

Nikon

NIKKOR

NIKKOR Z MC 105mm f/2.8 VR S

Reference Guide

- Read this document thoroughly before using the product.
- To ensure proper use of the product, be sure to read "For Your Safety" (page 5).
- After reading this document, keep it readily accessible for future reference.

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Introduction

Before You Begin

Before using this product, please read these instructions carefully. You will also need to consult the documentation provided with the camera.

- This lens is intended exclusively for use with mirrorless cameras featuring a Nikon Z mount.
- Update the camera firmware to the latest version. With earlier versions, the camera may fail to detect the lens correctly and some features may not be available. The latest version of the camera firmware can be downloaded from the Nikon Download Center at the URL below.

<https://downloadcenter.nikonimglib.com/>

No reproduction in any form of this document, in whole or in part (except for brief quotation in critical articles or reviews), may be made without written authorization from NIKON CORPORATION.

For Your Safety

To prevent damage to property or injury to yourself or to others, read “For Your Safety” in its entirety before using this product.

After reading these safety instructions, keep them readily accessible for future reference.



WARNING: Failure to observe the precautions marked with this icon could result in death or severe injury.



CAUTION: Failure to observe the precautions marked with this icon could result in injury or property damage.



WARNING

Do not disassemble or modify this product. Do not touch internal parts that become exposed as the result of a fall or other accident.

Failure to observe these precautions could result in electric shock or other injury.

Should you notice any abnormalities such as the product producing smoke, heat, or unusual odors, immediately disconnect the camera power source.

Continued operation could result in fire, burns or other injury.

Keep dry. Do not handle with wet hands.

Failure to observe these precautions could result in fire or electric shock.

Do not use this product in the presence of flammable dust or gas such as propane, gasoline or aerosols.

Failure to observe this precaution could result in explosion or fire.



WARNING

Do not directly view the sun or other bright light source through the lens.

Failure to observe this precaution could result in visual impairment.

Keep this product out of reach of children.

Failure to observe this precaution could result in injury or product malfunction.

In addition, note that small parts constitute a choking hazard. Should a child swallow any part of this product, seek immediate medical attention.

Do not entangle, wrap or twist the straps around your neck.

Failure to observe this precaution could result in accidents.

Do not handle with bare hands in locations exposed to extremely high or low temperatures.

Failure to observe this precaution could result in burns or frostbite.



CAUTION

Do not leave the lens pointed at the sun or other strong light sources.

Light focused by the lens could cause fire or damage to product's internal parts. When shooting backlit subjects, keep the sun well out of the frame. Sunlight focused into the camera when the sun is close to the frame could cause fire.

Do not leave the product where it will be exposed to extremely high temperatures for an extended period, such as in an enclosed automobile or in direct sunlight.

Failure to observe this precaution could result in fire or product malfunction.

Do not transport cameras or lenses with tripods or similar accessories attached.

Failure to observe this precaution could result in injury or product malfunction.

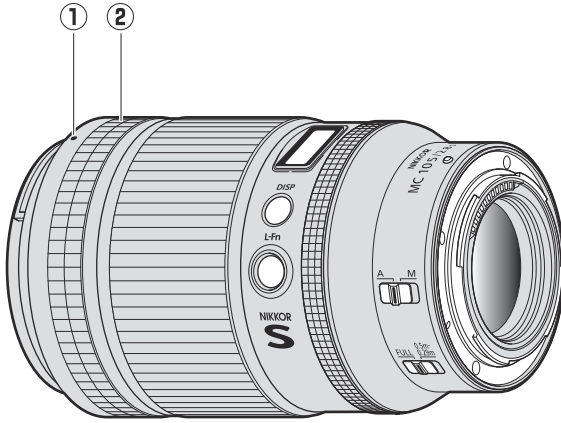
Keep the product at least 5 cm (2.0 in.) from pacemakers and other medical devices.

Medical devices in close proximity could be affected by the magnet or magnets in the product.

Using the Lens

Parts of the Lens: Names and Functions

The parts of the lens are listed below.

