On-Camera Flash
for Canon, Nikon, or Sony
NS-DCF200C/NS-DCF200N/NS-DCF200S

Before using your new product, please read these instructions to prevent any damage.

Note: Camera flashes are designed for specific camera makes. For example, you cannot use the Canon flash (NS-DCF200C) with a Nikon or Sony camera.
Insignia On-Camera Flash

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Introduction

Congratulations on your purchase of a high-quality Insignia product. Your NS-DCF200C (for Canon cameras), NS-DCF200N (for Nikon cameras), or NS-DCF200S (for Sony cameras) represents the state of the art in advanced on-camera flash technology and is manufactured for reliable and trouble-free performance.

Important Safety Instructions

To prevent damage to your flash or injury to you or to others, read the following safety precautions in their entirety before using your flash.

1. Read and understand all instructions before using.
2. Keep these instructions.
3. Always keep this product dry. Do not use in rain or in damp conditions.
4. Do not leave or store your flash in places where the ambient temperatures are over 122°F (50°C), for example, in an automobile. Otherwise the electronic parts may be damaged.
5. This product contains high-voltage electronic parts. Touching the high-voltage circuit inside it may result in electric shock. Do not disassemble. Should repairs become necessary, this product must be sent to an authorized maintenance center.
6. Stop using this product if it breaks open due to a drop or strong impact. Otherwise, electric shock may occur if you touch the electronic parts inside it.
7. Do not fire your flash directly into the eyes (especially those of babies) within short distances. Otherwise, visual impairment may occur. When taking pictures of babies, keep your flash at least 3.3 ft. (1 m) away from them. Using bounce flash to reduce light intensity is also recommended.
8. Do not use your flash in the presence of flammable gases, chemicals, and other similar materials. In certain circumstances, these materials may be sensitive to the strong light emitting from this flash unit and fire or electromagnetic interference may result.
Overheating occurs if you use your flash continuously without letting it cool down. We advise that you let your flash cool for about 10 minutes after 30 continuous full-power flashes.

SAVE THESE INSTRUCTIONS

Features
• Designed for:
  • Canon cameras with hotshoe (NS-DCF200C)
  • OR
  • Nikon DSLR cameras with hotshoe (NS-DCF200N)
  • OR
  • Sony cameras with Multi Interface Shoe mount (NS-DCF200S)
• Increased brightness and versatility compared to built-in flash
• Compact design for easy transportation
• High-output design for maximum performance
• Full feature set for maximum flexibility
• TTL compatibility for seamless integration with camera focus and metering system
• Backlit LCD screen for visibility

Package contents
• Insignia On-Camera Flash
• Carrying Case
• Stand
• User Guide
Flash body

- Catchlight panel
- Wide panel
- Battery compartment
- Flash head
- Optical control sensor
- Focus assist beam
- Mounting foot
- LCD panel
- Battery compartment
- Lock ring
Control panel

- **ZOOM** select button
- **MODE** select button
- **C.Fn** custom function button (press for 2 seconds)
- **SLAVE** triggering button
- **SYNC** button
- **Power** button
- **Select dial**
- **SET** button
- **Test button/flash ready indicator**

**TTL autofocus**

- **TTL autofocus mode**
- **Zoom display**
- **Focus length**
- **High-speed sync**
- **Flash exposure compensation amount**
**Manual flash**

- Manual flash mode
- Manual flash output

**Stroboscopic flash**

- Stroboscopic mode
- Number of flashes
- Flash frequency
Installing batteries

Note: Using premium batteries, such as non-rechargeable lithium or high-output rechargeable batteries, will noticeably reduce flash recycle time and improve battery life.

1. While pressing in on the battery compartment cover, slide the cover down, then lift the cover to open the compartment.

2. Insert two AA batteries (not included) into the battery compartment. Make sure that the + and – symbols on the batteries match the symbols in the battery compartment.

3. Replace the battery compartment cover.
Cautions:

• Batteries should not be exposed to excessive heat, such as sunshine, heat registers, or fire.
• Battery chemicals can cause a rash. If the batteries leak, clean the battery compartment with a cloth. If chemicals touch your skin, wash immediately.
• Make sure that batteries are disposed of correctly. Do not burn or incinerate.

