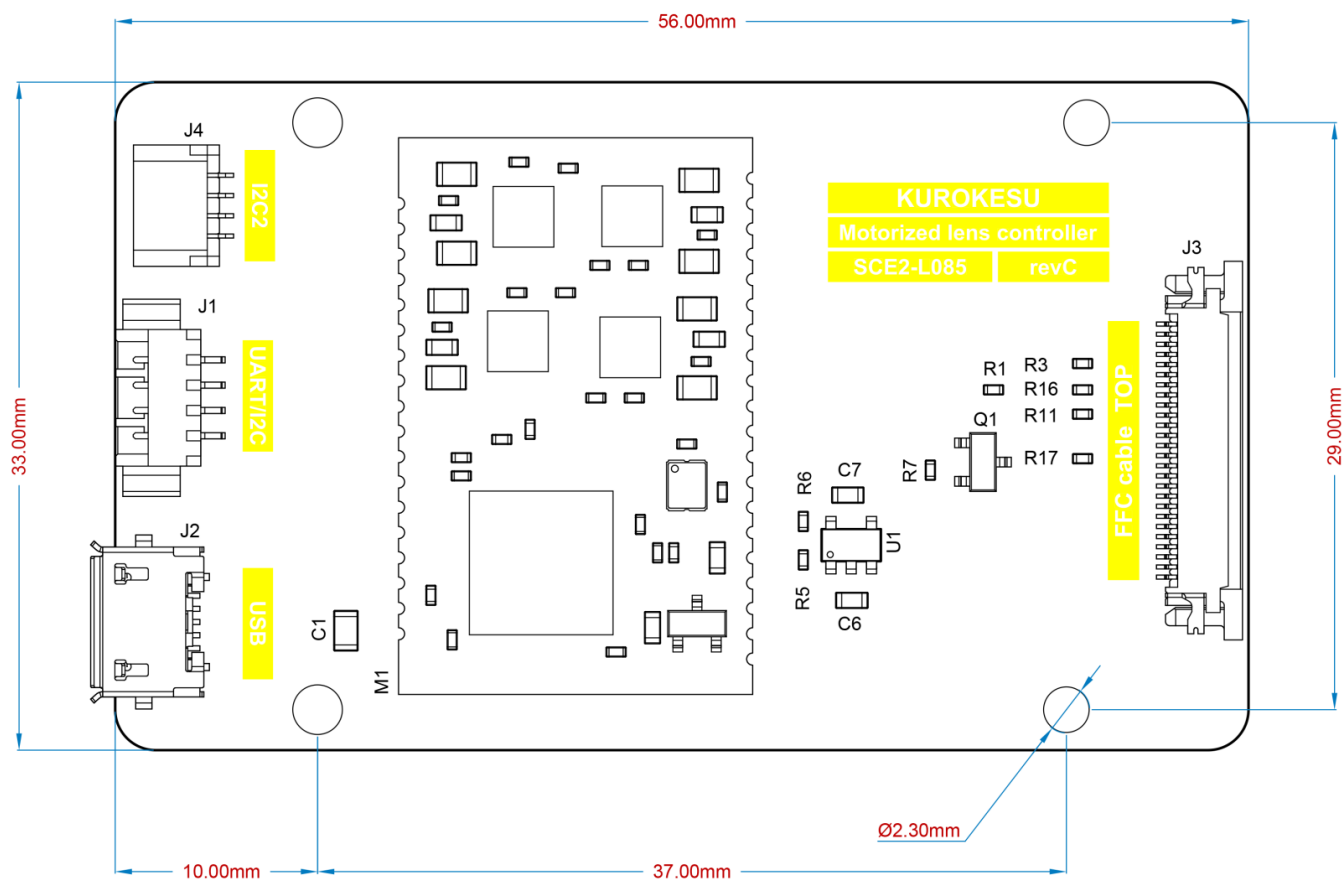
Controller uses SCE2-M module populated on the custom carrier board.

# Schematics





PCB



Revision #7

Created 22 January 2022 13:26:10 by Saulius

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