OpenMV® Telephoto Lens

Datasheet

SKU: Telephoto-Lens / IR-Telephoto-Lens

Description

This lens gives your OpenMV Cam the ability to see longer distances (zoom in). The standard lens that ships with your OpenMV Cam has about a 70-degree FOV which allows your camera to see more things, but with less detail. This lens has about a 20-degree FOV, providing about a 4x zoom on any particular object. Available with or without a 650 nm IR cut filter.

Target Areas

Long-range detection, eye tracking, zoom applications, quality inspection, wildlife monitoring, perimeter security.

Key Features

- **~20-degree FOV (4x zoom)** — Up to 4.29x optical zoom with OV7725. Enables long-range detail resolution.
- **12 mm focal length** — F2.0 aperture, 1/3" image format.
- **M12 x 0.5 mount** — Standard M12 threaded mount compatible with all OpenMV Cam models.
- **Multi-sensor compatible** — FOV data for PS5520, PAG7936, MT9M114, MT9V024/034, OV7725, OV5640, and OV2640.
- **IR cut filter option** — Available with 650 nm IR cut filter or without.
- **3D model available** — STEP file available on GrabCAD.

Applications

The Telephoto Lens is great for any application where you need your OpenMV Cam to zoom in on some subject. For example, the telephoto lens makes it easy to do eye-tracking without IR light by zooming in on someone's eye, making it easier to determine the direction their pupil is pointing.

Contents

1 Specifications

- 1.1 Optical Specifications
- 1.2 FOV with PS5520 Sensor
- 1.3 FOV with PAG7936 Sensor
- 1.4 FOV with OV7725 Sensor
- 1.5 FOV with OV5640 Sensor
- 1.6 FOV with OV2640 Sensor
- 1.7 FOV with MT9V024/034 Sensor
- 1.8 FOV with MT9M114 Sensor

2 General Info

3 Certifications

4 Company Information

5 Reference Documentation

6 Revision History

1 Specifications

1.1 Optical Specifications

Component	Details
Focal Length	12 mm
Aperture	F2.0
Image Format	1/3"
Mount	M12 x 0.5 threaded
IR Cut Filter	650 nm (variant with IR cut filter)

1.2 FOV with PS5520 Sensor

Component	Details
Diagonal / Horizontal / Vertical	33.1° / 26.7° / 20.2°
Optical Zoom	3.33x (vs. 3.6 mm lens)

1.3 FOV with PAG7936 Sensor

Component	Details
Diagonal / Horizontal / Vertical	21.4° / 18.2° / 11.4°
Optical Zoom	4.29x (vs. 2.8 mm lens)

1.4 FOV with OV7725 Sensor

Component	Details
Diagonal / Horizontal / Vertical	22.6° / 18.2° / 13.7°
Optical Zoom	4.29x (vs. 2.8 mm lens)

1.5 FOV with OV5640 Sensor

Component	Details
Diagonal / Horizontal / Vertical	21.4° / 17.2° / 12.9°
Optical Zoom	4.29x (vs. 2.8 mm lens)

1.6 FOV with OV2640 Sensor

Component	Details
Diagonal / Horizontal / Vertical	20.8° / 16.7° / 12.6°
Optical Zoom	4.29x (vs. 2.8 mm lens)

1.7 FOV with MT9V024/034 Sensor

Component	Details
Diagonal / Horizontal / Vertical	25.1° / 21.3° / 13.7°
Optical Zoom	4.29x (vs. 2.8 mm lens)

1.8 FOV with MT9M114 Sensor

Component	Details
Diagonal / Horizontal / Vertical	14.6° / 11.7° / 8.8°
Optical Zoom	4.29x (vs. 2.8 mm lens)

2 General Info

Dimension	Value
Length	14 mm
Width	14 mm
Height	15 mm
Weight	4 g
Operating Temperature	-20°C to +80°C
Storage Temperature	-20°C to +80°C
Country of Origin	China
HS Code	8473.30.2000
UPC	638126314697, 608275911214
SKU	Telephoto-Lens, IR-Telephoto-Lens
ECCN	EAR99

3 Certifications

Certification	Region	Details
RoHS	EU	Compliant with EU Directive 2011/65/EU (RoHS 2). All components and solder are lead-free.
REACH	EU	Compliant with EU Regulation (EC) No 1907/2006.

4 Company Information

Field	Details
Website	https://openmv.io
Documentation	https://docs.openmv.io
Support	https://forums.openmv.io

5 Reference Documentation

Reference	Link / Document
Product Page	https://openmv.io/products/telephoto-lens
3D Model (STEP)	https://grabcad.com/library/telephoto-lens-1

6 Revision History

Date	Revision	Changes
2026-04-04	Rev 1	Initial public release.