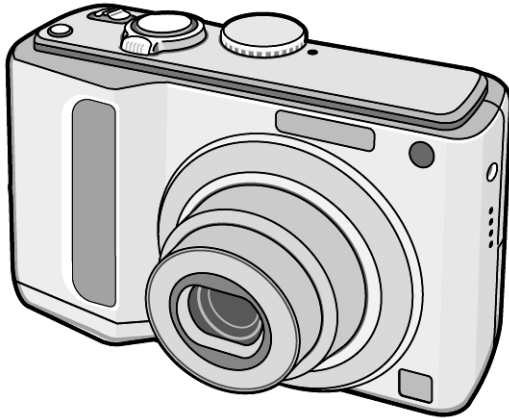


# Service Manual

Digital Camera

LUMIX



Model No. **DMC-LZ10P**  
**DMC-LZ10PC**  
**DMC-LZ10PL**  
**DMC-LZ10E**  
**DMC-LZ10EB**  
**DMC-LZ10EE**  
**DMC-LZ10EF**  
**DMC-LZ10EG**  
**DMC-LZ10GC**  
**DMC-LZ10GK**  
**DMC-LZ10GN**

Vol. 1

Colour

(S).....Silver Type (except EF/EG/GN)

(K).....Black Type

**⚠ WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

**Panasonic®**

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# 1 Safety Precaution

## 1.1. General Guidelines

### 1. IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by

 in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.
3. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## 1.2. Leakage Current Cold Check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between  $1\text{ M}\Omega$  and  $5.2\text{ M}\Omega$ . When the exposed metal does not have a return path to the chassis, the reading must be infinity.

## 1.3. Leakage Current Hot Check (See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a  $1.5\text{ k}\Omega$ ,  $10\text{ W}$  resistor, in parallel with a  $0.15\text{ }\mu\text{F}$  capacitor, between each exposed metallic part on the set and a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with  $1\text{ k}\Omega/\text{V}$  or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed  $0.75\text{ V RMS}$ . A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed  $1/2\text{ mA}$ . In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

Hot-Check Circuit



Figure. 1

## 1.4. How to Discharge the Capacitor on Flash Top PCB

### CAUTION:

1. Be sure to discharge the capacitor on FLASH TOP PCB.
2. Be careful of the high voltage circuit on FLASH TOP PCB when servicing.

### [Discharging Procedure]

1. Refer to the disassemble procedure and Remove the necessary parts/unit.
2. Put the insulation tube onto the lead part of Resistor (ERG5SJ102:1k $\Omega$  /5W).  
(an equivalent type of resistor may be used.)
3. Put the resistor between both terminals of capacitor on FLASH TOP PCB for approx. 5 seconds.
4. After discharging confirm that the capacitor voltage is lower than 10V using a voltmeter.

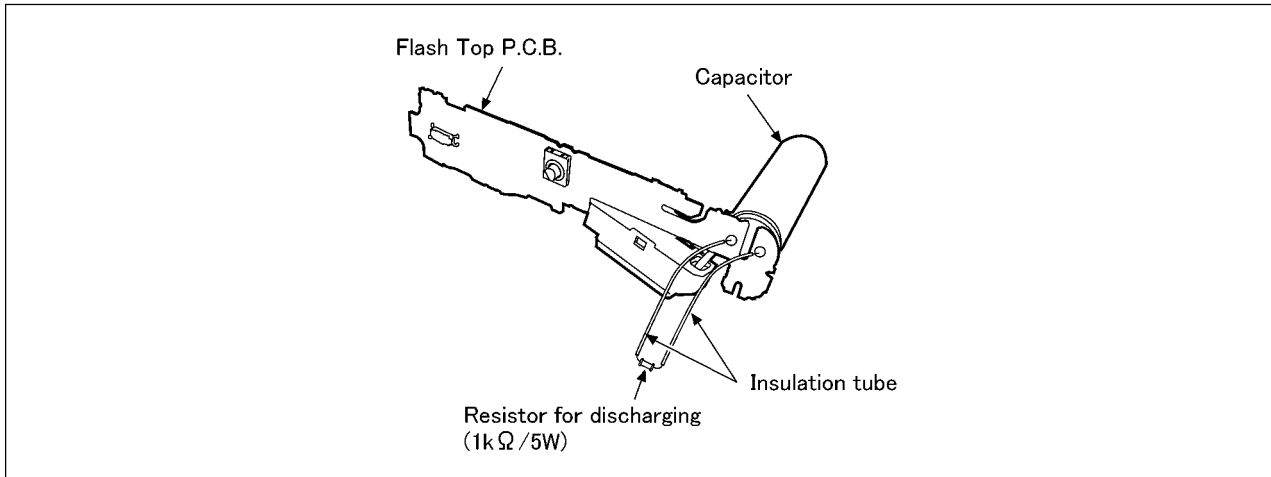


Fig. F1

## 2 Warning

### 2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices.

Examples of typical ES devices are CCD image sensor, IC (integrated circuits) and some field-effect transistors and semiconductor "chip" components.

The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

**CAUTION :**

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

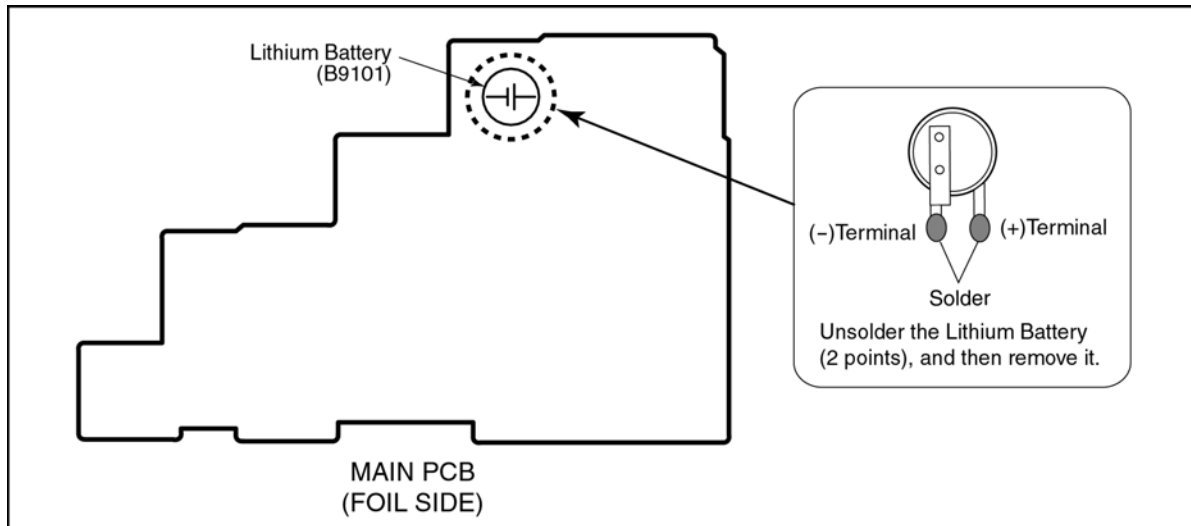
## 2.2. How to Replace the Lithium Battery

### 2.2.1. Replacement Procedure

1. Remove the MAIN PCB. (Refer to Disassembly Procedures.)
2. Unsolder the each soldering point of electric lead terminal for Lithium battery (Ref. No. "B9101" at foil side of Main PCB) and remove the Lithium battery together with electric lead terminal. Then replace it into new one.

**NOTE:**

The Type No. ML614S/F9FE includes electric lead terminals.



**NOTE:**

This Lithium battery is a critical component.

(Type No.: ML614S/F9FE **Manufactured by Matsushita Battery Industrial Co.,Ltd.**)

It must never be subjected to excessive heat or discharge.

It must therefore only be fitted in requirement designed specifically for its use.

Replacement batteries must be of same type and manufacture.

They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.

Do not attempt to re-charge the old battery or re-use it for any other purpose.

It should be disposed of in waste products destined for burial rather than incineration.

**(For English)**

### CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

**(For German)**

### ACHTUNG

Explosionsgefahr bei falschem Anbringen der Batterie. Ersetzen Sie nur mit einem äquivalentem vom Hersteller empfohlenem Typ.

Behandeln Sie gebrauchte Batterien nach den Anweisungen des Herstellers.

**(For French)**

### MISE EN GARDE

Une batterie de remplacement inappropriée peut exploser. Ne remplacez qu'avec une batterie identique ou d'un type recommandé par le fabricant. L'élimination des batteries usées doit être faite conformément aux instructions du fabricant.

**NOTE:**

Above caution are also applicable for below batteries which is for DMC-LZ10 all series, as well.