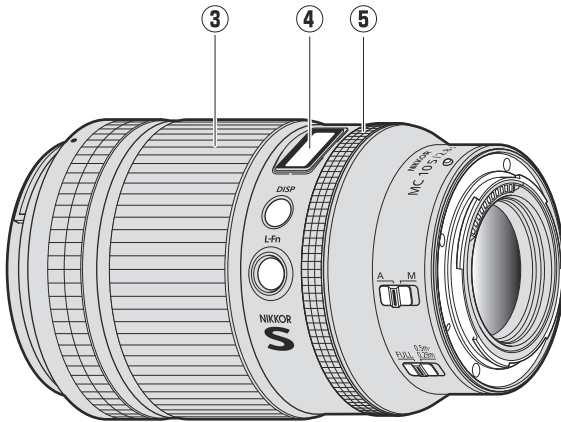


1 Lens hood mounting mark

Use when attaching the lens hood.

 ["Attaching and Removing the Lens Hood" \(p.21\)](#)

2 Rubber grip



3 Focus ring

Use for manual focus.

- When focusing using autofocus, you can adjust focus manually by rotating the ring while the shutter-release button is pressed halfway; after focusing, press the shutter-release button the rest of the way down to shoot.

4 Lens info panel

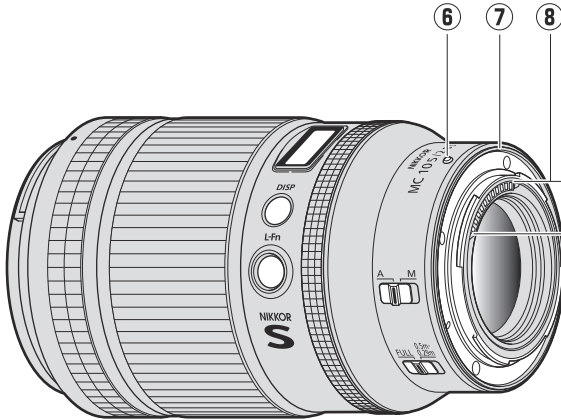
View focus distance, depth of field, and other information.

📖 ["The Lens Info Panel" \(p.17\)](#)

📖 ["Panel Options" \(p.19\)](#)


5 Control ring

Rotate to adjust a setting such as **[Aperture]** or **[Exposure compensation]** assigned using the camera. For more information, see the description of **[Custom control assignment]**, **[Custom controls]**, or **[Custom controls (shooting)]** in the camera manual.



6 Lens mounting mark

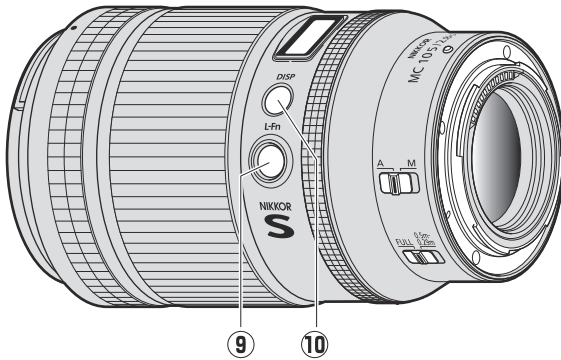
Use when mounting the lens on the camera.

 ["Attachment and Removal" \(p.16\)](#)

7 Rubber lens-mount gasket

8 CPU contacts

Used to transfer data to and from the camera.



9 L-Fn button

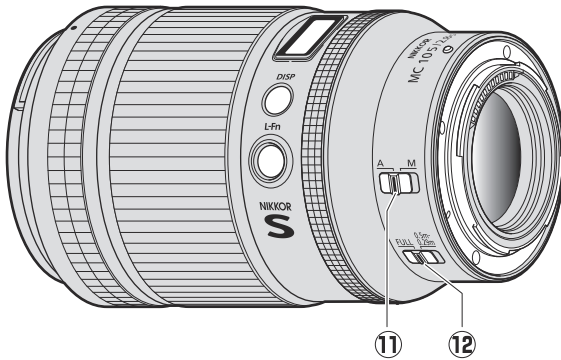
Press to perform a function assigned using the camera. For more information, see the description of [**Custom control assignment**], [**Custom controls**], or [**Custom controls (shooting)**] in the camera manual.

