

SONY[®]

4-273-955-11(1)

Digital Still Camera

Instruction Manual

Cyber-shot



DSC-W520

WARNING

To reduce fire or shock hazard, do not expose the unit to rain or moisture.

IMPORTANT SAFETY INSTRUCTIONS

-SAVE THESE INSTRUCTIONS

DANGER

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS

If the shape of the plug does not fit the power outlet, use an attachment plug adaptor of the proper configuration for the power outlet.

CAUTION**| Battery pack**

If the battery pack is mishandled, the battery pack can burst, cause a fire or even chemical burns. Observe the following cautions.

- Do not disassemble.
- Do not crush and do not expose the battery pack to any shock or force such as hammering, dropping or stepping on it.
- Do not short circuit and do not allow metal objects to come into contact with the battery terminals.
- Do not expose to high temperature above 60°C (140°F) such as in direct sunlight or in a car parked in the sun.
- Do not incinerate or dispose of in fire.
- Do not handle damaged or leaking lithium ion batteries.
- Be sure to charge the battery pack using a genuine Sony battery charger or a device that can charge the battery pack.
- Keep the battery pack out of the reach of small children.
- Keep the battery pack dry.
- Replace only with the same or equivalent type recommended by Sony.
- Dispose of used battery packs promptly as described in the instructions.

| Battery charger

Even if the CHARGE lamp is not lit, the battery charger is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet (wall socket). If some trouble occurs while using the battery charger, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).

For Customers in the U.S.A. and Canada

| RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.



For more information regarding recycling of rechargeable batteries, call toll free

1-800-822-8837, or visit <http://www.rbrrc.org/>

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

For Customers in Europe

| Notice for the customers in the countries applying EU Directives

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This product has been tested and found compliant with the limits set out in the EMC Directive for using connection cables shorter than 3 meters (9.8 feet).

| Attention

The electromagnetic fields at the specific frequencies may influence the picture and sound of this unit.

| Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the communication cable (USB, etc.) again.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product,

please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)



This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste. On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead. By ensuring these batteries are disposed of correctly, you will help prevent

potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.



In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.

For all other batteries, please view the section on how to remove the battery from the product safely.

Hand the battery over to the applicable collection point for the recycling of waste batteries. For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Notice for customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e., marked with an  or  mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

Refer to “Cyber-shot User Guide” (HTML) on supplied CD-ROM

For details on advanced operations, please read “Cyber-shot User Guide” (HTML) on the CD-ROM (supplied) using a computer.



Insert the CD-ROM into the CD-ROM drive.

For Windows users:

- ① Click [User Guide] → [Install].
- ② Start “User Guide” from the shortcut on the desktop.

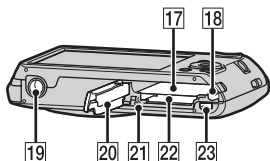
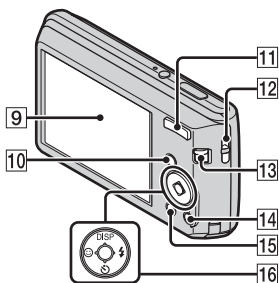
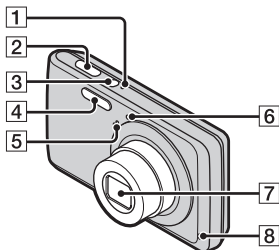
For Macintosh users:

- ① Select the [User Guide] and copy [eng] folder stored in the [User Guide] folder to your computer.
- ② After copying is complete, double-click “index.html” in the [eng] folder.

