Dear user, thanks for purchasing this product. Much investment in time and effort has gone into its development, and it is our hope that it will give you many years of trouble-free service.

**CAUTION**

1. Do not drop, puncture or disassemble the camera; otherwise the warranty will be voided.
2. Avoid all contact with water and dry hands before using.
3. Do not expose the camera to high temperature or leave it in direct sunlight. Doing so may damage the camera.
4. Use the camera with care. Avoid pressing hard on the camera body.
5. For your own safety, avoid using the camera when there is a storm or lightning.
6. Avoid using batteries of different brands or types at the same time. There is potential of explosion by doing that.
7. Remove batteries during long periods between usage, as deteriorated batteries may affect the functionality of the camera.
8. Remove batteries if they show signs of leaking or distortion.
9. We suggest using only the accessories supplied by the manufacturer.
Getting Started

1. Your camera parts
2. Loading the battery
3. Inserting and removing the SD/MMC card (optional)
   - Inserting the card
   - Removing the card
4. Attaching the strap (optional)
5. Using the tripod (optional)

Basic operation

1. Powering on and off
   - Using the Lens cover
   - Using the Power button
2. Setting the Mode switch
3. Taking still pictures
   - Snapshot
   - Focus
   - Zoom in/out
   - Flash strobe and self-timer
   - The LCD display under 📷 mode
4. Recording movies
   - The LCD display under 🎥 mode

Playing Your Images on the LCD at Once

1. Viewing pictures and movies
   - The LCD display under 📸 mode
2. Deleting the picture and movie
## Advanced Operation and Settings

1. Using the MENU button
   - MENU under 📷 mode
   - MENU under 🎥 mode
   - MENU under 🔊 mode

2. Configuring settings

## Enjoying Viewing Your Images on a PC

1. Installing the MD 40820 Driver
2. Connecting your camera to your computer
3. Copying pictures and movies to your computer
4. Viewing on your computer

## Using the PC Camera Function for Fun

1. Installing the MD 40820 Driver
2. Connecting your camera to your computer
3. Capturing immediate images to your computer
4. Advanced settings
   - 📌 Format settings
   - 🎥 Properties settings

## Troubleshooting

## Other Information

1. Life of battery
2. LED indicator events
3. Storage Capacity
4. More on flicker
5. Specification
1. Your camera parts
Knowing your camera parts well before using it will help you operate it more easily.

1. Power button
2. Lens cover
3. Shutter/Quick Exit button
4. Mode switch
5. Microphone
6. Flash strobe
7. USB port
8. Focus switch
9. Lens
10. Self-Timer LED indicator
11. LCD display
12. Control button ▲ (Zoom in)
13. Control button ▼ (Zoom out)
14. MENU/OK button
15. LED indicator
16. Strap holder
17. Battery/SD/MMC card cover
18. Tripod port
19. SD/MMC card slot
20. Battery section
2. Loading the battery

Please use two AAA 1.5V batteries.

⚠ We recommend you to use alkaline batteries.

1. Slide the **battery/card cover** in the direction of the indication to open it.

2. Follow the indication to load two AAA batteries.

3. Close inward and slide upward the **battery/card cover** to lock it.

✔ For details of the battery life, see the "Life of battery" section on page 32.
3. Inserting and removing the SD/MMC card (Optional)

⚠️ Never eject the SD/MMC card while the camera is processing data. (The LED indicator lights red while the camera is processing data. For more information on the LED messages, please see the "LED indicator events" section on page 32)

► Inserting the card

1. Open the battery/card cover.

2. Insert the card in the direction of the indicator and push it in till the end of the card plot.

3. Close the battery/card cover.

► Removing the card

Push in and release the card to remove it.

The camera comes with 16MB flash memory built inside for storage. If you do not insert a SD/MMC card, the data will be saved in the built-in flash memory automatically.

✔️ For details of the storage capacity of the SD/MMC card and internal memory (16MB flash memory), please see the "Storage capacity" section on page 33.
4. Attaching the strap (Optional)

For convenience and safety, you may wish to attach the carrying strap.

1. Thread the strap loop through the holder in the direction indicated.

2. Fasten the strap as indicated.

5. Using the tripod (Optional)

The tripod can be attached to your camera to minimize camera movement and ensure optimal image quality, particularly while taking self-portraits, longer movies or in a macro mode.