Notes:

• Do not mix batteries of different types.
• Do not mix old and new batteries.
• Remove batteries when the charge is depleted.
• If your flash is not going to be used for an extended period of time, remove the batteries.

Low battery warning

If the battery power is low, the icon blinks on the LCD. You need to replace the batteries.
Attaching your flash to a camera

1 If the camera has a plastic protective cover on the hotshoe, remove it.

2 Rotate the lock ring on your flash’s mounting foot counter-clockwise as far as it will go to make sure that the lock ring is completely loosened.

3 Slip your flash’s mounting foot into the camera’s hotshoe. Make sure that the foot is all the way into the hotshoe.

4 Rotate the lock ring on the flash’s mounting foot clockwise until it locks in place.

5 To remove your flash, rotate the lock ring counter-clockwise to loosen your flash, then slide your flash out of the hotshoe.
Attaching your flash to the stand

1 Rotate the lock ring on your flash's mounting foot counter-clockwise as far as it will go to make sure that the lock ring is completely loosened.
2 Slide your flash's mounting foot into the slot on the stand.
3 Rotate the lock ring on your flash's mounting foot clockwise until it locks in place.
4 Set the stand on a flat, stable surface.
   OR
   Screw the bottom of the stand into a standard camera tripod.

Turning your flash on and off

Caution:
• Turn off your flash if it will not be used for an extended period of time.
• We recommend that you do not disable the Auto Power Off function when your flash is used off camera.

1 Make sure that the batteries are installed. See Installing batteries on page 8.
2 Press the (power) button for one second to turn on your flash.
   If you set up your flash as the master flash, your flash turns off after about 90 seconds. To turn on (wake) your flash, press the camera shutter halfway or press any button.
   If you set up your flash as a slave flash, your flash turns off after about 60 minutes. To turn on (wake) your flash, press any button.
3 Press the button again to turn off your flash.
Power management
When you set up your flash as the master flash, your flash turns off after about 90 seconds of inactivity. To wake your flash, press the camera shutter button halfway or press any flash button. You can turn off the auto power off function.

1 Press the ZOOM/C.Fn button for two seconds until the C.Fn menu is displayed. For the location of the ZOOM/C.Fn button, see Control panel on page 6.
2 Turn the select dial to select ST, then press the SET button. The setting blinks.
3 Turn the select dial to select ON or OFF, then press the ZOOM/C.Fn button.
   Note: When you set up your flash as a slave flash, your flash turns off after about 60 minutes of inactivity.

Selecting a flash mode
Your flash has three flash modes:
- **TTL (auto-flash)**—Your flash and camera work together to calculate the correct exposure for the subject and background. For more information, see Using the TTL auto-flash mode on page 13.
- **Manual (M) mode**—Lets you manually adjust your flash output from 1/1 full power to 1/128th power in one-third stop increments. For more information, see Using the Manual flash mode on page 16.
- **Stroboscopic (Multi) mode**—Lets you take a rapid series of flashes to capture multiple images of a moving subject in a single photograph. For more information, see Using the Stroboscopic mode on page 18.
To select a flash mode:
• Press the MODE button one or more times. The flash mode displayed on the LCD changes each time you press the button. You can select TTL (auto-flash mode), M (Manual mode), or Multi (Stroboscopic mode).

Using the TTL auto-flash mode
In TTL mode, the camera and your flash work together to calculate the correct exposure for the subject and the background. In this mode, multiple functions are available, including:
• Flash exposure compensation (FEC)
• High-speed sync (HSS)
• Second curtain sync

To select TTL mode:
• Press the MODE button one or more times to select TTL.
Taking a picture

1. On the camera, press the shutter button halfway to focus.
2. On the camera, fully press the shutter button. Your flash fires a pre-flash that the camera uses to calculate exposure and flash output the instant before the photo is taken. Then the camera takes the picture.

If the flash output value is set to the maximum, Hi appears on the LCD for three seconds. Adjust the camera’s aperture, shutter, and ISO parameters if underexposure appears.

If the flash output value is set to the minimum, Lo appears on the LCD for three seconds. Adjust the camera’s aperture, shutter, and ISO parameters if overexposure appears.

Using flash exposure compensation

The flash exposure compensation (FEC) function lets you adjust the flash output from -3 to +3 in 1/3 step increments. FEC is useful in situations where you need to make minor adjustments based on the environment.