1. AA Oxyride batteries
2. AA Alkaline batteries
3. AA Rechargeable Ni-MH (nickel-metal hydride) batteries

# 3 Service Navigation

## 3.1. Introduction

This service manual contains technical information, which allow service personnel's to understand and service this model. Please place orders using the parts list and not the drawing reference numbers. If the circuit is changed or modified, the information will be followed by service manual to be controlled with original service manual.

## 3.2. General Description About Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30°C (86°F) more than that of the normal solder.

### Distinction of PCB Lead Free Solder being used

The letter of "PbF" is printed either foil side or components side on the PCB using the lead free solder.(See right figure)	PbF
---	-----

### Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used. (Definition: The letter of "PbF" is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30°C (662±86°F).

### Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.  
RFKZ03D01K-----(0.3mm 100g Reel)  
RFKZ06D01K-----(0.6mm 100g Reel)  
RFKZ10D01K-----(1.0mm 100g Reel)

### Note

\* Ingredient: tin (Sn) 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

## 3.3. Important Notice 1:(Other than U.S.A. and Canadian Market)

1. The service manual does not contain the following information, because of the impossibility of servicing at component level without concerned equipment/facilities.
  - a. Schematic diagram, Block Diagram and PCB layout of MAIN PCB.
  - b. Parts list for individual parts for MAIN PCB.When a part replacement is required for repairing MAIN PCB, replace as an assembled parts. (Main PCB)
2. The following category is/are recycle module part. please send it/them to Central Repair Center.
  - MAIN PCB (VEP56055A or VEP56055C): Excluding replacement of Lithium Battery

### 3.4. How to Define the Model Suffix (NTSC or PAL model)






There are six kinds of DMC-LZ10, regardless of the colours.

- a) DMC-LZ10 (Japan domestic model)
- b) DMC-LZ10P/PC
- c) DMC-LZ10E/EB/EF/EG/GN
- d) DMC-LZ10EE
- e) DMC-LZ10GK
- f) DMC-LZ10PL/GC

What is the difference is that the "INITIAL SETTINGS" data which is stored in Flash ROM mounted on Main PCB.

#### 3.4.1. Defining methods:

To define the model suffix to be serviced, refer to the nameplate which is putted on the bottom side of the Unit.

<p><b>a) DMC-LZ10 (Japan domestic model)</b> The nameplate for this model show the following Safety registration mark.</p> 	 <p>Safety registration mark</p>
<p><b>b) DMC-LZ10P/PC</b> The nameplate for these models show the following Safety registration mark.</p> 	
<p><b>c) DMC-LZ10E/EB/EF/EG/GN</b> The nameplate for these models show the following Safety registration mark.</p> 	
<p><b>d) DMC-LZ10EE</b> The nameplate for this model show the following Safety registration mark.</p> 	
<p><b>e) DMC-LZ10GK</b> The nameplate for this model show full model number. (with suffix)</p>	
<p><b>f) DMC-LZ10PL/GC</b> The nameplate for these models do not show any above Safety registration marks.</p>	

**NOTE:**

After replacing the MAIN PCB, be sure to achieve adjustment.

The adjustment instruction is available at "software download" on the "Support Information from NWBG/VDBG-PAVC" web-site in "TSN system", together with Maintenance software.



### 3.4.2. INITIAL SETTINGS:

When you replace the Main PCB, be sure to perform the initial settings after achieving the adjustment by ordering the following procedure in accordance with model suffix of the unit.

#### 1. IMPORTANT NOTICE:

Before proceeding Initial settings, be sure to read the following CAUTIONS.

#### CAUTION 1 (Initial Settings)

**DO NOT** select "NONE(JAPAN)" or "P"(North America) if need to select "EG/E/PL/GC/GK/EF/EB/EE/GN and PC".

Otherwise, once "NONE(JAPAN)" or "P"(North America) are selected, "EG/E/PL/GC/GK/EF/EB/EE/GN and PC" will not displayed, thus, RE-Settings (changing area) can not be made.

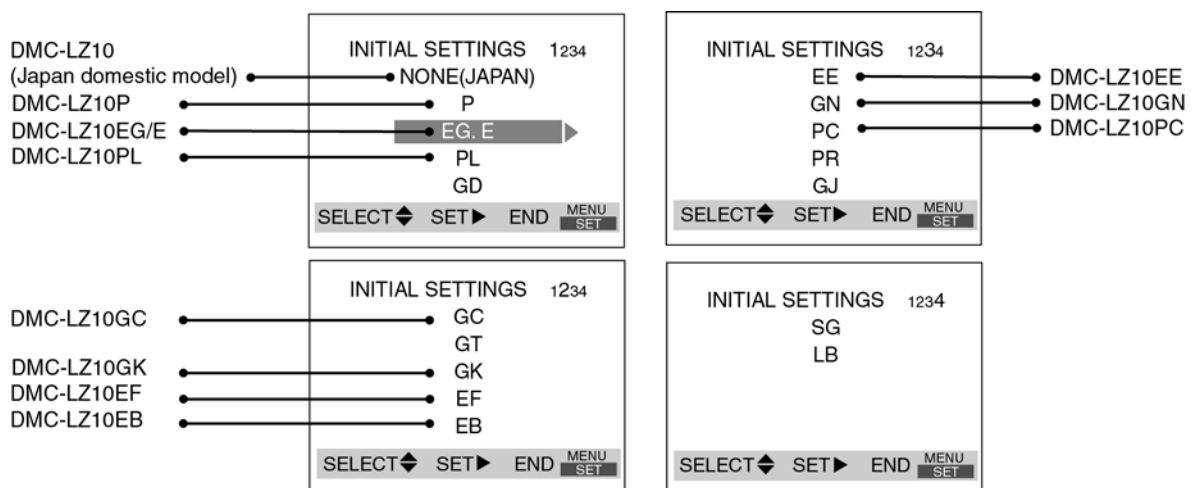
#### CAUTION 2 (Picture back up from "Built-in Memory")

This unit employs "Built-in Memory" for picture image data recording.(Approx. 20MB)  
Be sure to make picture data back up (i.e., Copying to SD memory card), before proceeding "INITIAL SETTINGS".

Once "INITIAL SETTINGS" has been carried out, all image data stored at "Built-in Memory" is erased.

#### 2. PROCEDURES:

- Precautions: Proceed the picture back up from the unit. (Refer to above "CAUTION 2")
- Preparation. Set the Mode dial to "P" (Program AE mode).  
Set the [REC]/[PLAYBACK] selector switch to "[REC] (Red camera mark)".
- **Step 1. The temporary cancellation of initial setting:**  
Set the [REC]/[PLAYBACK] selector switch to "[ REC ] (Red camera mark)".  
While keep pressing [ E.ZOOM ] and "[ UP ] of Cursor buttons" simultaneously, turn the Power on.
- **Step 2. The cancellation of initial setting:**  
Set the [REC]/[PLAYBACK] selector switch to "[ PALYBACK ]".  
Press [ E.ZOOM ] and "[ UP ] of Cursor buttons" simultaneously, then turn the Power off.
- **Step 3. Turn the Power on:**  
Set the [REC]/[PLAYBACK] selector switch to "[ REC ] (Red camera mark)", and then turn the Power on.
- **Step 4. Display the INITIAL SETTING:**  
While keep pressing [ MENU ] and "[ RIGHT ] of Cursor buttons" simultaneously, turn the Power off.



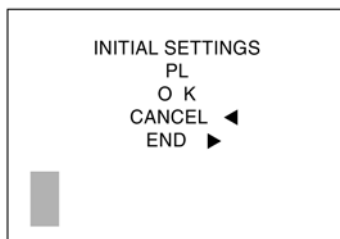
• **Step 5. Set the INITIAL SETTING: (Refer to “CAUTION 1”)**

**[Caution for before settings]**

Once "NONE(JAPAN)" (Area for Japan) or "P" (Area for North America) is selected with "INITIAL SETTINGS", other areas will not be displayed even if "INITIAL SETTINGS" menu is displayed again, thus, the area can not be changed.

Select the area carefully.

Select the area with pressing “[ UP ] / [ DOWN ] of Cursor buttons”, and then press the “[ RIGHT ] of Cursor buttons”.



The only set area is displayed, and then press the “[ RIGHT ] of Cursor buttons” after confirmation.

(The unit is powered off automatically.)

Confirm the display of “PLEASE SET THE CLOCK” in English when the unit is turned on again.

• **Step 6. CONFIRMATION:**

The display shows “PLEASE SET THE CLOCK” when turn the Power on again.

When the unit is connected to PC with USB cable, it is detected as removable media.

(When the “GK” model suffix is selected, the display shows “PLEASE SET THE CLOCK” in Chinese.)

1) As for your reference Default setting condition is given in the following table.