1. Attach the tripod to the port on the bottom of the camera and rotate the serrated wheel to lock it.

2. Unfold the legs to set up.

3. Adjust the alignment to the desired position.
1. Powering on and off

Slide the Lens cover or press the Power button to power on or off the camera.

**Using the Lens cover**

Slide the Lens cover in the direction of the arrow to turn the power on or off.

![Lens cover on/off](image)

While the Lens cover is open, you can also press the Power button to deactivate your camera.

If the camera is idle for over 60 seconds, the LCD display will be turned off to conserve battery power; press any key to wake up the camera. If it is idle for over 3 minutes, the camera will shut down automatically.

2. Setting the Mode switch

This camera provides three modes to use. Push the Mode switch to select the mode that you want to use.

- **Movie mode**
- **Still Picture mode**
- **Playback mode**
3. Taking still pictures

Follow the steps to snap stills. Also use the **Focus switch** to set the focus and the **Control buttons** to adjust zoom in or zoom out so that you can get best result.

► **Snapshot**

1. Set the **Mode switch** to 📸.

2. Press the **Shutter button** to take pictures.

While the LED indicator is flashing red, the image is being captured; while the LED turns green, the picture processing is done. (For more information of the LED message, please see the "LED indicator events" section on page 32.)

► **Focus**

Adjust the focus before taking the still picture. Push the **Focus switch**, then select the mode best for your picture. The following table tells you which focus mode you may choose with the distance from the object.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macro</td>
<td>12&quot;<del>24&quot; (30cm</del>60cm)</td>
</tr>
<tr>
<td>Micro</td>
<td>24&quot;<del>∞ (60cm</del>∞)</td>
</tr>
</tbody>
</table>

► **Zoom in/out**

Press the **Control button ▲** to zoom in or the **Control button ▼** to zoom out.
**Flash strobe and self-timer**

The strobe and self-timer are provided to offer more convenient utilities when taking pictures. You can use the strobe if the light is not adequate. The self-timer function is useful in certain situations (ex. taking self-portrait photo). There are other settings in the **MENU** under **mode** to affect the result of image, including size, exposure, white balance, and effect. For details on operation and information, please see page 13-14.

**The LCD display under ** mode**

- **Zoom**: 1.0X
- **Number of pictures and movies taken**: 20
- **Still pictures mode**
- **Focus mode**
- **Resolution**
- **Flash status**
- **Life of battery**
- **Storage mode**
  - SD/MMC card: 
  - Flash memory: non-icon
4. Recording movies

1. Set the **Mode switch** to 📽.

2. Press the **Shutter button** to start recording.

3. Press the **Shutter button** again to stop the recording.

- You can also adjust the **Focus switch** under 📹 mode. (Please refer to the "Focus" section on page 8.)
- The resolution of movie is 320*240 pixels.

▶ The LCD display under 📽 mode

- Number of pictures and movies taken
- Life of battery
- Storage mode:
  - SD/MMC card: 🛠️
  - Flash memory: non-icon
1. Viewing pictures and movies

1. Set the **Mode switch** to \( \text{\text{
  \[\text{ dominance}\]}} \). \[\text{
  \[\text{ dominance}\]}
\]

2. The last image taken will be highlighted first on the LCD display.

3. Press the **Control buttons** \( \text{\text{
  \[\text{ dominance}\]}} \) to select the previous or the next image, then view it on the LCD display.

   - While playing a movie on the camera, sound playback is not available. Please copy the movie to your computer (for details, see page 17) to view it with sound playback.

---

**The LCD display under **\( \text{\text{
  \[\text{ dominance}\]}} \) mode

- **The type you are viewing**
  - Picture: \( \text{\text{
  \[\text{ dominance}\]}} \)
  - Movie: \( \text{\text{
  \[\text{ dominance}\]}} \)

- **Playback mode**

- **Picture and movie number**

- **Number of pictures and movies taken**

- **Life of battery**
  - It appears under the status of low battery only.

- **Storage mode**
  - SD/MMC card: \( \text{\text{
    \[\text{ dominance}\]}} \)
  - Flash memory: non-icon
2. Deleting the picture and movie

Follow the steps if you want to delete one picture or movie.