10 Display button (DISP)

Save settings or choose the information shown in the lens info panel.

 ["The Lens Info Panel" \(p.17\)](#)

 ["Panel Options" \(p.19\)](#)



11 Focus-mode switch

Choose a focus mode.

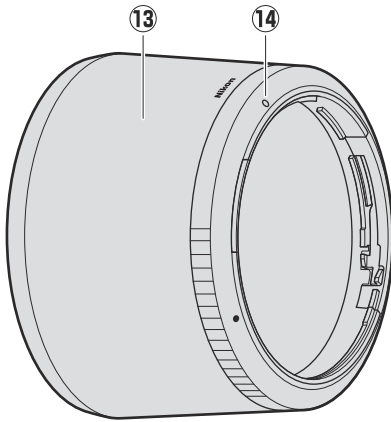
- **A:** Autofocus
- **M:** Manual focus

Note that regardless of the setting chosen, focus must be adjusted manually when manual focus mode is selected using camera controls.

12 Focus limit switch

Choose the focus distance limits for autofocus according to your goals.

- **FULL:** Choose for subjects at distances anywhere in the lens's full autofocus range (0.29 m/0.96 ft to infinity).
- **0.5 m – 0.29 m:** Limit autofocus to distances of 0.29 m (0.96 ft) to 0.5 m (1.64 ft). Choose this option for faster focusing when shooting close-ups or at any time when you anticipate that your subject will be no more than 0.5 m away.



13 Lens hood

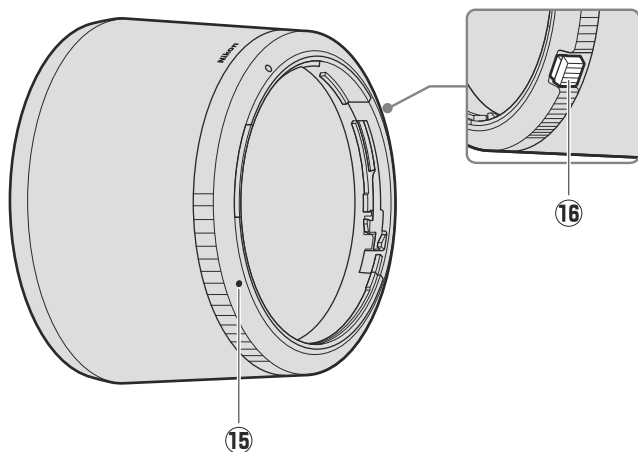
Lens hoods block stray light that would otherwise cause flare or ghosting. They also serve to protect the lens.

📖 ["Attaching and Removing the Lens Hood" \(p.21\)](#)

14 Lens hood lock mark

Use when attaching the lens hood.

📖 ["Attaching and Removing the Lens Hood" \(p.21\)](#)



15 Lens hood alignment mark

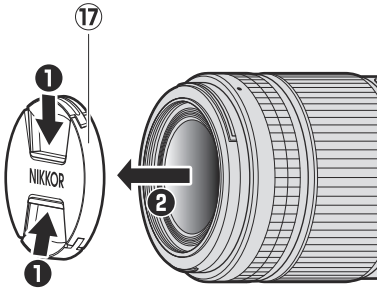
Use when attaching the lens hood.

 ["Attaching and Removing the Lens Hood" \(p.21\)](#)

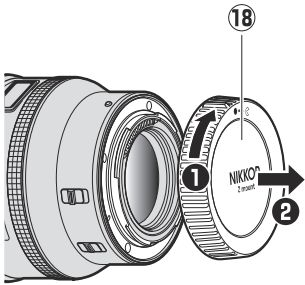
16 Lens hood lock release button

Use when removing the lens hood.

 ["Attaching and Removing the Lens Hood" \(p.21\)](#)



17 Lens cap (front cap)



18 Lens cap (rear cap)

Attachment and Removal

Attaching the Lens

1. Turn the camera off, remove the body cap, and detach the rear lens cap.
2. Position the lens on the camera body, keeping the mounting mark on the lens aligned with the mounting mark on the camera body, and then rotate the lens counterclockwise until it clicks into place.