• **Default setting (After “INITIAL SETTINGS”)**

	MODEL	VIDEO OUTPUT	LANGUAGE	DATE	REMARKS
a)	DMC-LZ10 (Japan domestic model)	NTSC	Japanese	Year/Month/Date	
b)	DMC-LZ10P/PC/PL	NTSC	English	Month/Date/Year	
c)	DMC-LZ10E/EB/EG/GC/GN	PAL	English	Date/Month/Year	
d)	DMC-LZ10EF	PAL	French	Date/Month/Year	
e)	DMC-LZ10EE	PAL	Russian	Date/Month/Year	
f)	DMC-LZ10GK	PAL	Chinese (simplified)	Year/Month/Date	

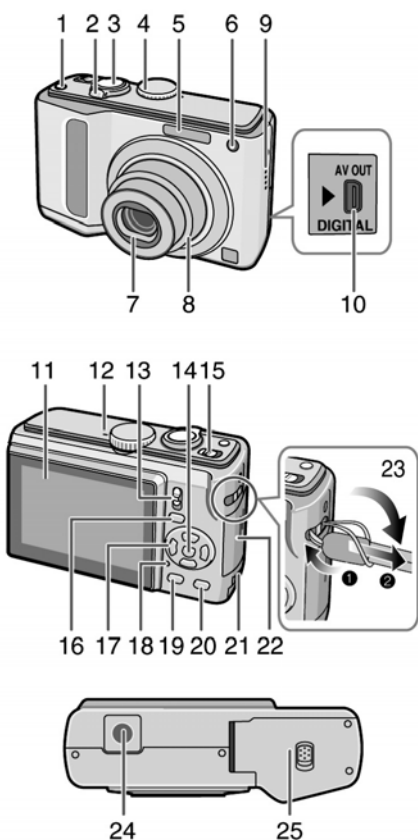
# 4 Specifications

<b>Digital Camera:</b>	Information for your safety
<b>Power Source:</b>	DC 3.0 V
<b>Power Consumption:</b>	1.5 W (When recording) 0.6 W (When playing back)
<b>Camera Effective pixels:</b>	10,100,000 pixels
<b>Image sensor:</b>	1/2.33" CCD
<b>Total pixels:</b>	10,700,000 pixels Primary color filter
<b>Lens:</b>	Optical 5 × zoom, f=5.2 to 26 mm [35 mm film camera equivalent: 30 to 150 mm / F3.3 to F5.9]
<b>Digital zoom:</b>	Max. 4 ×
<b>Extended optical zoom:</b>	max 8.9 ×
<b>Focus:</b>	Normal / Macro Face Detection / 9-area-focusing / 3-area-focusing (high speed) / 1-area-focusing (high speed) / 1-area-focusing / Spot
<b>Focus range:</b>	Normal : 50 cm (1.64 feet) (Wide) / 1 m (3.28 feet) (Tele) to ∞ Macro / Intelligent auto: 5 cm (0.17 feet) (Wide) / 1 m (3.28 feet) (Tele) to ∞ Advanced scene mode / Scene mode: settings may be different to those shown above
<b>Shutter system:</b>	Electronic shutter + Mechanical shutter
<b>Motion picture recording:</b>	Aspect ratio [4:3]: 640 × 480 pixels (30 frames/second, 10 frames/second) (When a card is used.) / 320 × 240 pixels (30 frames/second, 10 frames/second) Aspect ratio [16:9]: 848 × 480 pixels (30 frames/second, 10 frames/second) (When a card is used.) With audio
<b>Burst recording</b>	
<b>Burst speed:</b>	Approx. 2.5 pictures/second (NORMAL), Approx. 2 pictures/second (Unlimited)
<b>Number of recordable pictures:</b>	Max. 5 pictures (Standard), max. 3 pictures (Fine), Depends on the remaining capacity of the built-in memory or the card (Unlimited).
<b>Hi-speed burst</b>	
<b>Burst speed:</b>	Approx. 5 pictures/second
<b>Picture size</b>	[2M] (4:3), [2.5M] (3:2), [2M] (16:9)
<b>ISO sensitivity:</b>	AUTO/100 / 200 / 400 / 800 / 1600 [HIGH SENS.] mode: 1600 to 6400
<b>Shutter speed:</b>	60 seconds to 1/2,000th of a second [STARRY SKY] mode: 15 seconds, 30 seconds, 60 seconds
<b>White balance:</b>	Auto white balance / Daylight / Cloudy / Shade / Halogen / White set
<b>Exposure (AE):</b>	Program AE, Aperture-priority AE, Shutter-priority AE, Manual exposure Exposure compensation (1/3 EV Step, -2 EV to +2 EV)
<b>Metering mode:</b>	Multiple / Center weighted / Spot

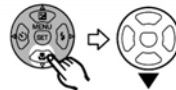
<b>LCD monitor:</b>	TFT LCD 2.5" (Approx. 230,000 dots) (field of view ratio about 100%)
<b>Flash:</b>	Flash range: Approx. 50 cm (1.64 feet) to 6.8 m (22.31 feet) (Wide [ISO AUTO] mode) AUTO, AUTO / Red-eye reduction, Forced ON (Forced ON / Red-eye reduction), (Slow sync. / Red-eye reduction), Forced OFF
<b>Microphone:</b>	Monaural
<b>Speaker:</b>	Monaural
<b>Recording media:</b>	Built-in Memory (Approx. 20 MB) / SD Memory Card / SDHC Memory Card/MultiMediaCard (Still pictures only)
<b>Picture size:</b>	
<b>Still picture:</b>	Aspect ratio [4:3]: 3648 × 2736 pixels / 3072 × 2304 pixels / 2560 × 1920 pixels / 2048 × 1536 pixels / 1600 × 1200 pixels / 640 × 480 pixels Aspect ratio [3:2]: 3648 × 2432 pixels / 3072 × 2048 pixels / 2560 × 1712 pixels / 2048 × 1360 pixels Aspect ratio [16:9]: 3648 × 2056 pixels / 3072 × 1728 pixels / 2560 × 1440 pixels / 1920 × 1080 pixels
<b>Motion picture:</b>	Aspect ratio [4:3]: 640 × 480 pixels (Only when using an SD Memory card / SDHC Memory Card), 320 × 240 pixels Aspect ratio [16:9]: 848 × 480 pixels (Only when using an SD Memory card / SDHC Memory Card) Fine / Standard
<b>Quality:</b>	
<b>Recording file format</b>	
<b>Still Picture:</b>	JPEG (Design rule for Camera File system, based on Exif 2.21 standard), DPOF corresponding
<b>Motion pictures:</b>	"QuickTime Motion JPEG" (motion pictures with audio)
<b>Interface</b>	
<b>Digital:</b>	USB 2.0 (Full Speed)
<b>Analog video / audio:</b>	NTSC / PAL Composite (Switched by menu), Audio line output (monaural)
<b>Terminal</b>	
<b>AV OUT / DIGITAL:</b>	Dedicated jack (8 pin)
<b>DC IN:</b>	Type1 jack (Only when using DC coupler)
<b>Dimensions:</b>	3.84" (W) × 2.44" (H) × 1.31" (D) (97.5 mm (W) × 62.0 mm (H) × 33.3 mm (D)) (excluding the projection part)
<b>Mass (Weight):</b>	Approx. 0.31 lb/141 g (excluding Memory Card and battery) Approx. 0.41 lb/188 g (with Memory Card and battery)
<b>Operating Temperature:</b>	0 °C to 40 °C (32 °F to 104 °F)
<b>Operating Humidity:</b>	10 % to 80 %

# 5 Location of Controls and Components

## Names of the Components

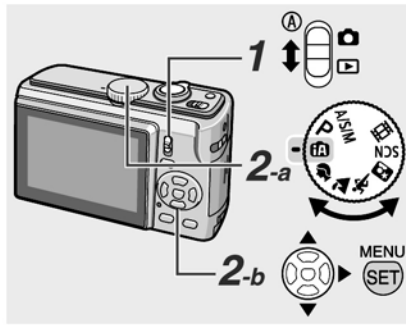


- 1 [E. ZOOM] (Easy Zoom) button
- 2 Zoom lever
- 3 Shutter button
- 4 Mode dial
- 5 Flash
- 6 Self-timer indicator  
AF assist lamp
- 7 Lens part
- 8 Lens barrel
- 9 Speaker

- 10 [AV OUT/DIGITAL] socket
  - 11 LCD monitor
  - 12 Microphone
  - 13 Recording/playback switch
  - 14 [MENU/SET] button
  - 15 Camera ON/OFF switch
  - 16 [EXPOSURE] button
  - 17 Cursor buttons
    - ◀ /Self-timer button
    - ▼ /Macro button
    - ▶ /Flash mode button
    - ▲ /Exposure compensation/  
Auto bracket /White balance  
fine adjustment /Backlight  
compensation button
  - In these operating instructions,  
operations using the cursor buttons  
are described as follows.
  - e.g.: When you  
press the  
▼ button.
- 
- 18 Status indicator
  - 19 [DISPLAY] button
  - 20 [Q.MENU] /delete button
  - 21 DC coupler door
  - 22 Card door
  - 23 Strap eyelet
    - Attach the strap when using the  
camera to prevent it from dropping.
  - 24 Tripod receptacle
    - When you use a tripod, make sure  
the tripod is stable with the camera  
attached to it.
  - 25 Battery door

## About the mode

Selecting recording modes or playback mode.