1. Push the Mode switch to , then press the Control buttons to pick the image you want to delete.

2. Press the MENU/OK button to enter the MENU.

3. Press the Control buttons to choose "Delete One", then press the MENU/OK button.

4. Pick "Yes" with the Control buttons, then press the MENU/OK button to complete the action of deletion.

Press the Shutter/Quick Exit button if you want to quick exit the MENU at anytime.
1. Using the MENU button

The MENU provides more advanced features for you to fine-tune the camera. Use the MENU/OK button to enter the MENU. Press the Control buttons ▼ to highlight the item. Use the MENU/OK button to confirm. Then use the Shutter/Quick Exit button to exit immediately.

➤ MENU under ☺ mode

✔ The MENU/OK button is for either entering the MENU or executing an action.

✔ Select the icon to exit; or press the Shutter/Quik Exit button to quick exit.

<table>
<thead>
<tr>
<th>Item</th>
<th>Option</th>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>2048x1536</td>
<td>![2048x1536 icon]</td>
<td>This item allows you to change the resolution of the picture. Select the &quot;1600x1200&quot; or &quot;2048x1536&quot; type when you want to develop 4x6 photos; select the &quot;1280x960&quot; when you want to develop 3x5 photos.</td>
</tr>
<tr>
<td></td>
<td>1600x1200</td>
<td>![1600x1200 icon]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1280x960</td>
<td>![1280x960 icon]</td>
<td></td>
</tr>
<tr>
<td>Strobe</td>
<td>Auto</td>
<td>![Auto icon]</td>
<td>This item allows you to set the flash strobe. When you are not sure if the light is adequate, select the &quot;Auto&quot; mode. The strobe will fire automatically if more light is needed. If you have problems when using the strobe, please refer to &quot;Troubleshooting&quot;.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>![Off icon]</td>
<td></td>
</tr>
<tr>
<td>Self-Timer</td>
<td>On</td>
<td>![On icon]</td>
<td>This item allows you to specify the delay for 10 seconds before the shutter fires. If you want to use the self-timer, set the &quot;On&quot; mode, press the Shutter button, then wait for 10 seconds with Self-Timer LED indicator flashing red.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>![Off icon]</td>
<td></td>
</tr>
</tbody>
</table>
This item allows you to set the color temperature with the light in the certain environment. If you know the color conditions of your shooting environment, such as the "sunny" (bright), "cloudy" (dim), "fluorescent" (high color condition) and "tungsten" (low color condition) situations, select the mode you consider most appropriate. Select the "Auto" mode if you are not sure the color condition of the environment.

This item offers four scenes of photo imaging, such as the "Normal" (no effect), "B&W" (black and white), "Classic" (old picture), and "Solarize" (over-exposed) effects.

This item allows you to set the effect of the image, such as the "Normal" (no effect) and "B&W" (black and white) effects.

See page 16 for details.
## MENU under **▶** mode

### DELETE

<table>
<thead>
<tr>
<th>Item</th>
<th>Option</th>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>① Delete One</td>
<td>Yes</td>
<td>✔</td>
<td>This item allows a picture or a movie stored in your built-in flash memory or the SD/MMC card to be deleted.</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>❌</td>
<td></td>
</tr>
<tr>
<td>② Delete All</td>
<td>Yes</td>
<td>✔</td>
<td>This item allows all files stored in your built-in flash memory or the SD/MMC card to be deleted.</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>❌</td>
<td></td>
</tr>
<tr>
<td>③ Format</td>
<td>Yes</td>
<td>✔</td>
<td>This item allows all files stored in your built-in flash memory or the SD/MMC card to be deleted and formatted. Note that all stored files will be gone and cannot be restored.</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>❌</td>
<td></td>
</tr>
</tbody>
</table>

### SETTING

<table>
<thead>
<tr>
<th>Item</th>
<th>Option</th>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>④ Setting</td>
<td></td>
<td></td>
<td>See page 16 for details.</td>
</tr>
</tbody>
</table>
2. Configuring settings

Highlight the icon with the Control buttons in the MENU for configuration. The following figures are the Setting displays under the three modes. The table is the description of all items in the Setting.