Removing the Lens

1. Turn the camera off.
2. Press and hold the lens release button while turning the lens clockwise.

Removing the Lens

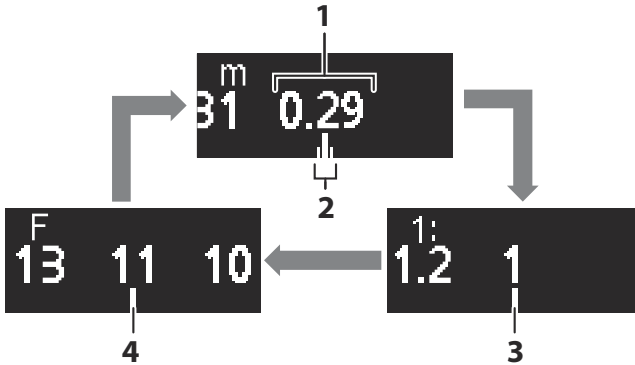
Do not remove the lens while the camera is on.

- If, after removing the lens from the camera, you notice that it rattles when shaken, reattach the lens, turn the camera on, and then turn the camera off and remove the lens in the correct order.

The Lens Info Panel

The lens Info panel lights when the lens is attached to a camera and the camera is on.

- Press the lens display button to cycle the display as shown:



- 1 Focus distance
- 2 Depth of field
- 3 Reproduction ratio
- 4 Aperture

- Depth of field is displayed when the camera is in mode **A** or **M**.
- The effective aperture is displayed only when the camera is in mode **A** or **M**. The display for other modes is shown in the illustration.



- The panel turns off automatically when the camera standby timer expires or if no lens operations are performed for about 10 seconds. Press the display button to reactivate the display.

The Lens Info Panel

The focus distance, depth of field, and reproduction ratio displayed in the lens info panel are approximations only.

Reproduction Ratio

When the reproduction ratio is displayed in the lens info panel, the value shown by the index is the denominator. For example, the index points to "1" to show a reproduction ratio of 1:1 (life size) and to "2" when the reproduction ratio is 1:2 (half life-size).



Reproduction ratio 1:2 (half life-size)

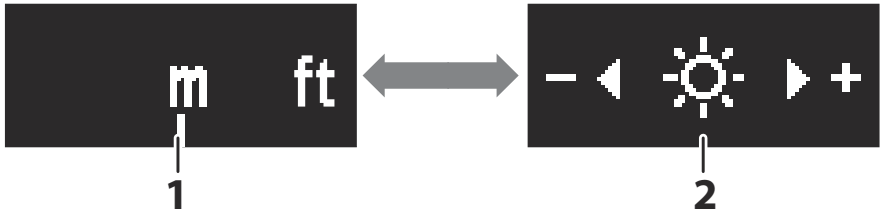
1 Index

Panel Options

Follow the steps below to choose the units for focus distance from meters (**m**) or feet (**ft**) or adjust the brightness of the lens Info panel.

1. Press and hold the display button to view settings.

- Unit or brightness selection options will be displayed. The currently selected item will flash.
- Press the display button to toggle between displays.



1 Units

2 Brightness

2. Choose a setting using the lens control ring.

Units

- Rotate the control ring to choose from meters (**m**) or feet (**ft**).



Brightness

- Rotate the control ring in the “+” (brighter) or “-” (darker) direction.



- Choose from 6 levels of brightness.
- To turn the lens info panel off, rotate the ring in the “-” direction until the ☀ icon changes to ✖.



- Press the display button to save changes and toggle the display.
- If no operations are performed using lens controls for about 5 seconds, panel options will clear from the display. Any changes will be lost.

