

# L120-DEVKIT

## Brief

L120 is 6.7-190mm focal length (28x) motorized zoom lens is designed for 1/1.8" image sensors, has zoom/focus/iris functions, designed for 5M sensors.

## Specifications

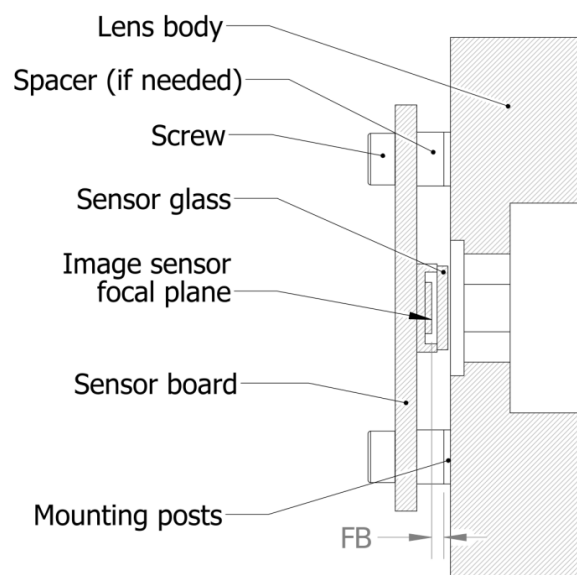
### Optics

Image sensor	1/1.8" Effective image area > 9.3mm
Focal distance	6.7 ~ 190mm / $\pm 5\%$
Aperture	f/1.6 ~ f/4.7
Focus range	<ul style="list-style-type: none"><li>• WIDE: 0.1m - infinity</li><li>• TELE: 1.0m - infinity</li></ul>
Field of view (D=8.26mm)	<ul style="list-style-type: none"><li>• WIDE: 65.5°</li><li>• TELE: 2.4°</li></ul>
Distortion	<ul style="list-style-type: none"><li>• WIDE: -1.08%</li><li>• TELE: 0.35%</li></ul>
Recommended image sensor	IMX385

### Mechanics

Flange back ( <b>FB</b> , see diagram below)	-1.0mm (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: 119mm</li> <li>• Width: 50mm</li> <li>• Height: 50mm</li> <li>• Front end diameter: 43mm</li> </ul>
Weight	194g (+controller 7.6g)

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.



## Motor specifications

Screw pitch	0.4mm
Spiral rotation direction	Right
Rated voltage	5.0 VDC
Coil resistance	<ul style="list-style-type: none"><li>• Zoom: <math>55\Omega \pm 10\%</math> / phase (T=25°C)</li><li>• Focus: <math>55\Omega \pm 10\%</math> / phase (T=25°C)</li></ul>
Phase count	2
Step angle	<ul style="list-style-type: none"><li>• Zoom: 18° / step</li><li>• Focus: 18° / step</li></ul>
Operating temperature range	-30°C ~ +70°C

## Position alignment sensor PI

Model number	GP1S093HCZ0F SHARP
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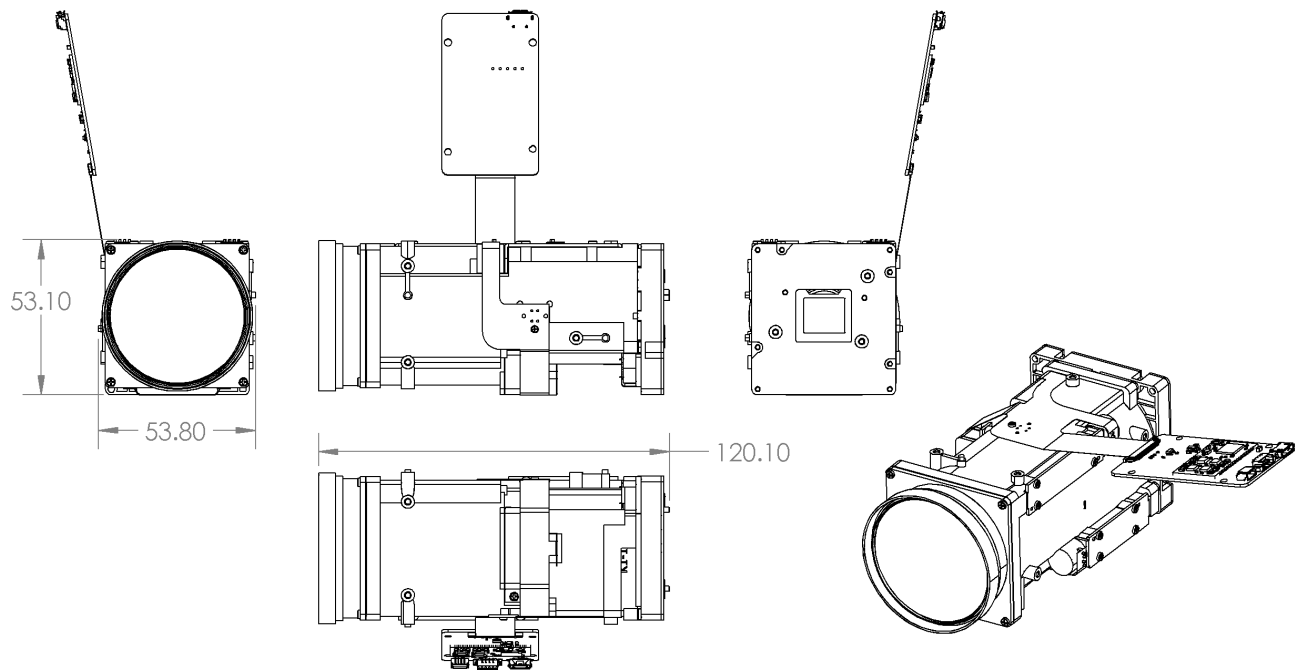
## Iris

Driving resistance	$120\Omega \pm 10\%$ (T=20°C, 65% RH)
Braking resistance	$120\Omega \pm 10\%$ (T=20°C, 65% RH)
Close to open operation	3.5 ~ 5.0V
Open to close operation	0 ~ 0.8V

## IR switch

Coil resistance	$22.5 \pm 10\%$ (T=20°C)
Operation voltage	4.5 ~ 5.0V
Current consumption	144 ~ 200mA
Filter thickness	0.3mm
Switching time	200 ~ 500ms
Filters	<ul style="list-style-type: none"><li>• Open air</li><li>• 380 ~ 650nm (T<sub>AVG</sub> &gt;90%)</li></ul>

## Dimensions



More detailed documentation coming soon!

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