1. Press the SET button. The (FEC) icon and the flash exposure value are highlighted on the LCD.
2. Turn the select dial to select 0.3 (1/3 step), 0.7 (2/3 step), or +0 (no flash exposure compensation).
3. Press the SET button to save the setting.
Using high-speed sync

High-speed sync lets your flash automatically synchronize with the camera shutter speed. This function is convenient when you want to use aperture priority for fill-flash portraits.

1. Press the **SYNC** button to turn on high-speed sync. The $\text{H}$ icon appears on the LCD.

2. On the camera, set the shutter speed to high-speed sync. For instructions, see the documentation that came with the camera.

**Notes:**
- With high-speed sync, the faster the shutter speed, the shorter the effective flash range.
- You cannot use high-speed sync with the Stroboscopic flash mode.
- Try to avoid using high-speed sync flash because over use shortens the flash tube’s lifetime.

Using second-curtain sync

With a slow shutter speed, you can create a light train that follows the subject. Your flash fires right before the shutter closes.

- Set the camera to rear mode.

**Note:** For the Canon flash (NS-DCF200C), you can also turn on second-curtain sync by pressing the **SYNC** button until $\text{S}$ appears on the LCD.
Using the Manual flash mode

In Manual mode, you can manually adjust the flash output from 1/1 full power to 1/128th power in one-third step increments. Use a hand-held flash meter to determine the flash output you need.

1 Press the MODE button one or more times to select M (Manual mode).

2 Turn the select dial to choose the flash output amount you want.

Flash output range

The following table shows how the f/stop changes in terms of the f/stop when you increase or decrease the flash output.

For example, when you decrease the flash output to 1/2, 1/2-0.3, or 1/2-0.7, then increase the flash output to more than 1/2, the LCD displays 1/2+0.3, 1/2+0.7, or 1/.

<table>
<thead>
<tr>
<th>Figures displayed when reducing flash level</th>
<th>1/1-0.3</th>
<th>1/1-0.7</th>
<th>1/2</th>
<th>1/2-0.3</th>
<th>1/2-0.7</th>
<th>1/4</th>
<th>****</th>
<th>****</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fourths</td>
<td>1/2+0.7</td>
<td>1/2+0.3</td>
<td></td>
<td>1/4+0.7</td>
<td>1/4+0.3</td>
<td></td>
<td>****</td>
<td>****</td>
</tr>
</tbody>
</table>
Using the Optical S1 secondary flash setting

The S1 secondary flash with optical sensor mode makes your flash fire synchronously when the main flash fires. This produces the same effect as using a radio trigger to create multiple lighting effects.

- To turn on the S1 mode, press the SLAVE button one or more times until S1 is displayed on the LCD.
  Note: S1 optical triggering is only available in Manual flash mode.

Using the Optical S2 secondary flash setting

If the camera has a pre-flash function, the S2 secondary flash with optical sensor mode makes your flash ignore a single pre-flash from the main flash. Your flash fires in response to the second, actual flash, from the main flash.

- To turn on the S2 mode, press the SLAVE button one or more times until S2 is displayed on the LCD.
  Note: S2 optical triggering is only available in Manual flash mode.

Using high-speed sync settings

High-speed sync lets the flash automatically synchronize with the camera shutter speed. This function is convenient when you want to use aperture priority for fill-flash portraits.

1. On your flash, press the SYNC button to select high-speed mode. The $\frac{1}{x}$ icon is displayed on the LCD.
2. On the camera, adjust the shutter speed to high-sync mode.

Notes:
- With high-speed sync, the faster the shutter speed, the shorter the effective flash range.
- You cannot use Stroboscopic mode when using high-speed sync mode.
- Try to avoid using high-speed sync flash because it shortens the flash tube’s lifetime.
Using the Stroboscopic mode

In the Stroboscopic (Multi) mode, the camera takes a rapid series of flashes to capture multiple images of a moving subject in a single photograph.

You can set the firing frequency (number of flashes per second expressed as Hz), the number of flashes, and the flash output.