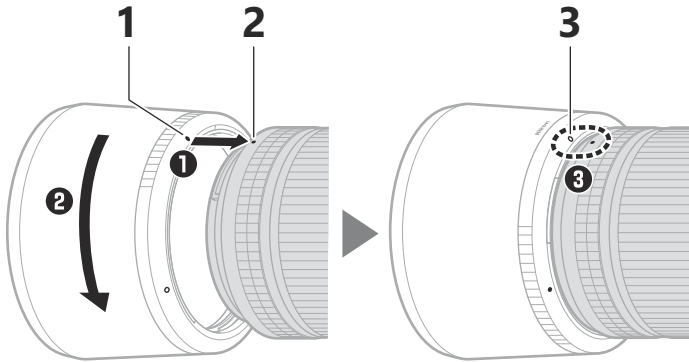
3. Press and hold the display button to return to the lens information display.

- Choosing ✖ for brightness turns the lens info panel off. To turn the display on again, press and hold the display button.

Attaching and Removing the Lens Hood

Attaching the Lens Hood

- Align the lens hood mounting mark with the lens hood alignment mark (❶) and then rotate the lens hood (❷) until the mounting mark is aligned with the lens hood lock mark (❸).

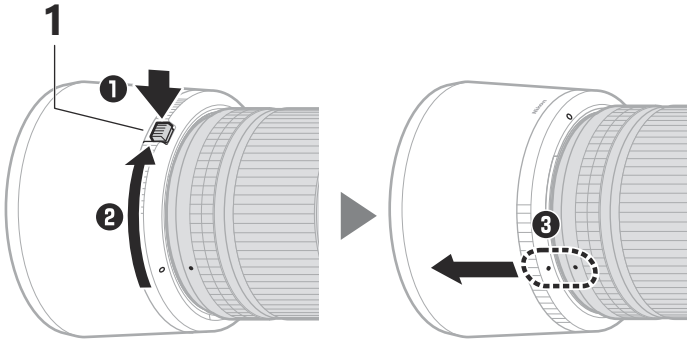


- ❶ Lens hood alignment mark
- ❷ Lens hood mounting mark
- ❸ Lens hood lock mark

- Gripping the front too tightly makes the lens hood difficult to attach or remove. When rotating the lens hood, hold it near the lens hood alignment mark (●) on its base.
- The lens hood can be reversed and mounted on the lens when not in use.

Removing the Lens Hood

- Keeping the lens hood lock release button pressed (❶), rotate the lens hood in the direction shown (❷) and remove it from the lens (❸).



1 Lens hood lock release button

- The same procedure can be used when the lens hood is reversed.

Precautions for Use

- Do not pick up or hold the lens or camera using only the lens caps or lens hood.
- Keep the CPU contacts clean.
- Should the rubber lens-mount gasket be damaged, cease use immediately and take the lens to a Nikon-authorized service center for repair.
- Replace the lens caps when the lens is not in use.
- Do not leave the lens in humid locations or in locations in which it may be exposed to moisture. Rusting of the internal mechanism can cause irreparable damage.
- Do not leave the lens next to open flames or in other extremely hot locations. Extreme heat could damage or warp the reinforced plastic exterior.
- Taking the lens from a warm to a cold environment or *vice versa* may cause damaging condensation inside and outside the lens. Place the lens in a sealed bag or plastic case before taking it across a temperature boundary. The lens can be taken from the bag or case once it has had time to adjust to the new temperature.
- We recommend that you place the lens in its case to protect it from scratches during transport.
- Keep credit cards and other such magnetic storage devices away from the camera and lens. Data stored on the device could be corrupted.

Lens Care

- Removing dust is normally sufficient to clean the glass surfaces of the lens.
- When cleaning the fluorine-coated front lens element:
 - Remove fingerprints and other oily stains with a soft, clean cotton cloth or third-party lens cleaning tissue; clean from the center outwards using a circular motion.
 - To remove stubborn stains, wipe gently using a soft cloth lightly dampened with a small amount of distilled water, ethanol, or third-party lens cleaner.
 - Drop-shaped marks may form on fluorine-coated surfaces, which are highly water- and oil-repellent. Such marks can be removed with a dry cloth.
- When cleaning the rear lens element, which is not fluorine-coated:
 - Remove fingerprints and other oily stains with a soft, clean cloth or third-party lens cleaning tissue lightly dampened with a small amount of ethanol or third-party lens cleaner; clean from the center outwards using a circular motion. Be sure to clean evenly and thoroughly without leaving smears.
- Never use organic solvents such as paint thinner or benzene to clean the lens.
- Neutral Color (NC) filters (available separately) and the like can be used to protect the front lens element.
- Do not store with naphtha or camphor moth balls or in direct sunlight. If the lens will not be used for an extended period, store it in a cool, dry location to prevent mold and rust.