The description of the Setting items

<table>
<thead>
<tr>
<th>Item</th>
<th>Option</th>
<th>Icon</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Time</td>
<td>Year Month Day Hour Minute</td>
<td>N/A</td>
</tr>
<tr>
<td>2</td>
<td>Beep</td>
<td>On Off</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Display</td>
<td>On Off</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Date Stamp</td>
<td>On Off</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Flicker</td>
<td>50HZ 60HZ</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Language</td>
<td>English Deutsch</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Default</td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>
Enjoying Viewing Your Images on a PC

1. Installing the MD 40820 Driver

Install the **MD 40820 Driver** before connecting your camera to your computer for the first time. Please follow the steps to complete the installation.

1. **For Windows XP users:** Skip step 1. (Installing the MD 40820 Driver) and go to step 2. (Connecting your camera to your computer) if you do not use the PC Camera function.
   
   1. **Turn on your computer.**
      - Do not connect the USB cable to your computer at this stage.
      - Turn off other applications running on your computer.
   
   2. **Place the supplied CD into the CD-ROM drive.**

   3. **Move the mouse to "MD 40820 Driver" and click it.**

   ![Image: CD with CD-ROM drive and icons]

   The title appears on the screen in a few seconds. Click the "MD 40820 Driver" item.

   **If no title appears on the screen**

   Please follow the steps:
   1. Double-click the "My computer" icon.
   2. Double-click the CD-ROM drive icon ("MD 40820 (E:)"").

   *The name of CD-ROM drive changes depending on how your computer is set up.*
4 The "Install Shield Wizard" dialog box is occurring and the automatic installation begins. When a window as Fig1 appears, click "Next".

Notice for Windows 2000 users

1. The "Digital Signature Not Found" dialog box might show twice. Please simply click "Yes". This camera works well for Windows 2000.

2. Follow the on-screen instructions and click "Finish". Do not restart your computer at this step.
5 When a window as Fig2 appears, please click "Yes" or "No" according to your circumstance.

1. If you are not a Windows XP user, or never install DirectX 8.0 or above, click "Yes".
2. If you are a Windows XP user, or you already installed DirectX 8.0 or above, click "No".

![Fig 2](image)

6 When a window as Fig3 or Fig4 appears, please click "Finish" or "Ok" to complete the installation.

![Fig 3](image)  ![Fig 4](image)

✔ The driver will be available after restarting your computer.

7 Take the CD out.
2. Connecting your camera to your computer

1. Turn on your computer.

2. Set the **Mode switch** on your camera to **Play** or **Capture**.

3. Insert the USB cable to the USB port on your computer.

4. Insert the other end of the USB cable to the USB port on your camera.
3. Copying pictures and movies to your computer

1. For Windows XP users
   After connecting your camera with the computer, a window will automatically appear (as Fig 5). Select the "Open folder to view files using Windows Explorer" item and click "Ok".

   ![Fig 5]

2. For Windows 2000/ ME/ 98SE users
   Double-click "My computer", then double-click the new "Removable Disk" icon.

   ![Removable Disk (F:)]

3. Double-click the "DCIM" file folder.

   1. For Windows XP users
   2. For Windows 2000/ ME/ 98SE users
3 Double-click the "100MEDIA" file folder.

- **For Windows XP users**

- **For Windows 2000/ ME/ 98SE users**

4 Drag the picture to the "My Documents" file folder to copy your picture or movie to the computer.

- **For Windows XP users**

- **For Windows 2000/ ME/ 98SE users**

---

The storage positions of the pictures and movies

You can find the files of your pictures and movies as Fig 6.
4. Viewing on your computer

1. Double-click "My Documents".

   - For Windows XP users
   - For Windows 2000/ ME/ 98SE users

2. Select the desired file and double-click it to view your picture or movie.

   - For Windows XP users
   - For Windows 2000/ ME/ 98SE users

Notice on disconnecting the camera from the computer for Windows 2000/ ME users

To disconnect your camera from the computer, please follow these steps:

1. Double-click "USB Disk" on the task bar.
2. Click (USB Disk), then click "Stop".
3. Confirm the device (MD 40820 ) on the confirmation screen and click "Ok".
4. Follow the on-screen instruction to disconnect your camera from your computer correctly and safely.
1. Installing the MD 40820 Driver

You need to install MD 40820 Driver before using PC Camera or Video Conferencing function.