1 Press the MODE button one or more times to select Multi (Stroboscopic mode).

2 Turn the select dial to choose the flash output amount you want.

3 Press the SET button to select the flash frequency setting, then turn the select dial to set the number.

4 Press the SET button again to select the number of flashes setting, then turn the select dial to set the number.
Calculating the shutter speed

When you use Stroboscopic mode, the shutter remains open until the firing stops. Use the following formula to calculate the shutter speed and set the speed on the camera.

**Number of Flashes / Flash Frequency = Shutter Speed**

For example, if the number of flashes is 10 and the firing frequency is 5Hz, the shutter speed should be at least two seconds.

**Notes:**

- The Stroboscopic flash mode is most effective with a highly reflective subject against a dark background.
- We recommend using a tripod and a remote control.
- A flash output of 1/1 and 1/2 cannot be set for the Stroboscopic flash mode.
- You can use the Stroboscopic flash mode “bulb.” Bulb mode is useful for shooting pictures in low light levels (such as at night) because it keeps the shutter open longer to let in more light.
If the number of flashes is displayed as “—” the firing continues until the shutter closes or the battery is exhausted. The number of flashes are limited as follows:

**Maximum Stroboscopic flashes:**

<table>
<thead>
<tr>
<th>Flash output/Hz</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>6</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1/8</td>
<td>14</td>
<td>14</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>1/16</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>1/32</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>1/64</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>1/128</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash output/Hz</th>
<th>6-7</th>
<th>8-9</th>
<th>10-19</th>
<th>20-50</th>
<th>51-90</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1/8</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1/16</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1/32</td>
<td>40</td>
<td>12</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>1/64</td>
<td>70</td>
<td>60</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>1/128</td>
<td>90</td>
<td>80</td>
<td>70</td>
<td>30</td>
<td>20</td>
</tr>
</tbody>
</table>
Using other functions

Using the auto-focus assist beam

In poorly-lit or low-contrast shooting environments, the built-in auto-focus assist beam automatically lights to make auto-focusing easier. The beam lights only when auto-focusing is difficult and turns off as soon as auto-focusing becomes correct.

If you want to turn off the auto-focus assist beam, set the AF (auto-focus) function to OFF on the C.Fn menu. For more information, see Customizing function settings (C.Fn) on page 25.

Notes:

• If the auto-focus assist beam does not light, the camera has a correct auto-focus.
• When you are not attaching your flash to a camera, the auto focus assist beam does not light up.
• On some interchangeable lens Sony cameras, the auto focus assist beam does not light. This is normal operation.

The effective range of the auto-focus assist beam is:

<table>
<thead>
<tr>
<th>Position</th>
<th>Effective Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
<td>2.0 ~ 13.1 ft. / 0.6 ~ 4 m</td>
</tr>
<tr>
<td>Periphery</td>
<td>2.0 ~ 8.2 ft. / 0.6 ~ 2.5 m</td>
</tr>
</tbody>
</table>
Using bounce flash

By pointing the flash head toward a wall or ceiling, your flash bounces off the surface before illuminating the subject. Bounce flash can soften shadows behind the subject for a more natural-looking shot.

To set the bounce direction, hold the flash head and turn it toward the surface you want to use to bounce the flash.

Notes:

- If the wall or ceiling is too far away, the bounced flash might be too weak and result in underexposure.
- The wall or ceiling should be a plain, white color for high reflectance. If the bounce surface is not white, a color cast may appear in the picture.
Creating a catchlight

With the catchlight panel, you can create a catchlight in the subject’s eyes to add life to the facial expression.

1 Point the flash head upward by 90°, then pull out the wide panel. The catchlight panel comes out at the same time. For the location of both panels, see Flash body on page 5.

2 Push the wide panel back in.

3 Position the flash head as described in Using bounce flash on page 22.

   **Important:**
   
   • Point the flash head straight ahead, then upward by 90°. The catchlight does not appear if you swing the flash head left or right.
   • For the best catchlight effect, stay about 4.9 ft. (1.5 m) away from the subject.

Setting flash coverage in manual zoom mode

You can set the flash coverage automatically or manually. You can set the flash coverage to match the lens focal length from 24mm to 105mm.

In addition, you can use the wide panel to expand the flash coverage for a 14mm wide-angle lens. See Using the wide panel to extend the flash coverage on page 24.
In manual zoom mode, press the ZOOM/C.Fn button, then turn the select dial to change the flash coverage. If AU is displayed, the flash coverage will be set automatically.