Technical Notes

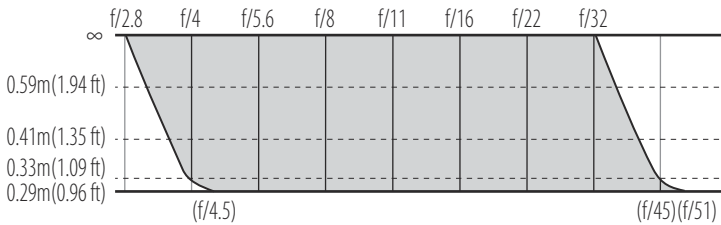
Shooting Close-Ups

This lens can be used for close-ups, letting you get closer to your subject so that it fills more of the frame. When shooting close-ups, note the following:

- Close-ups are prone to blur caused by camera shake. We recommend that you mount the camera on a tripod and release the shutter using an optional remote cord or wireless remote controller.
- Shooting at short focus distances noticeably reduces depth of field. To increase depth of field and so increase the apparent depth of focus in front of and behind the focus point, stop aperture down and increase exposure times.
- Be careful not to strike your subject when using the lens hood.

Adjusting Aperture

The aperture of the lens varies in a range that changes with focus distance. At a focus distance of infinity, aperture ranges from $f/2.8$ to $f/32$, while the range at a focus distance of 0.29 m (0.96 ft) is $f/4.5$ to $f/51$. At apertures matching or close to the maximum and minimum for the lens in modes **A** and **M**, effective aperture¹ is automatically adjusted for changes in focus distance as shown.² For example, if an aperture of $f/2.8$ is selected at a focus distance of infinity, the effective aperture when the focus distance is reduced to 0.29 m (0.96 ft) will be $f/4.5$.



- 1 Due to the way the lens is constructed, the brightness of the image it projects on the image sensor varies with focus distance. The image darkens as the focus distance drops and the reproduction ratio increases. The camera and lens info panel consequently show an “effective aperture” that reflects this variation in brightness.
- 2 Assuming an aperture step size of $1/3$ EV.

Choosing a Reproduction Ratio

To take pictures at a selected reproduction ratio—for example, 1:1 (life size) or 1:2 (half life-size):

1. Slide the focus-mode switch to M.

2. Press the display button to display the reproduction ratio in the lens info panel.

3. Rotate the focus ring until the desired reproduction ratio is selected in the lens info panel.

- For example, to select a reproduction ratio of 1:2, rotate the focus ring until the index points to “2”. Do not rotate the focus ring after choosing the reproduction ratio.



4. Position the camera so that the subject is in focus.

- Move the camera forward or back until the image in the shooting display is in focus.

Reproduction Ratio

The “reproduction ratio” is the ratio of the apparent size of an object on the image sensor to its true size. If the length of the subject on the image sensor is 1 cm when the actual subject is 2 cm long, for example, the reproduction ratio is 1:2 (half life-size).

Vibration Reduction (VR)

The lens supports vibration reduction. Vibration reduction settings can be adjusted from the camera. For more information, see the camera manual.

With [**Normal**] selected for the on-camera vibration reduction option, vibration reduction allows shutter speeds up to 4.5 stops * slower than would otherwise be the case, expanding the range of shutter speeds available.

* Measured according to CIPA standards. Values for lenses that support FX format are measured on FX-format mirrorless cameras, those for DX lenses on DX-format mirrorless cameras. Values for zoom lenses are measured at maximum zoom.

Vibration Reduction and Focus Distance

The effectiveness of vibration reduction diminishes as the focus distance drops.

Vibration Reduction

We recommend selecting [**Off**] for the on-camera vibration reduction option when the camera is mounted on a tripod or monopod.