### 1 Slide the recording/playback switch **A** to **⏺** (up) or **▶** (down).

- ⏺** : Recording mode (a)
- ▶** : Playback mode (b)

### 2 Setting recording/playback mode

#### a <Recording mode>

Turn the mode dial to set the desired mode to **⏺** (microphone).

#### b <Playback mode>

Other playback mode than normal playback [**▶**] mode can be selected.

- 1 Press [MENU/SET].
- 2 Press **▶**.
- 3 Select playback mode using **▲/▼**.
- 4 Press [MENU/SET].



### Recording mode

#### **A** Intelligent auto mode

Taking pictures easily.

#### **P** Program AE mode

Taking pictures in the desired setting.

#### A/S/M mode

This mode allows you to create elaborate pictures.

- A: Aperture-priority AE
- S: Shutter-priority AE
- M: Manual exposure

#### Advanced scene mode

Taking pictures of people, scenery, etc. expressively.

- 👤** : PORTRAIT
- 🏞️** : SCENERY
- 🏃** : SPORTS
- 🌃** : NIGHT PORTRAIT

#### SCN Scene mode

Taking pictures according to the scene.

#### **📹** Motion picture mode

This mode allows you to record motion pictures.

### Playback mode

#### **▶** Normal playback mode

Playing back the pictures normally.

#### Other playback modes

- 📄** Slide show mode
- 📁** Category playback mode
- ★** Favorite playback mode

- [FAVORITE PLAY] does not appear when the [FAVORITE] is set to [OFF].

# 6 Service Mode

## 6.1. Error Code Memory Function

### 1. General description

This unit is equipped with history of error code memory function, and can be memorized 16 error codes in sequence from the latest. When the error is occurred more than 16, the oldest error is overwritten in sequence.

The error code is not memorized when the power supply is shut down forcibly (when the unit is powered on by the battery, the battery is pulled out) because the error code is memorized to FLASH ROM when the unit is powered off.

### 2. How to display

The error code can be displayed by the following procedure:

Before perform the error code memory function, connect the AC adaptor or insert the battery.

(Since this unit has built-in memory, this error code memory function can be performed without inserting SD memory card.)

#### • 1. The temporary cancellation of initial setting:

Set the [REC]/[PLAYBACK] selector switch to “[ REC ] (Red camera mark)”.

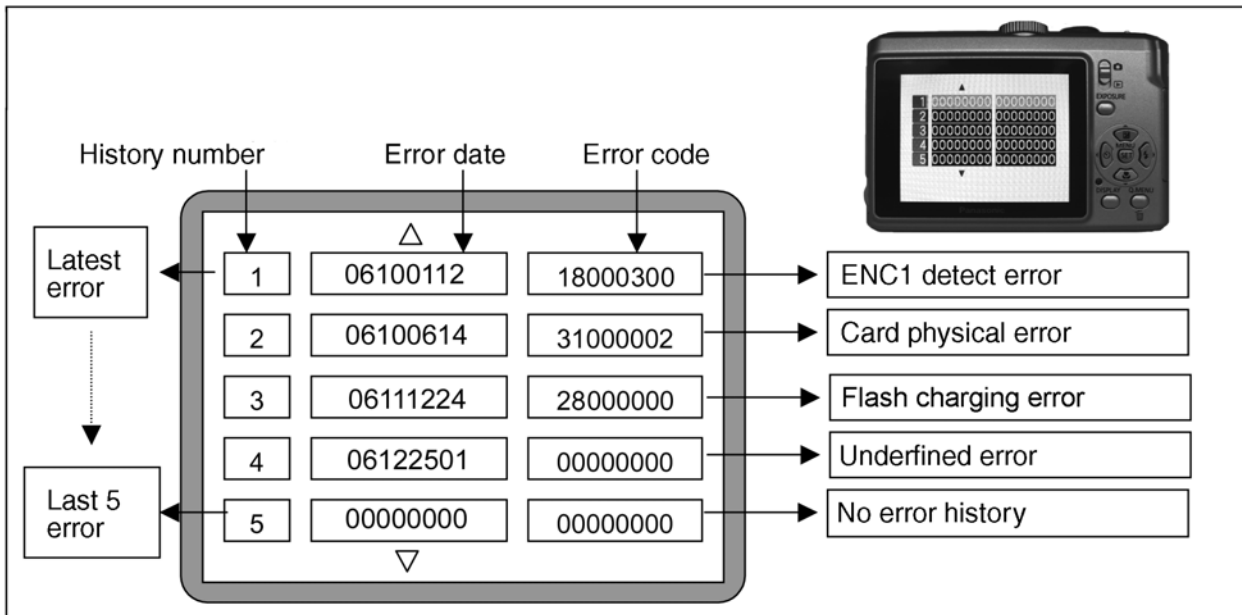
While keep pressing [ E.ZOOM ] and “[ UP ] of Cursor buttons” simultaneously, turn the Power on.

#### • 2. The display of error code:

Press [ E.ZOOM ], [ MENU ] and “[ LEFT ] of Cursor buttons” simultaneously with the step 1 condition.

The display is changed as shown below when the above buttons is pressed simultaneously.

Normal display → Error code display → Operation history display → Normal display → .....



Example of Error Code Display

#### • 3. The change of display:

The error code can be memorized 16 error codes in sequence, however it is displayed 5 errors on the LCD.

Display can be changed by the following procedure:

“[ UP ] or [ DOWN ] of Cursor buttons” : It can be scroll up or down one.

“[ LEFT ] or [ RIGHT ] of Cursor buttons” : It can be display last 5 error or another 5 error.

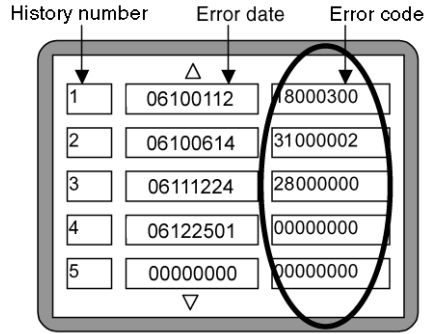
#### • 4. How to read the error date:

The error date code is displayed from the left in order at the year, month, day, time.

Error date information is acquired from "Clock setting" information when the error occurs. When the clock is not setting, it is displayed as "00000000".

• 5. How to read the error code:

One error code is displayed for 8 bit, the contents of error codes is indicated the table as shown below.



Attribute	Main item	Sub item	Error code		Contents (Upper)	
			High 4 bits	Low 4 bits	Check point (Lower)	
LENS	Lens drive	OIS	18*0	1000	PSD (X) error. Hall element (X axis) position detect error in OIS unit. OIS Unit	
				2000	PSD (Y) error. Hall element (Y axis) position detect error in OIS unit. OIS Unit	
				3000	GYRO (X) error. Gyro (IC7102: X axis) detect error on Main P.C.B.. IC7102 (Gyro element) or IC6001 (VENUS 4)	
				4000	GYRO (Y) error. Gyro (IC7101: Y axis) detect error on Main P.C.B.. IC7101 (Gyro element) or IC6001 (VENUS 4)	
				5000	MREF error (Reference voltage error). IC9101 (LENS drive) or IC6001 (VENUS 4)	
				6000	Drive voltage (X) error. VENUS 4 AD value error, LENS Unit, LENS flex breaks etc.	
				7000	Drive voltage (Y) error. VENUS 4 AD value error, LENS Unit, LENS flex breaks etc.	
		C.B./Zoom	0010	HP Low detect error. (HP ENC. detects always low. (Fully retracted condition.)) Zoom motor, ABS ENC., and/or circuit failure. Zoom deadlock (Exit side).		
				0020	HP Low detect error. (HP ENC detects always High. (Exit condition.)) Zoom motor, ABS ENC., and/or circuit failure. Zoom deadlock (Retract side).	
				0030 0040 0050	Zoom ENC. detect error.(No signal is supplied from Encoder located on Zoom Motor.) Zoom motor, ABS ENC., and/or circuit failure. Zoom deadlock.	
			Focus	0001	HP Low detect error (Focus encoder always Low detect error). FP9002-(37) signal line or IC6001 (VENUS 4)	
				0002	HP High detect error (Focus encoder always High detect error). FP9002-(38) signal line or IC6001 (VENUS 4)	
			Lens	18*1	0000	Power ON time out error. Lens drive system
		18*2			0000	Power OFF time out error. Lens drive system
		Adj.History	OIS	19*0	2000	OIS adj. Yaw direction amplitude error (small)
					3000	OIS adj. Pitch direction amplitude error (small)
					4000	OIS adj. Yaw direction amplitude error (large)
					5000	OIS adj. Pitch direction amplitude error (large)
					6000	OIS adj. MREF error
	7000				OIS adj. time out error	
	8000				OIS adj. Yaw direction off set error	
	9000				OIS adj. Pitch direction off set error	
	A000				OIS adj. Yaw direction gain error	
	B000				OIS adj. Pitch direction gain error	
	C000	OIS adj. Yaw direction position sensor error				
	D000	OIS adj. Pitch direction position sensor error				
	E000	OIS adj. other error				