**Important:**
- If you set the flash coverage manually, make sure that it covers the lens focal length. Otherwise, the picture will not have a dark periphery.
- When the (low battery) indicator is displayed, the zoom focal length is always 24mm.

**Using the wide panel to extend the flash coverage**

When your flash is in manual zoom mode, you can use the built-in wide panel to extend the flash coverage for 14mm, wide-angle lenses.

1. Pull out the wide panel and place it over the flash head. The catchlight panel comes out at the same time.

2. Push the catchlight panel back in. The flash coverage is extended to 14 mm.

**Note:** When the wide panel is over the flash head, the ZOOM/C.Fn button does not work.
Customizing function settings (C.Fn)

You can adjust the following settings:

<table>
<thead>
<tr>
<th>Custom function menu option</th>
<th>Function</th>
<th>Setting</th>
<th>Settings &amp; description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST</td>
<td>Auto power off (standby mode)</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>AF</td>
<td>AF-assist beam</td>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>BL</td>
<td>Backlight control</td>
<td>10 sec</td>
<td>Off in 10 seconds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OF</td>
<td>Always off</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
<td>Always on</td>
</tr>
</tbody>
</table>

1 Press the ZOOM/C.Fn button for two seconds or longer until the C.Fn menu is displayed. For the location of the ZOOM/C.Fn button, see Control panel on page 6.
2 Turn the select dial to select a function, then press the SET button. The setting blinks.
3 Turn the select dial to select a setting, then press the SET button.
4 Press the ZOOM/C.Fn button to exit the menu.
Understanding protection functions

Over-temperature protection

- To avoid overheating and damage to the flash head, do not fire more than 30 continuous flashes in fast succession at 1/1 full power. After 30 continuous flashes, let your flash cool for at least 10 minutes.
- If you fire more than 30 continuous flashes, then fire more flashes in short intervals, the internal over-temperature protection function may be activated and make the recycling time over 10 seconds. If this occurs, let your flash cool about 10 minutes.
- When the over-temperature protection is started,  is displayed on the LCD.

The number of flashes that will activate the overheating protection based on the power output level are:

<table>
<thead>
<tr>
<th>Power output</th>
<th>Number of flashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>30</td>
</tr>
<tr>
<td>1/2 +0.7</td>
<td>40</td>
</tr>
<tr>
<td>1/2 +0.3</td>
<td>50</td>
</tr>
<tr>
<td>1/2</td>
<td>60</td>
</tr>
<tr>
<td>1/4 (+0.3,+0.7)</td>
<td>100</td>
</tr>
<tr>
<td>1/8 (+0.3,+0.7)</td>
<td>200</td>
</tr>
<tr>
<td>1/16 (+0.3,+0.7)</td>
<td>300</td>
</tr>
<tr>
<td>1/32 (+0.3,+0.7)</td>
<td>500</td>
</tr>
<tr>
<td>1/64 (+0.3,+0.7)</td>
<td>1000</td>
</tr>
<tr>
<td>1/128 (+0.3,+0.7)</td>
<td></td>
</tr>
</tbody>
</table>
The number of flashes that will activate over-temperature protection in high-speed sync triggering mode are:

<table>
<thead>
<tr>
<th>Power output</th>
<th>Number of flashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/1</td>
<td>15</td>
</tr>
<tr>
<td>1/2 (+0.3,+0.7)</td>
<td>20</td>
</tr>
<tr>
<td>1/4 (+0.3,+0.7)</td>
<td>30</td>
</tr>
<tr>
<td>1/8 (+0.3,+0.7)</td>
<td>40</td>
</tr>
<tr>
<td>1/16 (+0.3,+0.7)</td>
<td>40</td>
</tr>
</tbody>
</table>

**Protection error messages**

Your flash provides additional real-time protection to secure your flash and your safety.

Error messages and descriptions are:

<table>
<thead>
<tr>
<th>Displayed on the LCD</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>A failure has occurred on the recycling system so that your flash cannot fire. Restart your flash. If the problem still exists, call Best Buy Customer Support. The Customer Support phone number is on the back cover.</td>
</tr>
<tr>
<td>E3</td>
<td>The voltage on of the flash tube is too high. Your flash needs to be serviced or replaced. Contact Best Buy Customer Support for information about servicing or replacing your flash. The Customer Service phone number is on the back cover.</td>
</tr>
</tbody>
</table>

**Maintaining**

Most users will not have to provide any maintenance to a flash. Contact Best Buy technical support for help if problems or questions arise.