Taking Photographs

The focus position may change if you turn the camera off and then on again after focusing. If you have focused on a pre-selected location while waiting for your subject to appear, we recommend that you do not turn the camera off until the picture is taken.

Cameras with AF-Assist Illuminators

The lens or lens hood may block the light from the camera AF-assist illuminator.

- For the information on using the lens with cameras that have built-in AF-assist illuminators, visit the site below.

<https://downloadcenter.nikonimglib.com/>

Using the Lens on Cameras with a Built-in Flash

Shadows will be visible in photos where light from the built-in flash is obscured by the lens or lens hood. Remove the lens hood before shooting. Note, however, that depending on the distance to the subject and lens focal length, shadows may appear even when the lens hood is removed.

- For information on the subject distances and focal lengths at which shadows will not appear in photos taken with a built-in flash, visit the site below.

<https://downloadcenter.nikonimglib.com/>

Accessories

Supplied Accessories

- LC-62B Lens Cap (front cap)
- LF-N1 Lens Cap (rear cap)
- HB-99 Lens Hood
- CL-C2 Lens Case

✓ Using the Lens Case

- The case is intended to protect the lens from scratches, not from falls or other physical shocks.
- The case is not water resistant.
- The material used in the case may fade, bleed, stretch, shrink, or change color when rubbed or wet.
- Remove dust with a soft brush.
- Water and stains can be removed from the surface with a soft, dry cloth. Do not use alcohol, benzene, thinner, or other volatile chemicals.
- Do not store in locations exposed to direct sunlight or high temperatures or humidity.
- Do not use the case to clean the monitor or lens elements.
- Be careful that the lens does not fall from the case during transport.

Material: Polyester

Compatible Accessories

- 62 mm filters
 - SB-R200 wireless remote flash units *
- * The lens can be used with up to four SB-R200 flash units.

Filters

- Use only one filter at a time.
- Remove the lens hood before attaching filters. You will also need to remove the lens hood before rotating circular polarizing filters.

Specifications

Mount	Nikon Z mount
Focal length	105 mm
Maximum aperture	f/2.8
Lens construction	16 elements in 11 groups (including 3 ED elements, 1 aspherical element, elements with Nano Crystal and ARNEO coats, and a fluorine-coated front lens element)
Angle of view	<ul style="list-style-type: none">• FX format: 23° 10'• DX format: 15° 20'
Focusing system	Internal focusing system
Vibration reduction	Lens shift using voice coil motors (VCMs)
Minimum focus distance	0.29 m (0.96 ft) from focal plane
Maximum reproduction ratio	1×
Diaphragm blades	9 (rounded diaphragm opening)
Aperture range	<ul style="list-style-type: none">• At a focus distance of infinity: f/2.8 – 32• At a focus distance of 0.29 m (0.96 ft): f/4.5 – 51
Focus limit switch	Two positions: FULL (∞ – 0.29 m) and 0.5 m – 0.29 m
Filter-attachment size	62 mm (P = 0.75 mm)

Dimensions	Approx. 85 mm/3.4 in. maximum diameter × 140 mm/ 5.6 in. (distance to end of lens from camera lens mount flange)
Weight	Approx. 630 g (1 lb 6.3 oz)

Nikon reserves the right to change the appearance, specifications, and performance of this product at any time and without prior notice.

Notices

Notices for Customers in the U.S.A.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission (FCC) Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTIONS

• Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Nikon Corporation may void the user's authority to operate the equipment.

Nikon Inc., 1300 Walt Whitman Road, Melville, New York 11747-3064, U.S.A.

Tel.: 631-547-4200

Notices for Customers in Canada

CAN ICES-003 (B) / NMB-003 (B)

Notices for Customers in Europe

This symbol indicates that electrical and electronic equipment is to be collected separately.



The following apply only to users in European countries:

- This product is designated for separate collection at an appropriate collection point. Do not dispose of as household waste.
- Separate collection and recycling helps conserve natural resources and prevent negative consequences for human health and the environment that might result from incorrect disposal.
- For more information, contact the retailer or the local authorities in charge of waste management.