Attribute	Main item	Sub item	Error code		Contents (Upper)	
			High 4 bits	Low 4 bits	Check point (Lower)	
HARD	VENUS A/D	Flash	20*0	0000	Flash charging error. IC6001-(AC17) signal line or Flash charging circuit	
				FLASH ROM (EEPROM Area)	FLASH ROM (EEPROM Area)	2B*0
	0002	EEPROM write error IC6002 (FLASH ROM)				
	SYSTEM	RTC	2C*0			
	SOFT	CPU	Reset	30*0	0001	NMI reset
0007					Non Mask-able Interrupt (30000001-30000007 are caused by factors)	
Card		Card	31*0	0001	0001	Card logic error SD memory card data line or IC6001 (VENUS 4)
					0002	Card physical error SD memory card data line or IC6001 (VENUS 4)
					0004	Write error SD memory card data line or IC6001 (VENUS 4)
						Format error
					CPU, ASIC hard	Stop
0002		Camera task invalid code error. IC6001 (VENUS 4)				
0100		File time out error in recording motion image IC6001 (VENUS 4)				
0200		File data send error in recording motion image IC6001 (VENUS 4)				
0300		Single or burst recording brake time out.				
Operation		Power on	3B*0	0000	FLASHROM processing early period of camera during movement.	
Zoom		Zoom	3C*0	0000	Inperfect zoom lens processing Zoom lens	
					35*0	0000   FFFF
			35*1	0000		
			35*2	0000	Though record preprocessing is necessary, it is not completed.	

**About "\*" indication in the above table:**

The third digit from the left is different as follows.

- In case of 0 (example: 18001000)

When the third digit from the left shows "0", this error occurred under the condition of INITIAL SETTINGS has been completed.

It means that this error is occurred basically at user side.

- In case of 8 (example: 18801000)

When the third digit from the left shows "8", this error occurred under the condition of INITIAL SETTINGS has been released.

(Example; Factory assembling-line before unit shipment, Service mode etc.)

It means that this error is occurred at service side.

**• 6. How to returned to Normal Display:**

Turn the power off and on, to exit from Error code display mode.

**NOTE:**

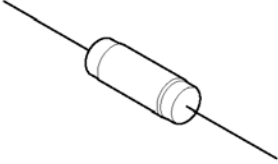
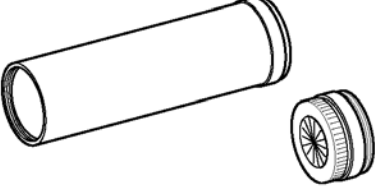
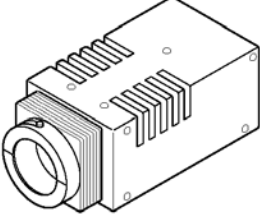
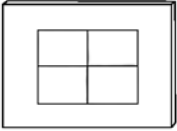



The error code can not be initialized.



# 7 Service Fixture & Tools

## 7.1. Service Fixture and Tools

The following Service Fixture and tools are used for checking and servicing this unit.

<b>Resistor for Discharging</b> <b>ERG5SJ102</b>	<b>Infinity Lens (with Focus Chart)</b> <b>VFK1164TCM02</b>	<b>LIGHT BOX</b> <b>VFK1164TDVLB</b>
 <b>An equivalent type of Resistor may be used.</b>	 <b>* RFKZ0422 can be used.</b>	 <b>※ with DC Cable</b>
<b>TR Chart</b> <b>RFKZ0443</b>	<b>Lens Cleaning Kit (BK)</b> <b>VFK1900BK</b>	<b>Grease (for lens)</b> <b>RFKZ0472</b>
	 <b>* Only supplied as 10 set/box.</b>	
<b>Dome type magnifying glass</b> <b>VFK1835</b>		
		

## 7.2. When Replacing the Main PCB

After replacing the MAIN PCB, be sure to achieve adjustment.

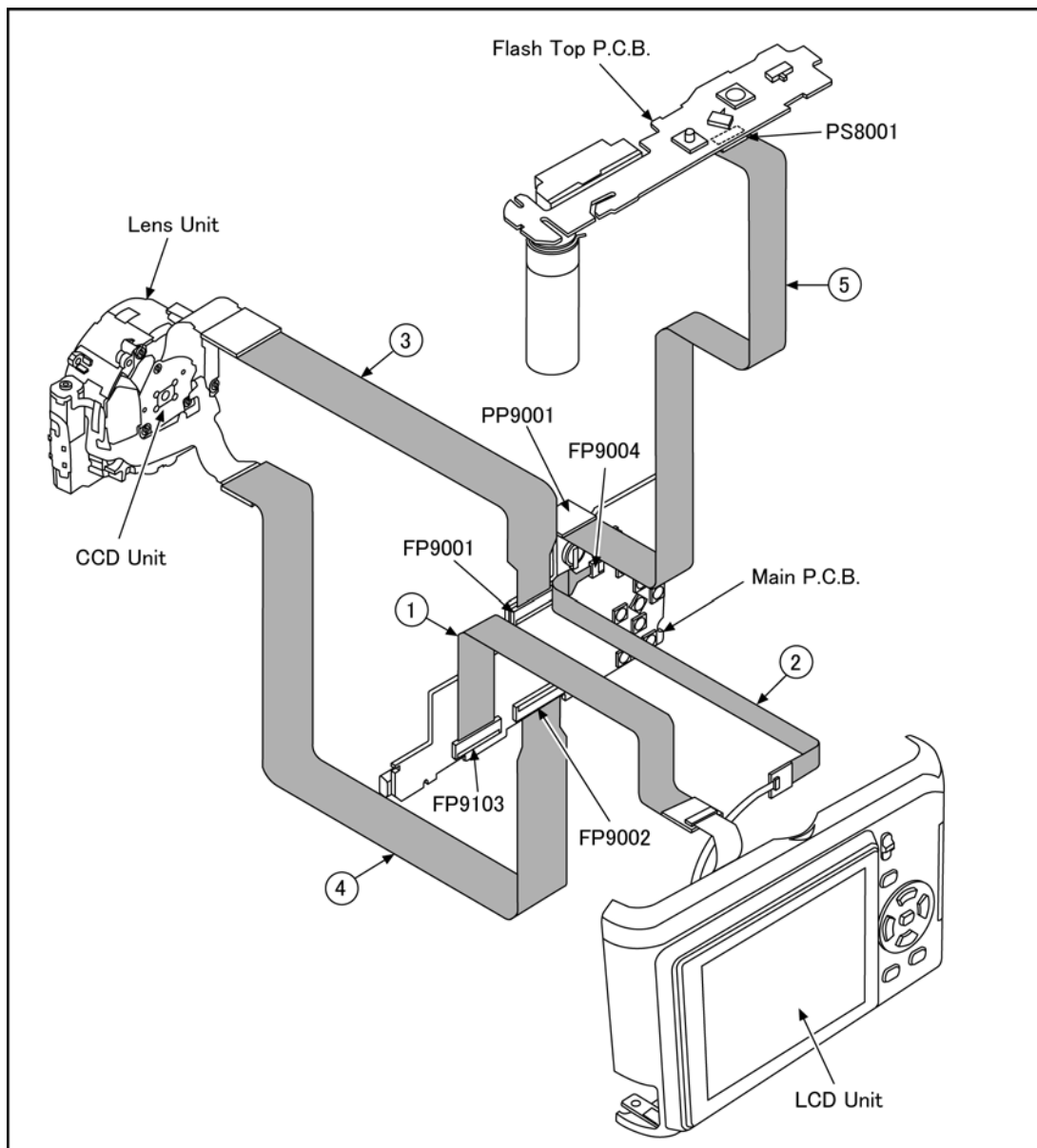
The adjustment instruction is available at "software download" on the "Support Information from NWBG/VDBG-PAVC" web-site in "TSN system", together with Maintenance software.