- Unauthorized service voids the warranty.
- Shut down your flash immediately should abnormal operation be detected.
- To clean your flash, wipe it down with a dry cloth. Do not use solvents or harsh cleaners, as this can damage the finish or cause internal damage.
Troubleshooting

My flash will not charge.
• Make sure that the batteries are installed correctly. See Installing batteries on page 8.
• Make sure that the batteries are not dead. Replace the batteries. See Installing batteries on page 8.
• If the icon blinks on the LCD panel, the battery power is low. Replace the batteries. See Installing batteries on page 8.

My flash does not fire.
• Your flash is not attached securely to the camera. Attach your flash securely to the camera. See Attaching your flash to a camera on page 10.
• The electrical contacts on the flash mounting shoe or the camera hotshoe are dirty. Clean the contacts by turning off your flash, removing your flash from the camera (if attached), then wiping the electrical contacts on the flash mounting foot and the camera hotshoe with a clean, dry cloth.

The power turns off by itself.
• If your flash is set as the master flash, it automatically turns off after 90 seconds of inactivity. Press the camera shutter button halfway or press any flash button to wake it up. To turn off the auto power off function, see Power management on page 12.
• If your flash is set as a slave flash, it automatically enters sleep mode after 60 minutes of inactivity. Press any flash button to wake it up.

Auto zoom does not work.
• The camera flash is not attached securely to the camera. Attach your flash securely to the camera. See Attaching your flash to a camera on page 10.

The flash exposure is underexposed or overexposed.
• You used high-speed sync. With high-speed sync, the effective flash range is shorter. See Using high-speed sync on page 15.
• Make sure that the subject is within the effective flash range displayed.
• You used Manual flash mode. Set the flash mode to TTL or modify the flash output. See Selecting a flash mode on page 12.
Photos have dark corners or only parts of the target subject are illuminated.

- The focal length of the lens exceeds the flash coverage. Check the flash coverage you set. Your flash has a flash coverage between 24mm and 105mm, which fits medium-format cameras. Pull the wide panel out to extend the flash coverage. See Setting flash coverage in manual zoom mode on page 23 and Using the wide panel to extend the flash coverage on page 24.

Specifications
Specifications are subject to change without notice.

<table>
<thead>
<tr>
<th>Type</th>
<th></th>
</tr>
</thead>
</table>
| Compatible cameras | • Canon cameras with hotshoe (NS-DCF200C)  
                  | • Nikon DSLR cameras with hotshoe (NS-DCF200N)  
                  | • Sony cameras with Multi Interface Shoe mount (NS-DCF200S) |
| Guide No. | 36 (m ISO 100) |
| Flash coverage | (24 to 105 mm) (14mm with wide panel)  
                 | Auto zoom (flash coverage set automatically to match the lens focal length and image size)  
                 | Manual zoom  
                 | Swinging/tilting flash head (bounce flash): 0° to 270° horizontally and -7° to 90° vertically |
| Flash duration | 1/350 to 1/20000 seconds |

Exposure control

<table>
<thead>
<tr>
<th>Exposure control system</th>
<th>TTL auto-flash and manual flash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash exposure compensation (FEC)</td>
<td>Manual FEC: ±3 stops in 1/3 stop increments</td>
</tr>
<tr>
<td>Sync mode</td>
<td>High-speed sync (up to 1/8000 seconds), first-curtain sync and second-curtain sync</td>
</tr>
<tr>
<td>Stroboscopic flash</td>
<td>Provided (up to 90 times, 99Hz)</td>
</tr>
</tbody>
</table>
**Auto-focus assist beam**

| Effective range (approx.) | Center: 2.0 ~ 13.1 ft. (0.6 ~ 4 m)  
|                          | Periphery: 2.0 ~ 8.2 ft. (0.6 ~ 2.5 m) |