Checking the accessories supplied

- Battery charger BC-CSN/BC-CSNB (1)
- Power cord (mains lead) (not supplied in the USA and Canada) (1)
- Rechargeable battery pack NP-BN1 (1)
- Dedicated USB cable (Sony Corporation 1-837-597-) (1)
- Wrist strap (1)
- CD-ROM (1)
 - Cyber-shot application software
 - “Cyber-shot User Guide”
- Instruction Manual (this manual) (1)

Identifying parts

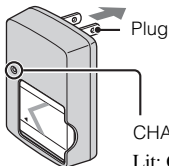


- 1 ON/OFF (Power) lamp
- 2 Shutter button
- 3 ON/OFF (Power) button
- 4 Flash
- 5 Microphone
- 6 Self-timer lamp/Smile Shutter lamp
- 7 Lens

- 8 Speaker
- 9 LCD screen
- 10 ▶ (Playback) button
- 11 For shooting: W/T (Zoom) button
For viewing: Q (Playback zoom) button/☒ (Index) button
- 12 Hook for wrist strap
- 13 Mode switch
- 14 ☒ (Delete) button
- 15 MENU button
- 16 Control button
Menu on: ▲/▼/◀/▶/●
Menu off: DISP/☺/☹/⚡
- 17 Battery insertion slot
- 18 Battery eject lever
- 19 Tripod receptacle
 - Use a tripod with a screw less than 5.5 mm (7/32 inches) long. Otherwise, you cannot firmly secure the camera, and damage to the camera may occur.
- 20 Battery/memory card cover
- 21 Access lamp
- 22 Memory card slot
- 23 •↔ (USB) / A/V OUT jack

Charging the battery pack

**For customers in the USA
and Canada**

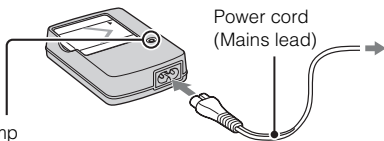


CHARGE lamp

Lit: Charging

Off: Charging finished (normal charge)

**For customers in countries/regions
other than the USA and Canada**



Power cord
(Mains lead)

1 Insert the battery pack into the battery charger.

- You can charge the battery even when it is partially charged.

2 Connect the battery charger to the wall outlet (wall socket).

- If you continue charging the battery pack for about one more hour after the CHARGE lamp turns off, the charge will last slightly longer (full charge).

Charging time

Full charge time: approx. 245 min.

Normal charge time: approx. 185 min.

Notes

- The above charging times apply when charging a fully depleted battery pack at a temperature of 25 °C (77 °F). Charging may take longer depending on conditions of use and circumstances.
- Connect the battery charger to the nearest wall outlet (wall socket).
- When charging is finished, disconnect the power cord (mains lead) from the wall outlet (wall socket), and remove the battery pack from the battery charger.
- Be sure to use the battery pack or the battery charger of the genuine Sony brand.

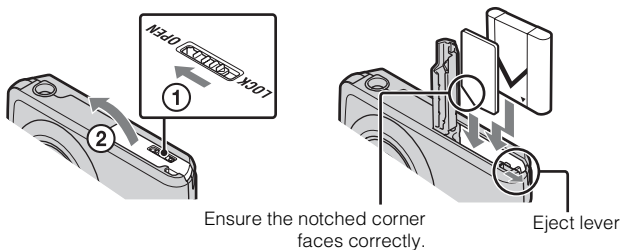
Battery life and number of images you can record/view

	Battery life (min.)	No. of Images
Shooting still images	Approx. 110	Approx. 220
Viewing still images	Approx. 170	Approx. 3400
Shooting movies	Approx. 110	—

Notes

- The number of images that can be recorded is an approximate number when shooting with a fully charged battery pack. The number may be less depending on the circumstances.
- The number of images that can be recorded is when shooting under the following conditions:
 - Using Sony “Memory Stick PRO Duo” (Mark2) media (sold separately).
 - When a fully charged battery pack (supplied) is used at an ambient temperature of 25 °C (77 °F).
- The number of still images that can be recorded is based on the CIPA standard, and is for shooting under the following conditions. (CIPA: Camera & Imaging Products Association)
 - [SteadyShot] is set to [Off].
 - DISP (Screen Display Settings) is set to [Normal].
 - Shooting once every 30 seconds.
 - The zoom is switched alternately between the W and T ends.
 - The flash strobos once every two times.
 - The power turns on and off once every ten times.
- The battery life for movies is when shooting under the following conditions:
 - Recording mode: VGA
 - When continuous shooting ends because of set limits (page 19), press the shutter button down again and continue shooting. Shooting functions such as the zoom do not operate.