- Skip step 1. (Installing the MD 40820 Driver) and go to step 2. (Connecting your camera to your computer) if you have already installed MD 40820 driver.

- If you never install MD 40820 Driver, please finish the installation first. For details, please see step 1. in the "Enjoying Viewing Your Image on a PC" section on page 17.

2. Connecting your camera to your computer

1. Turn on your computer.

2. Set the Mode switch on your camera to 📸 .

3. Slide the Lens cover on your camera to prepare for capturing images.

4. Insert the USB cable to the USB port on your computer.

5. Insert the other end of the USB cable to the USB port on your camera.
Notice for Windows 2000/ ME/ 98SE users when using PC camera function for the first time

When using PC Camera function (or Video Conferencing) for the first time, please follow the steps below.

- **For Windows 2000 users**
  The dialog box "Digital Signature Not Found" might appear twice, please simply click "Yes". This camera works well for Windows 2000.

- **For Windows ME users**
  Please select "Automatic search for a better driver" when a window as Fig 7 appears.

- **For Windows 98SE users**
  Click "Next" when a window as Fig 8 appears.
  - Select "Search for a best driver for your device" and click "Next" when a window as Fig 9 appears.
  - Select the position where your Windows 98SE driver is. You might be asked to insert the licensed Windows 98SE CD-ROM in your CD-ROM drive.
  - Follow the on-screen instructions to complete the installation.
3. Capturing immediate images to your computer

1. After the installation of driver and hardware, you can start to use the PC Camera function or run other Video Conferencing applications. (This manual provides information related to PC camera function only.)

Double-click the "**MD 40820**" icon on the desktop to execute the program, then you can begin to capture immediate images on your computer.

OR

Click the "**Start**" menu and go up to "**Programs**", then go to the folder named "**MD 40820**" and click it.

If you want to use Video Conferencing function

Open the NetMeeting interface or other Video Conferencing application and then start to use it.
Press the icon at the bottom on the PC camera panel to use the functions.

Viewing your pictures and movies with PC camera interface

Click the "Open Album" icon at the bottom on the PC camera panel, or go to the follow path to find the files.

C:\Program Files\MD 40820\Work Temp
4. Advanced settings

Click the "Format" and "Setting" icon on the PC camera panel to bring up advanced settings.

Format settings

1. Color Space / Compression
   Select one of the following functions according to your needs.
   - RGB 24: Better image quality.
   - I420: The file will be compressed to add advantage for faster-speed transformation.

2. Output Size
   Set output size to change the size of the preview window. The default size is 320x240. Select larger pixels when you need a larger preview window.
Properties settings

1 Video Setting

1 Banding Filter

If the screen of your computer flickers when using PC Camera function, change the "Banding Filter" item on the "Video Setting" tab to avoid noise. Select "50Hz" or "60 Hz" until the screen stops flickering. If you want to restore the default setting, select "Normal AE".

![Banding Filter](image)

2 Bandwidth

If the controller has no enough bandwidth available for the MD 40820 USB camera, select a smaller value in the "Bandwidth" item on the "Video Setting" tab. The smaller the bandwidth value is, the less the bandwidth is occupied.

![Bandwidth](image)

2 Custom Setting

You can use the default settings or change the settings of brightness, contrast, saturation, sharpness, and hue on your own.