## 7.3. Service Position

This Service Position is used for checking and replacing parts. Use the following Extension cables for servicing.

Table S1 Extension Cable List

No.	Parts No.	Connection	Form
1	RFKZ0354	FP9103 (MAIN) - LCD UNIT	37PIN 0.3 FFC
2	VFK1974	FP9004 (MAIN) - LCD UNIT	4PIN 0.5 FFC
3	RFKZ0416	FP9001 (MAIN) - CCD UNIT	41PIN 0.3 FFC
4	RFKZ0477	FP9002 (MAIN) - LENS UNIT	45PIN 0.3 FFC
5	VFK1870	PP9001 (MAIN) - PS8001 (FLASH TOP)	30PIN B to B



### CAUTION-1. (When servicing FLASH TOP PCB)

1. Be sure to discharge the capacitor on FLASH TOP PCB.

Refer to "HOW TO DISCHARGE THE CAPACITOR ON FLASH TOP PCB".

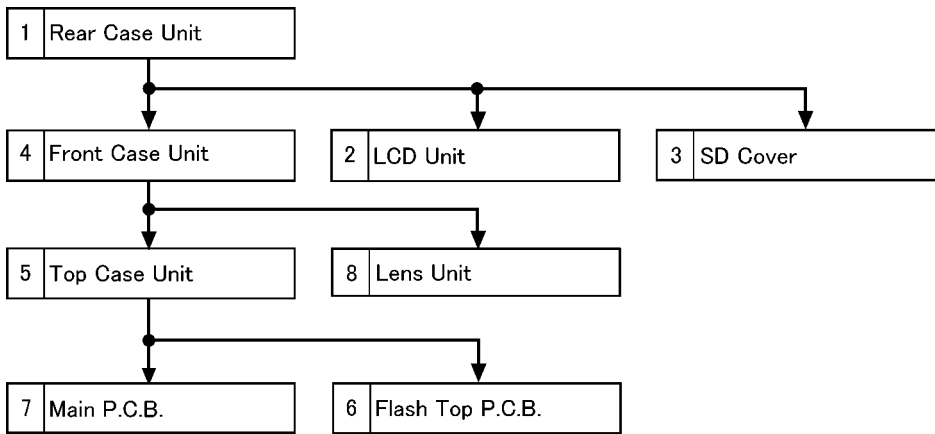
The capacitor voltage is not lowered soon even if the AC Cord is unplugged or the battery is removed.

2. Be careful of the high voltage circuit on FLASH TOP PCB.

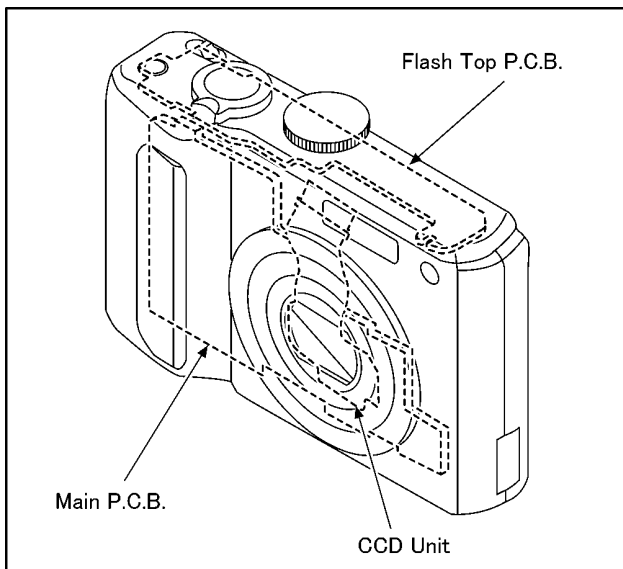
3. DO NOT allow other parts to touch the high voltage circuit on FLASH TOP PCB.

# 8 Disassembly and Assembly Instructions

## 8.1. Disassembly Flow Chart



## 8.2. PCB Location



## 8.3. Disassembly Procedure

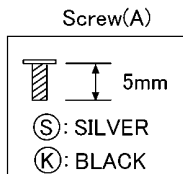
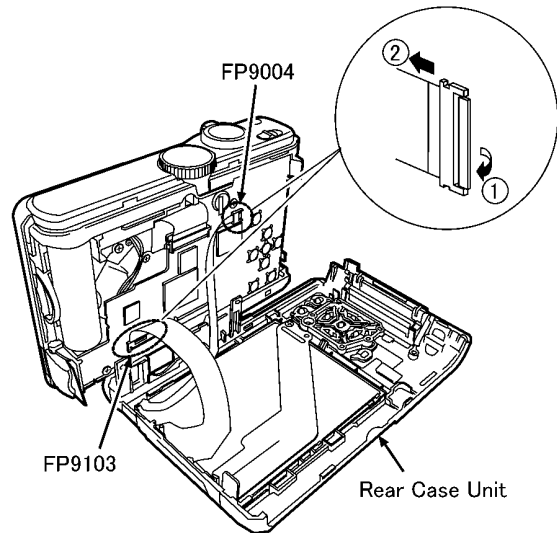
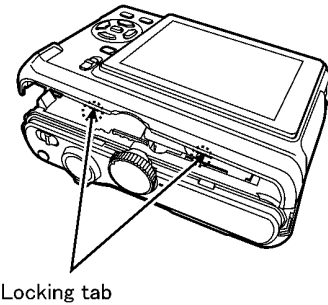
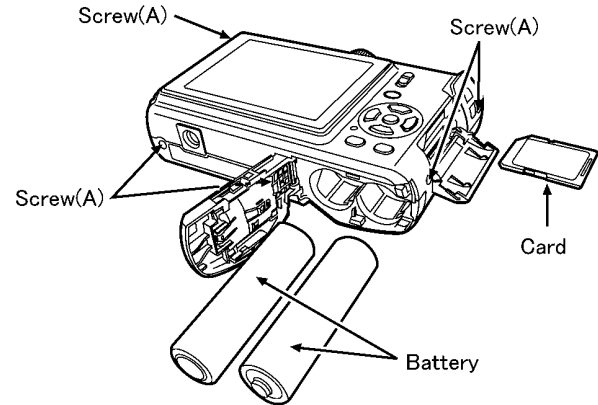
### 8.3.1. Removal of the Rear Case Unit

No.	Item	Fig	Removal		
1	Rear Case Unit	Fig. D1	Card		
			Battery		
			5 Screws (A)		
			FP9103(Flex)		
			FP9004(Flex)		
			2 Locking tabs		
		Rear Case Unit			
		Fig. D2	NOTE: (When Installing)		
2	LCD Unit	Fig. D3	1 Screw (B)		
			LCD Holder		
			LCD Unit		
3	SD Cover	Fig. D4	Cursor Button		
			Shaft		
			Earth Plate		
			LED Panel (R)		
			SD Cover		
4	Front Case Unit	Fig. D5	1 Screw (C)		
			FP9001(Flex)		
			FP9002(Flex)		
			1 Screw (D)		
			Coupler Cover		
			Front Case Unit		
5	Top Case Unit	Fig. D6	PP9001(Connector)		
			Top Case Unit		
6	Flash Top P.C.B.	Fig. D7	Top Ornament Unit		
			E.ZOOM Button		
			Power Knob		
			3 Screw (E)		
			Flash Top P.C.B.		
				Fig. D8	NOTE: (When Installing)
7	Main P.C.B.	Fig. D9	5 Solders		
			3 Screw (F)		
			Speaker		
			Main P.C.B.		
8	Lens Unit	Fig. D10	3 Screw (G)		
			Lens Unit		

#### NOTE:

When servicing and reassembling, remove the card and battery from the unit.

- Card
- Battery
- Screw(A) × 5
- FP9004 (Flex)
- FP9103 (Flex)
- Locking tab × 2



#### NOTE: (When Replacing)

When remove the flex, pull up the locking tab in the direction of arrow ①, and then remove the flex in the direction of arrow ②.