Inserting the battery pack/a memory card (sold separately)



1 Open the cover.

2 Insert the memory card (sold separately).

- With the notched corner facing as illustrated, insert the memory card until it clicks into place.

3 Insert the battery pack.

- Align the battery pack with the guide arrow inside the battery insertion slot. Then, insert the battery pack until the battery eject lever locks into place.

4 Close the cover.

- Closing the cover with the battery inserted incorrectly may damage the camera.

■ Memory cards that you can use

	Memory Card	For still images	For movies
A	Memory Stick PRO Duo	○	○
	Memory Stick PRO-HG Duo	○	○
	Memory Stick Duo	○	—
B	SD memory card	○	○
	SDHC memory card	○	○

- In this manual, products in A are collectively referred to as “Memory Stick Duo” media.
- In this manual, products in B are collectively referred to as SD card.
- When recording movies, it is recommended that you use Class 2 or faster SD cards.

■ To remove the memory card/battery pack

Memory card: Push the memory card in once.

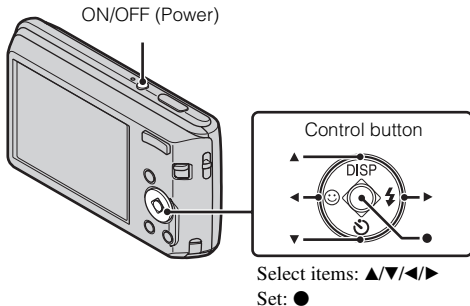
Battery pack: Slide the battery eject lever. Be sure not to drop the battery pack.

Note

- Never remove the memory card/battery pack when the access lamp (page 8) is lit. This may cause damage to data in the memory card/internal memory.

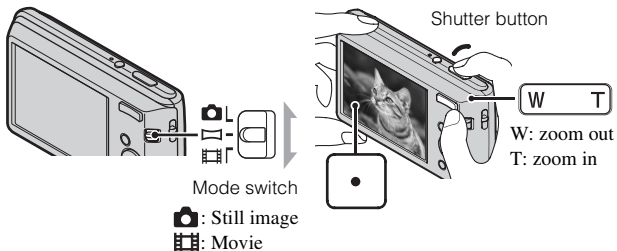
Setting the date and time

Date & Time setting is displayed when you press the ON/OFF (Power) button for the first time.



- 1 Press the ON/OFF (Power) button.**
Date & Time setting is displayed when you press the ON/OFF (Power) button for the first time.
 - It may take time for the power to turn on and allow operation.
- 2 Set [Date & Time Format], [Daylight Savings] and [Date & Time], then press [OK].**
 - Midnight is indicated as 12:00 AM, and noon as 12:00 PM.
- 3 Select the desired area following the instructions on the screen, then press ● → [OK].**
- 4 Select the desired display color and display resolution mode, following the instructions on the screen.**

Shooting still images/movies



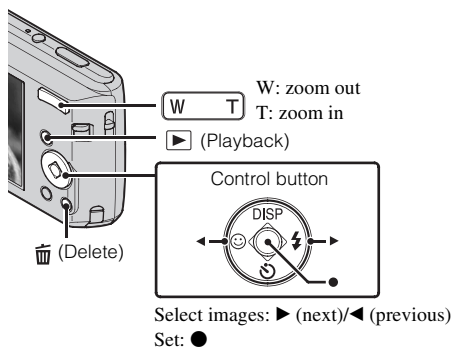
Shooting still images:

- 1 Press the shutter button halfway down to focus.
When the image is in focus, a beep sounds and the ● indicator lights.
 - 2 Press the shutter button fully down.
-

Shooting movies:

- 1 Press the shutter button fully down to start recording.
 - You can zoom by pressing the W/T (zoom) button before shooting.
 - 2 Press the shutter button fully down again to stop recording.
-

Viewing images



1 Press the ▶ (Playback) button.

■ Selecting next/previous image

Select an image with ▶ (next)/◀ (previous) on the control button. Press ● in the center of the control button to view movies.