![Custom Setting](image)
### Troubleshooting

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>When using the camera</strong></td>
<td></td>
</tr>
</tbody>
</table>
| **The camera has no power.**                                           | 1. The batteries may be out of power, please change the batteries.  
2. Make sure that the battery is installed correctly.                  |
| **Cannot power on my camera even though batteries is installed.**      | 1. Make sure that the battery is installed correctly.  
2. If it is idle over 3 minutes, the camera will shut down automatically, please press the **Power button** or slide the **Lens cover** to power on the camera. |
| **Cannot take pictures and movies when pressing the **Shutter button.**| 1. Make sure that the **Lens cover** is open.  
2. The storage is full. Please free some space of the SD/MMC card or flash memory.  
3. Check if the camera is under the status of charging batteries.  
4. Check if the SD/MMC card is set to "protected".  
5. If the "MEMORY ERROR" message shows on the LCD display, please set the **Mode switch** to **mode format** the card. |
<p>| <strong>I did not delete the picture and movie, but cannot find the data in the SD/MMC card.</strong> | Check if your files are stored in the camera’s built-in memory. If there is a **icon at the right bottom section on the LCD display, it means you are using the camera with a SD/MMC card. Please remove the card to find the data in the flash memory. (For details, see the &quot;Removing the card&quot; section on page 6) |
| <strong>Cannot set the strobe to the &quot;On&quot; mode.</strong>                            | Charging the flash strobe requires more power of batteries. When the battery is under the status of low power, the strobe <strong>On</strong> cannot be set. Please change the batteries. |</p>
<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The image is too blurred.</td>
<td>Please adjust the focus (see page 8).</td>
</tr>
<tr>
<td>The image on is too dark.</td>
<td>You may need to take pictures or movies in the place with adequate light or use the flash strobe.</td>
</tr>
<tr>
<td>Sound playback is not available when viewing the movie on the LCD display.</td>
<td>This situation is normal. If you want the movie with sound playback, please copy the movie to your computer and view it on the computer.</td>
</tr>
<tr>
<td>Noise occurs on my camera when viewing the image on the LCD display or on the computer.</td>
<td>Set the filter matching the place you are. Please refer to the &quot;More on flicker&quot; section on page 33.</td>
</tr>
</tbody>
</table>

When connecting the camera to your computer

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The driver installation failed.</td>
<td>1  Please remove the driver and other related programs. Follow the installation steps in this manual to reinstall.  2  Install the driver before inserting the USB cable.</td>
</tr>
<tr>
<td>A conflict with other installed camera or capture device.</td>
<td>If you have any other camera or capture device, completely remove the camera and its driver form the computer to avoid a driver conflict.</td>
</tr>
<tr>
<td>The movie cannot be played on my computer.</td>
<td>Please install DirectX 8.0 or above. (See the &quot;Installing the MD 40820 Driver&quot; section on page 17 or download DirectX 8.0 and get more information on Microsoft website.)</td>
</tr>
<tr>
<td>Noise occurs on my computer when using Video Conferencing.</td>
<td>Set the filter matching the place you are. Please refer to the &quot;Banding Filter&quot; section on page 29.</td>
</tr>
</tbody>
</table>
1. Life of battery

<table>
<thead>
<tr>
<th>Condition</th>
<th>Number of images</th>
<th>Battery life (minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking Still Pictures 1600x1200 (without flash strobe)</td>
<td>650</td>
<td>45</td>
</tr>
</tbody>
</table>

* Data above is for using alkaline batteries and in 25°C, with pictures taken every four seconds.

⚠️ Notes: 1. Life of battery will be shorten in the following conditions.
   (1) Taking snapshot at low temperature.
   (2) Turn on/off power repeatedly.
2. The table above is for reference only.
3. Using the flash light will decrease the number of pictures to be taken.

2. LED indicator events

<table>
<thead>
<tr>
<th>Condition</th>
<th>LED color</th>
<th>Meanings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status (LED indicator)</td>
<td>Red</td>
<td>Busy (mode change, storage, or capture)</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Ready (waiting for command)</td>
</tr>
<tr>
<td>Flash (LED indicator)</td>
<td>Red</td>
<td>Charging flash</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Ready (waiting for command)</td>
</tr>
<tr>
<td>Data transformation (LED indicator)</td>
<td>Red</td>
<td>Data transformation</td>
</tr>
<tr>
<td></td>
<td>Green</td>
<td>Ready (waiting for command)</td>
</tr>
<tr>
<td>Self-Timer (Self-Timer indicator)</td>
<td>Red (regularly)</td>
<td>Counting</td>
</tr>
<tr>
<td></td>
<td>Red (rapidly)</td>
<td>Capturing the picture</td>
</tr>
</tbody>
</table>

⚠️ Never eject the card or remove the batteries while the LED indicator is lit up red.
3. Storage capacity

<table>
<thead>
<tr>
<th>Memory</th>
<th>Still picture</th>
<th>Movie</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2048x1536</td>
<td>1600x1200</td>
</tr>
<tr>
<td>Flash memory (16MB)</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>SD/MMC card (32MB)</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>SD/MMC card (64MB)</td>
<td>80</td>
<td>120</td>
</tr>
<tr>
<td>SD/MMC card (128MB)</td>
<td>160</td>
<td>240</td>
</tr>
<tr>
<td>SD/MMC card (256MB)</td>
<td>320</td>
<td>480</td>
</tr>
<tr>
<td>SD/MMC card (512MB)</td>
<td>640</td>
<td>960</td>
</tr>
</tbody>
</table>

**Notes:**
1. Actual number of pictures stored may vary (up to ± 30%) depending on the resolution and color saturation.
2. The table above is for reference only.