Fig. D1

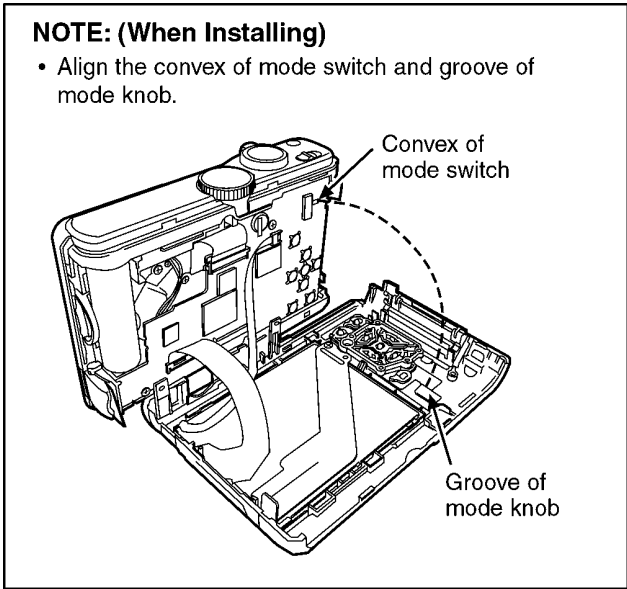


Fig. D2

### 8.3.2. Removal of the LCD Unit

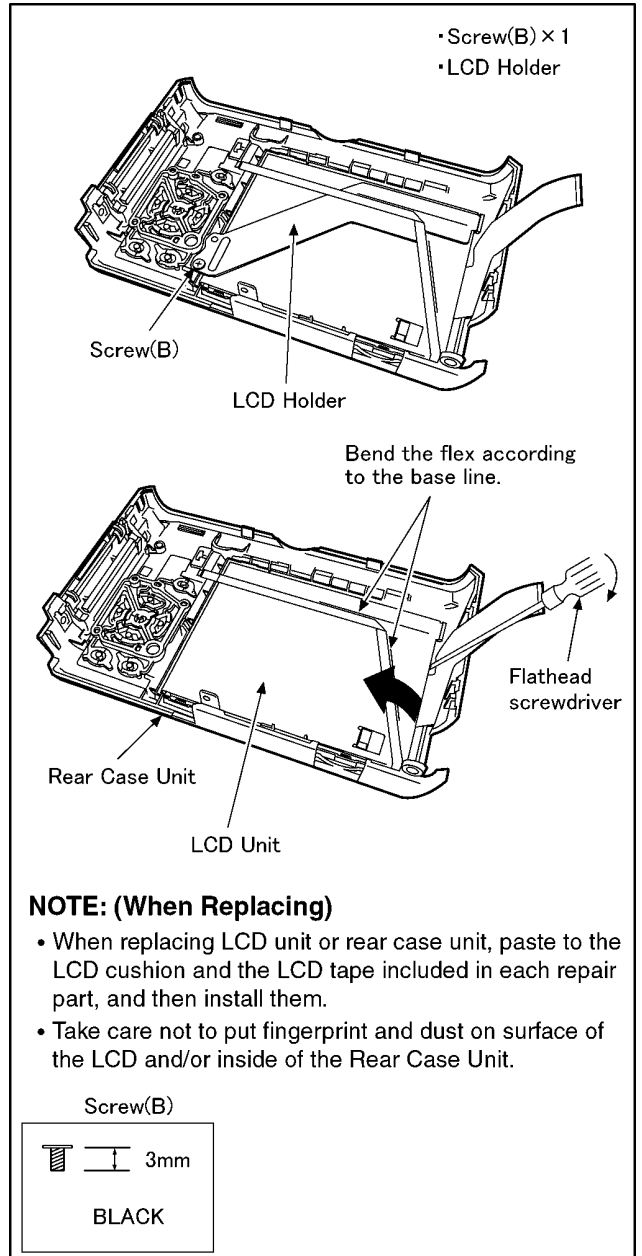


Fig. D3

### 8.3.3. Removal of the SD Cover

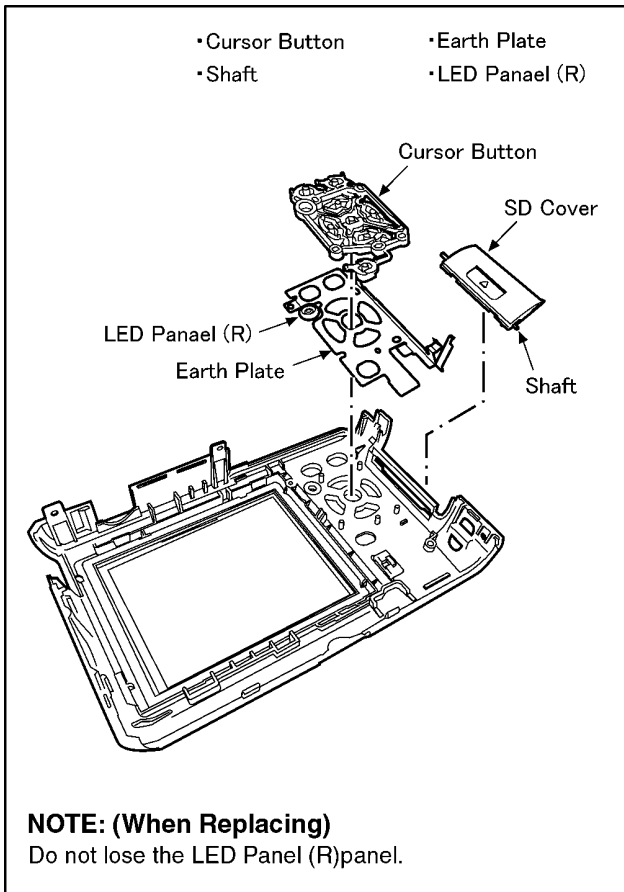


Fig. D4

### 8.3.4. Removal of the Front Case Unit

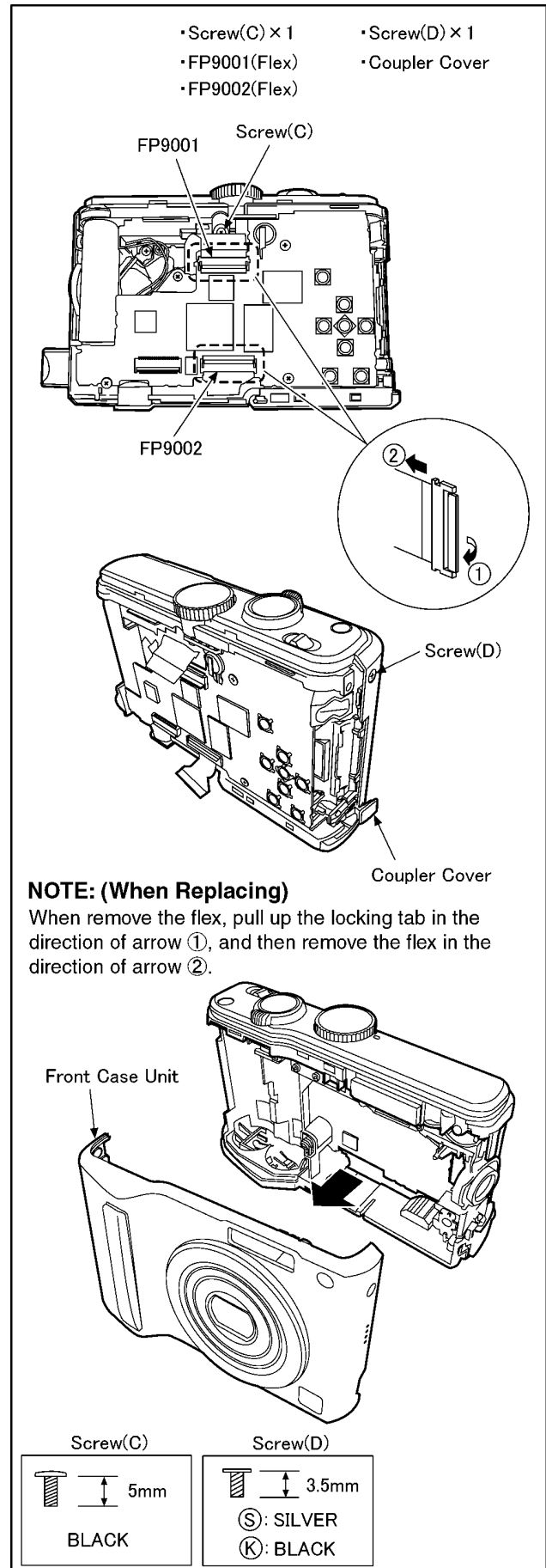


Fig. D5

### 8.3.5. Removal of the Top Case Unit

**IMPORTANT NOTICE:**

Take care not apply any bending load to the charging capacitor. It brings about the possibility of PCB and/or component damage on the Flash Top P.C.B.