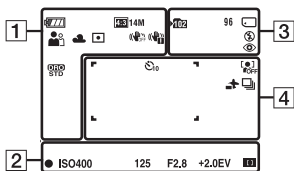
■ Deleting an image

- ① Press 🗑️ (Delete) button.
- ② Select [This Image] with ▲ on the control button, then press ●.

■ Returning to shooting images

Press the shutter button halfway down.

List of icons displayed on the screen (When shooting still images)



1

Display	Indication
	Battery remaining
	Low battery warning
	Image size
	Scene Selection
	Shooting mode
	Scene Recognition icon
	White balance
	Metering Mode
	SteadyShot
	Vibration warning
	Anti Blink
	DRO
	Smile Detection Sensitivity indicator
	Zoom scaling

2

Display	Indication
	AE/AF lock
ISO400	ISO number
125	Shutter speed
F2.8	Aperture value
+2.0EV	Exposure Value
	AF range finder frame indicator

3

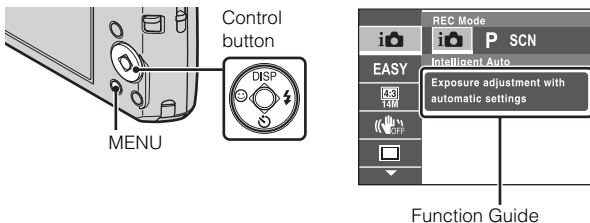
Display	Indication
	Recording folder
96	Number of recordable images
	Recording/Playback Media (memory card, internal memory)
	Flash mode
	Red-eye reduction
	Flash charging

4

Display	Indication
	Self-timer
	Face Detection
	Destination
	Burst Settings
	AF range finder frame
	Spot metering cross-hairs


Introduction of other functions


Other functions used when shooting or playing back can be operated using the Control button or MENU button on the camera. This camera is equipped with a Function Guide that allows you to easily select from the functions. While displaying the guide, try the other functions.




Control button

DISP (Screen Display Settings): Allows you to change the screen display.

 (Self-Timer): Allows you to use the self-timer.

 (Smile Shutter): Allows you to use the Smile Shutter mode.

 (Flash): Allows you to select a flash mode for still images.

Menu Items

Shooting

REC Mode	Select recording mode.
Scene Selection	Select pre-set settings to match various scene conditions.
Easy Mode	Shoot still images using minimal functions.
Shooting Direction	Set the direction to pan the camera when shooting Sweep Panorama images.
Image Size	Select the image size for still images, panoramic images or movie files.
SteadyShot	Select the anti-blur mode.
Burst Settings	Select single-image mode or burst mode.
EV	Adjust the exposure manually.
ISO	Adjust the luminous sensitivity.



White Balance	Adjust color tones of an image.
Focus	Select the focus method.
Metering Mode	Select the metering mode that sets which part of the subject to measure to determine the exposure.
Smile Detection Sensitivity	Set the Smile Shutter function sensitivity for detecting smiles.
Face Detection	The camera detects faces and adjusts various settings automatically.
Anti Blink	Set to automatically shoot two images and select image in which the eyes are not blinking.
DRO	Set DRO function to correct the brightness and contrast and improve the image quality.



