

CA-LH8

High-resolution Low-distortion Lens 8 mm

Forms the imaging path for a compatible KEYENCE area-camera inspection system while limiting geometric distortion across the documented sensor format.

PRODUCT SNAPSHOT

BRAND
KEYENCE

FAMILY
KEYENCE CA-L machine-vision lens system

PART
CA-LH8

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PRODUCT OVERVIEW

Forms the imaging path for a compatible KEYENCE area-camera inspection system while limiting geometric distortion across the documented sensor format.

1

Provides an 8 mm focal length for wide machine-vision fields

2

Uses a C-mount mechanical camera interface

3

Covers compatible image sensors up to 2/3 inch

4

Resolves 100 cycles/mm at the center and 80 cycles/mm at the periphery

SYSTEM COMPONENTS

Compatible KEYENCE area camera

C-mount camera interface

27 mm P0.5 optical filter

Close-up ring when required by the named camera

TECHNICAL NOTE

Thread CA-LH8 fully into the C-mount without loading the optical barrel, set the working distance at or above 0.1 m, and use a close-up ring of at least 1.5 mm with CV-020, CV-070, CV-035C/M or CV-H035C/M cameras.

TECHNICAL DATA

PARAMETER	VALUE
Focal length	8 mm
F-stop range	F1.4 to F16
Minimum working distance	0.1 m
Lens mount	C-mount
Filter size	27.0 mm P0.5
Compatible image sensor	2/3 inch

PARAMETER	VALUE
TV distortion, 2/3 inch	-0.6%
TV distortion, 1/3 inch	-0.28%
Resolving power, center	100 cycles/mm
Resolving power, periphery	80 cycles/mm
Ambient temperature	0 to +50 degC
Ambient humidity	80% RH or less, non-condensing

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
CA-H200C	KEYENCE 2-megapixel color camera	View CA-H200C page
CA-CH10	KEYENCE high-speed camera cable	View CA-CH10 page
CV-X470F	KEYENCE high-performance vision controller	View CV-X470F page
SZ-VH1	KEYENCE safety-laser-scanner display unit	View SZ-VH1 page
LJ-X8080	KEYENCE laser profiler sensor head	View LJ-X8080 page
GT2-H32	KEYENCE high-accuracy contact sensor head	View GT2-H32 page
EX-416	KEYENCE amplifier unit	View EX-416 page
LJ-V7300	KEYENCE laser profiler controller	View LJ-V7300 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Wide-field component presence inspection

Provides an 8 mm focal length for wide machine-vision fields

Low-distortion dimensional gauging

Uses a C-mount mechanical camera interface

Orientation and assembly verification

Covers compatible image sensors up to 2/3 inch

High-resolution packaging inspection

Resolves 100 cycles/mm at the center and 80 cycles/mm at the periphery

PRODUCT PRECAUTIONS

- 1 Verify the CA-LH8 marking and the 8 mm focal-length designation before removing the installed lens.
- 2 Power down the camera and protect the image sensor opening from dust while the C-mount is exposed.
- 3 Do not touch the optical surfaces; use clean lens-handling methods for the front and rear elements.
- 4 Maintain a working distance of at least 0.1 m when establishing the inspection geometry.
- 5 Use a close-up ring at least 1.5 mm thick when CA-LH8 is paired with CV-020, CV-070, CV-035C/M or CV-H035C/M.
- 6 Confirm that the selected camera sensor does not exceed the documented 2/3-inch compatible format.
- 7 Set aperture and illumination together, then refocus before saving the revised inspection program.
- 8 After installation, verify focus, field coverage and geometric measurement against the approved target.

ENGINEER FAQ

Q1 What focal length does KEYENCE CA-LH8 provide?

KEYENCE specifies an 8 mm focal length for CA-LH8.

Q2 Which camera mount is required for KEYENCE CA-LH8?

CA-LH8 uses a C-mount camera interface.

Q3 What sensor size can KEYENCE CA-LH8 cover?

The official KEYENCE specification lists compatibility with image sensors up to 2/3 inch.

Q4 What working distance should be maintained with KEYENCE CA-LH8?

The documented minimum working distance is 0.1 m; final focus and field coverage must be verified on the installed camera.

Q5 Which aperture range is available on KEYENCE CA-LH8?

The official CA-LH8 specification lists an F-stop range from F1.4 to F16.

Q6 Does KEYENCE CA-LH8 require a close-up ring on every camera?

No. KEYENCE specifically requires a close-up ring of at least 1.5 mm for CV-020, CV-070, CV-035C/M and CV-H035C/M pairings.

Q7 How should KEYENCE CA-LH8 be checked after replacement?

Verify focus, field of view, image sharpness and the approved measurement or inspection result before returning the vision system to production.

Q8 What filter thread is provided on KEYENCE CA-LH8?

KEYENCE specifies a 27.0 mm filter thread with P0.5 pitch.

SOURCE KEYENCE CA-LH8 official product data sheet | KEYENCE CA-LH8

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