**Power supply**

| AA batteries (2) | Premium batteries, such as non-rechargeable lithium or high-output rechargeable batteries, will noticeably decrease flash recycle time and improve battery life. Alkaline batteries can also be used. |
| Recycle time | Approx. 0.1 ~ 2.2 seconds (Panasonic eneloop Ni-MH batteries)  
|              | Red LED indicator lights when the flash is ready. |
| Full power flashes | Approx. 210 (2500mA Ni-MH batteries) |
| Power saving | Power off automatically after approx. 90 seconds of idle operation. (60 minutes if set as slave) |

**Sync triggering mode**

| Hotshoe, optical triggering |

**Dimensions**

| W × H × D | 5.5 × 2.4 × 1.5 in. (140 × 62 × 38 mm) |
| Weight without batteries | 7.1 oz. (200 g) |
Legal notices

FCC Part 15
This device complies with Part 15 of the FCC Rules. Operation of this product 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.

This equipment has been tested and found to comply within 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 technician for help.

FCC warning
Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user’s authority to operate this equipment.
One-year limited warranty -
Insignia

Definitions:
The Distributor* of Insignia branded products warrants to you, the original purchaser of this new Insignia-branded product ("Product"), that the Product shall be free of defects in the original manufacture of the material or workmanship for a period of one (1) year from the date of your purchase of the Product ("Warranty Period").
For this warranty to apply, your Product must be purchased in the United States or Canada from a Best Buy branded retail store or online at www.bestbuy.com or www.bestbuy.ca and is packaged with this warranty statement.

How long does the coverage last?
The Warranty Period lasts for one year (365 days) from the date you purchased the Product. Your purchase date is printed on the receipt you received with the Product.

What does this warranty cover?
During the Warranty Period, if the original manufacture of the material or workmanship of the Product is determined to be defective by an authorized Insignia repair center or store personnel, Insignia will (at its sole option): (1) repair the Product with new or rebuilt parts; or (2) replace the Product at no charge with new or rebuilt comparable products or parts.
Products and parts replaced under this warranty become the property of Insignia and are not returned to you. If service of Products or parts are required after the Warranty Period expires, you must pay all labor and parts charges. This warranty lasts as long as you own your Insignia Product during the Warranty Period. Warranty coverage terminates if you sell or otherwise transfer the Product.

How to obtain warranty service?
If you purchased the Product at a Best Buy retail store location, please take your original receipt and the Product to any Best Buy store. Make sure that you place the Product in its original packaging or packaging that provides the same amount of protection as the original packaging. If you purchased the Product from a Best Buy online web site (www.bestbuy.com or www.bestbuy.ca), mail your original receipt and the Product to the address listed on the web site. Make sure that you put the Product in its original packaging or packaging that provides the same amount of protection as the original packaging.
To obtain warranty service, in the United States call 1-888-BESTBUY, or in Canada call 1-866-BESTBUY. Call agents may diagnose and correct the issue over the phone.

Where is the warranty valid?
This warranty is valid only in the United States and Canada at Best Buy branded retail stores or websites to the original purchaser of the product in the county where the original purchase was made.

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What does the warranty not cover?

This warranty does not cover:

• Customer instruction/education
• Installation
• Set up adjustments
• Cosmetic damage
• Damage due to weather, lightning, and other acts of God, such as power surges
• Accidental damage
• Misuse
• Abuse
• Negligence
• Commercial purposes/use, including but not limited to use in a place of business or in communal areas of a multiple dwelling condominium or apartment complex, or otherwise used in a place of other than a private home.
• Modification of any part of the Product, including the antenna
• Display panel damaged by static (non-moving) images applied for lengthy periods (burn-in).
• Damage due to incorrect operation or maintenance
• Connection to an incorrect voltage or power supply
• Attempted repair by any person not authorized by Insignia to service the Product
• Products sold “as is” or “with all faults”
• Consumables, including but not limited to batteries (i.e. AA, AAA, C etc.)
• Products where the factory applied serial number has been altered or removed
• Display panels containing up to three (3) pixel failures (dots that are dark or incorrectly illuminated) grouped in an area smaller than one-tenth (1/10) of the display size or up to five (5) pixel failures throughout the display. (Pixel based displays may contain a limited number of pixels that may not function normally.)
• Failures or Damage caused by any contact including but not limited to liquids, gels or paints.

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