Viewing



Easy Mode	Set the text-size increases and all indicators become easier to see.
Slideshow	Select a method of continuous playback.
Retouch	Retouch an image using various effects.
Delete	Delete an image.
Protect	Protect the images.
DPOF	Add a print order mark to a still image.
Rotate	Rotate a still image to the left or right.
Select Folder	Select a folder which contains the images you want to play back.


Setting items

If you press the MENU button while shooting or during playback,

 (Settings) is provided as a final selection. You can change the default settings on the  (Settings) screen.

 Shooting Settings	Grid Line/Disp. Resolution/Digital Zoom/Red Eye Reduction/Blink Alert
 Main Settings	Beep/Language Setting/Function Guide/Display color/Power Save/Initialize/Video Out/USB Connect/LUN Setting

 Memory Card Tool*	Format/Create REC. Folder/Change REC. Folder/Delete REC. Folder/Copy/File Number
 Clock Settings	Area Setting/Date & Time Setting

* If a memory card is not inserted,  (Internal Memory Tool) will be displayed and only [Format] and [File Number] can be selected.

Number of still images and recordable time of movies

The number of still images and recordable time may vary depending on the shooting conditions and the memory card.

Still images

(Units: Images)

Size \ Capacity	Internal memory	Memory card
	Approx. 28 MB	2 GB
14M	4	300
VGA	170	11000
16:9(11M)	6	380

Movies

The table below shows the approximate maximum recording times. These are the total times for all movie files. The recordable movie file size is up to approx. 2 GB for each file.



(Units: hour : minute : second)

Size \ Capacity	Internal memory	Memory card
	Approx. 28 MB	2 GB
VGA	00:00:25	00:25:00
QVGA	00:01:00	01:15:00

Notes on using the camera

Changing the language setting

The screen language setting, press the MENU button, then select

 (Settings) →  (Main Settings) → [Language Setting].

On use and care

Avoid rough handling, disassembling, modifying, physical shock, or impact such as hammering, dropping or stepping on the product. Be particularly careful of the lens.

Notes on recording/playback

- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- The camera is neither dust-proof, nor splash-proof, nor water-proof.
- Avoid exposing the camera to water. If water enters inside the camera, a malfunction may occur. In some cases, the camera cannot be repaired.
- Do not aim the camera at the sun or other bright light. It may cause the malfunction of the camera.
- If moisture condensation occurs, remove it before using the camera.
- Do not shake or strike the camera. It may cause a malfunction and you may not be able to record images. Furthermore, the recording media may become unusable or image data may be damaged.

Do not use/store the camera in the following places

- In an extremely hot, cold or humid place
In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Under direct sunlight or near a heater
The camera body may become discolored or deformed, and this may cause a malfunction.
- In a location subject to rocking vibration
- Near a location that generates strong radio waves, emits radiation or is strongly magnetic place. Otherwise, the camera may not properly record or play back images.
- In sandy or dusty places
Be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases this malfunction cannot be repaired.

On carrying

Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

Notes on the LCD screen and lens

The LCD screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, some tiny black and/or bright dots (white, red, blue or green) may appear on the LCD screen. These dots are a normal result of the manufacturing process, and do not affect the recording.

On camera's temperature

Your camera and battery may get warm due to continuous use, but it is not a malfunction.

On the overheat protection

Depending on the camera and battery temperature, the power may turn off automatically to protect the camera. A message will be displayed on the LCD screen before the power turns off.

On charging the battery

If you charge a battery that has not been used for a long time, you may be unable to charge it to the proper capacity. This is due to the battery characteristics, and is not a malfunction. Charge the battery again.

Warning on copyright

Television programs, films, videotapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

No compensation for damaged content or recording failure

Sony cannot compensate for failure to record or loss or damage of recorded content due to a malfunction of the camera or recording media, etc.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. To prevent damage to the finish or casing:

- Do not expose the camera to chemical products such as thinner, benzene, alcohol, disposable cloths, insect repellent, sunscreen or insecticide.