4. More on flicker

The default flicker setting of your camera is based on your country. When using the camera abroad, please refer to the table below to match the flicker setting with the place you go.

<table>
<thead>
<tr>
<th>Country</th>
<th>England</th>
<th>Germany</th>
<th>France</th>
<th>Italy</th>
<th>Spain</th>
<th>Netherlands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting</td>
<td>50Hz</td>
<td>50Hz</td>
<td>60Hz</td>
<td>50Hz</td>
<td>50Hz</td>
<td>50Hz</td>
</tr>
<tr>
<td>Country</td>
<td>Portugal</td>
<td>America</td>
<td>Taiwan</td>
<td>China</td>
<td>Japan</td>
<td>Korea</td>
</tr>
<tr>
<td>Setting</td>
<td>50Hz</td>
<td>60Hz</td>
<td>60Hz</td>
<td>50Hz</td>
<td>50/ 60Hz</td>
<td>60Hz</td>
</tr>
</tbody>
</table>
### 5. Specification

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hardware resolution</strong></td>
<td>2048x1536 (3.1Mega pixels)</td>
</tr>
<tr>
<td><strong>Sensor effective resolution</strong></td>
<td>1600x1200 (2Mega pixels)</td>
</tr>
<tr>
<td><strong>Internal memory</strong></td>
<td>Built-in 16MB SDRAM (buffer)</td>
</tr>
<tr>
<td></td>
<td>32 MB flash memory (storage)</td>
</tr>
<tr>
<td><strong>External memory</strong></td>
<td>Built-in SD/MMC slot (maximum: 512 MB)</td>
</tr>
<tr>
<td><strong>Digital still camera</strong></td>
<td>JPEG Format</td>
</tr>
<tr>
<td></td>
<td>2048x1536 (3.1Mega pixels); 1600x1200 (2Mega pixels); 1280x960 (1.3Mega pixels)</td>
</tr>
<tr>
<td><strong>Digital video camcorder</strong></td>
<td>Motion JPEG (AVI) Format</td>
</tr>
<tr>
<td></td>
<td>QVGA (320x240 pixels) / up to 20 fps</td>
</tr>
<tr>
<td><strong>Video conferencing</strong></td>
<td>VGA (640x480 pixels) / up to 10 fps</td>
</tr>
<tr>
<td></td>
<td>QVGA (320x240 pixels) / up to 20 fps</td>
</tr>
<tr>
<td><strong>LCD display</strong></td>
<td>1.5&quot; Color TFT LCD</td>
</tr>
<tr>
<td><strong>Digital zoom</strong></td>
<td>4x (for still pictures only)</td>
</tr>
<tr>
<td><strong>Exposure</strong></td>
<td>Auto/Back light</td>
</tr>
<tr>
<td><strong>White balance</strong></td>
<td>Auto/Sunny/Cloudy/Fluorescent/Tungsten</td>
</tr>
<tr>
<td><strong>Image effect</strong></td>
<td>4 modes for still pictures and 2 modes for videos</td>
</tr>
<tr>
<td><strong>Lens</strong></td>
<td>F=3.5, 8.5mm</td>
</tr>
<tr>
<td><strong>Self Timer</strong></td>
<td>10 seconds</td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>USB 1.1 (USB 2.0 compatible)</td>
</tr>
<tr>
<td><strong>Power saving</strong></td>
<td>Auto power-off if idle for over 3 minutes</td>
</tr>
<tr>
<td><strong>Built-in microphone</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Built-in speakers</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>Built-in flash strobe</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>AAAx2 (alkaline recommended)</td>
</tr>
<tr>
<td><strong>Dimension</strong></td>
<td>3.4&quot;x1.6&quot;x1.2&quot;</td>
</tr>
</tbody>
</table>