Specifications

Camera

[System]

Image device:

7.76 mm (1/2.3 type) color CCD,
Primary color filter

Total pixel number of camera:

Approx. 14.5 Megapixels

Effective pixel number of camera:

Approx. 14.1 Megapixels

Lens: 5× zoom lens

f = 4.5 mm – 22.5 mm (25 mm –
125 mm (35 mm film equivalent))
F3.3 (W) – F5.8 (T)

Exposure control: Automatic exposure,
Scene Selection (9 modes)

White balance: Automatic, Daylight,
Cloudy, Fluorescent 1/2/3,
Incandescent, Flash

Recording interval for Burst mode:
Approx. 0.9 second

File format:

Still images: JPEG (DCF Ver. 2.0,
Exif Ver. 2.3, MPF Baseline)
compliant, DPOF compatible
Movies: AVI (Motion JPEG)

Recording media: Internal Memory
(approx. 28 MB), “Memory Stick
Duo” media, SD card

Flash: Flash range (ISO sensitivity
(Recommended exposure Index)
set to Auto):

Approx. 0.5 m to 3.0 m (1 ft 7 3/4
inches to 9 ft 10 1/8 inches) (W)/
approx. 0.5 m to 1.5 m (1 ft 7 3/4
inches to 4 ft 11 1/8 inches) (T)

[Input and Output connectors]

 (USB)/A/V OUT terminal:

Video output

Audio output (Monaural)

USB communication

USB communication: Hi-Speed USB
(USB 2.0)

[LCD screen]

LCD panel:

6.7 cm (2.7 type) TFT drive

Total number of dots: 230 400 (960
× 240) dots

[Power, general]

Power: Rechargeable battery pack
NP-BN1, 3.6 V

Power consumption (during shooting):
0.99 W

Operating temperature: 0 °C to 40 °C
(32 °F to 104 °F)

Storage temperature: –20 °C to +60 °C
(–4 °F to +140 °F)

Dimensions (CIPA compliant):
96.3 mm × 55.6 mm × 21.2 mm
(3 7/8 inches × 2 1/4 inches ×
27/32 inches) (W/H/D)

Mass (CIPA compliant): Approx. 125 g
(4.4 oz) (including NP-BN1 battery
pack and “Memory Stick Duo”
media)

Microphone: Monaural

Speaker: Monaural

Exif Print: Compatible

PRINT Image Matching III:
Compatible

BC-CSN/BC-CSNB battery charger

Power requirements: AC 100 V to 240 V, 50 Hz/60 Hz, 2 W

Output voltage: DC 4.2 V, 0.25 A

Operating temperature: 0 °C to 40 °C (32 °F to 104 °F)

Storage temperature: -20 °C to +60 °C (-4 °F to +140 °F)

Dimensions: Approx. 55 mm × 24 mm × 83 mm (2 1/4 inches × 31/32 inches × 3 3/8 inches) (W/H/D)

Mass: Approx. 55 g (1.9 oz.)

Rechargeable battery pack NP-BN1

Used battery: Lithium-ion battery

Maximum voltage: DC 4.2 V

Nominal voltage: DC 3.6 V

Maximum charge voltage: DC 4.2 V

Maximum charge current: 0.9 A

Capacity:

typical: 2.3 Wh (630 mAh)

minimum: 2.2 Wh (600 mAh)

Design and specifications are subject to change without notice.

Trademarks

- The following marks are trademarks of Sony Corporation.
Cyber-shot, “Cyber-shot,” “Memory Stick PRO Duo,” “Memory Stick PRO-HG Duo,” “Memory Stick Duo”
- Windows is registered trademark of Microsoft Corporation in the United States and/or other countries.
- Macintosh is registered trademark of Apple Inc.
- SDHC logo is trademarks of SD-3C, LLC.
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Additional information on this product and answers to frequently asked questions can be found at our Customer Support Website.

<http://www.sony.net/>

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