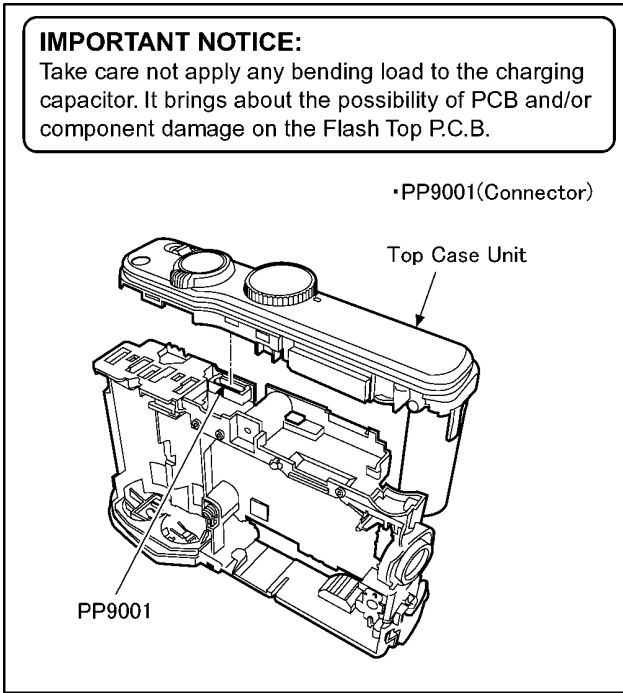
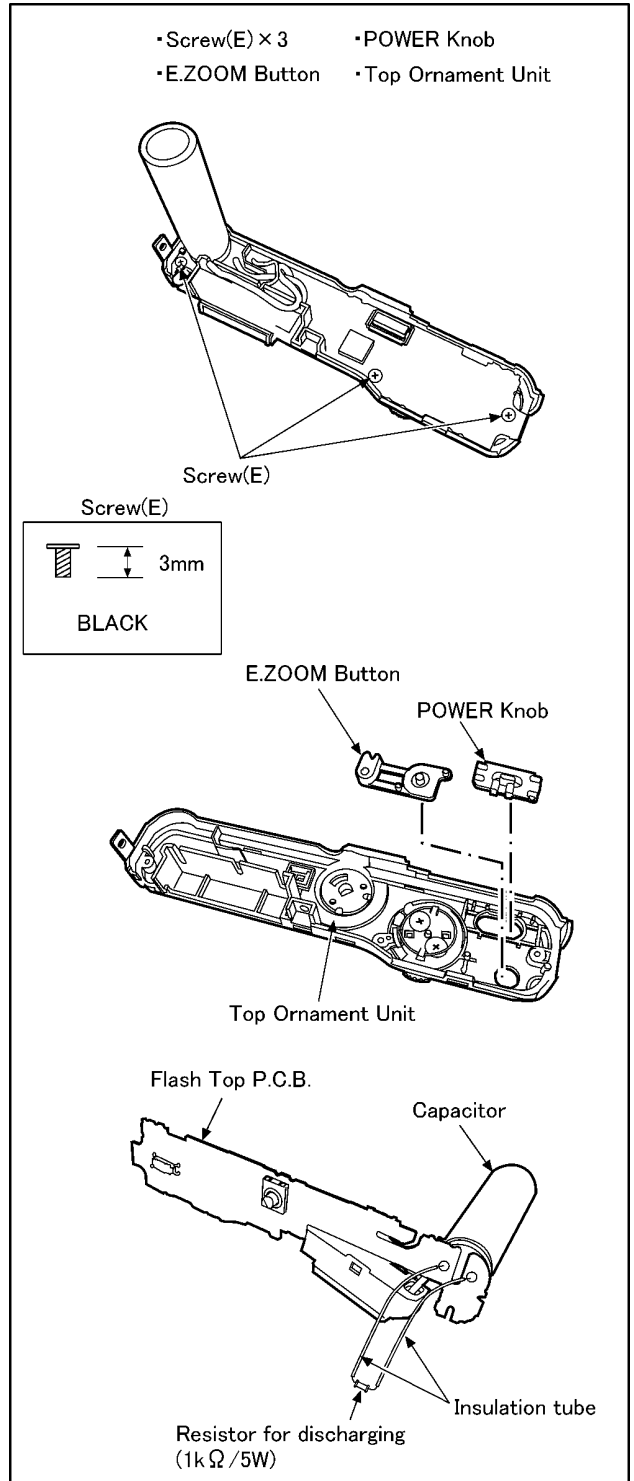


Fig. D6

### 8.3.6. Removal of the Flash Top P.C.B.

- Screw(E) × 3
- POWER Knob
- E.ZOOM Button
- Top Ornament Unit



**CAUTION**

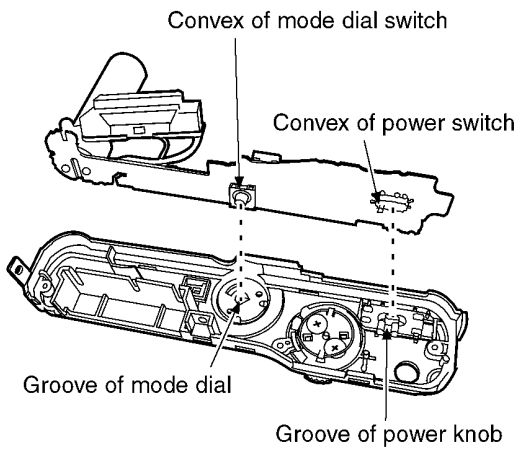
**Be sure to discharge the capacitor on Flash Top P.C.B. before disassembling.**

1. Remove the Flash Top P.C.B..
2. Put the insulation tube on the lead part of resistor (ERG5SJ102: 1kΩ/5W).
3. Put the resistor between both terminals of capacitor unit for approx. 5 seconds.

Fig. D7

**NOTE: (When Installing)**

- Align the convex of power switch and groove of power knob.
- Align the convex of mode dial switch and groove of mode dial.



**IMPORTANT NOTICE:**

Take care not apply any bending load to the charging capacitor. It brings about the possibility of PCB and/or component damage on the Flash Top P.C.B.

Fig. D8

**8.3.7. Removal of the Main P.C.B.**

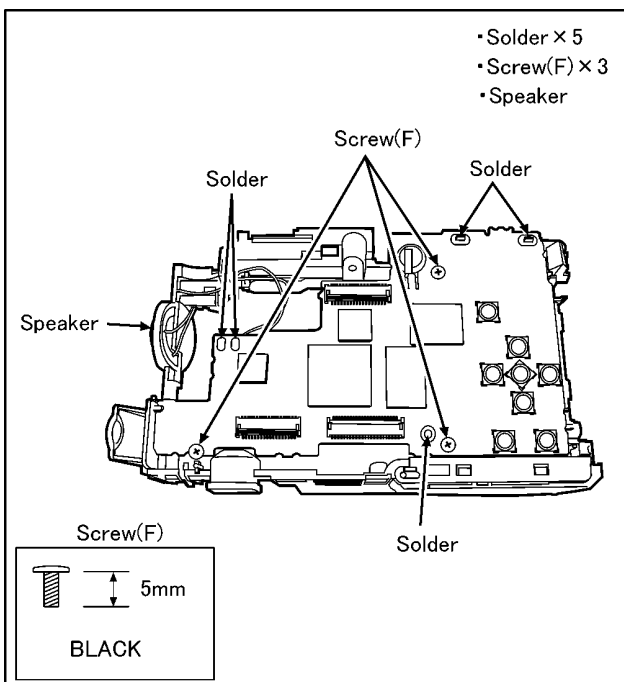


Fig. D9

**8.3.8. Removal of the Lens Unit**

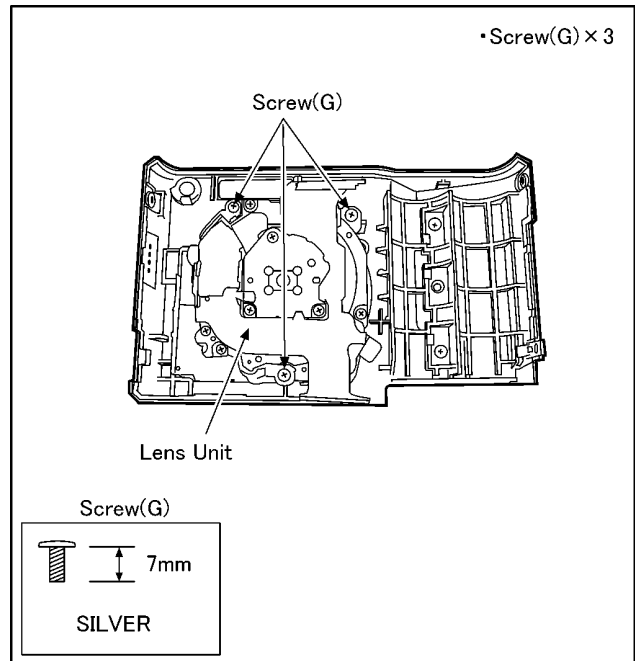


Fig. D10

**NOTE: (When Assembling)**

Be sure to confirm the following points when assembling.

- The Screw is tightened enough.
- Assembling conditions are fine. (No distortion, no illegal-space.)
- No dust and/or dirt on every Lens surfaces.
- LCD image is fine. (No dust and dirt on it, and no gradient images.)



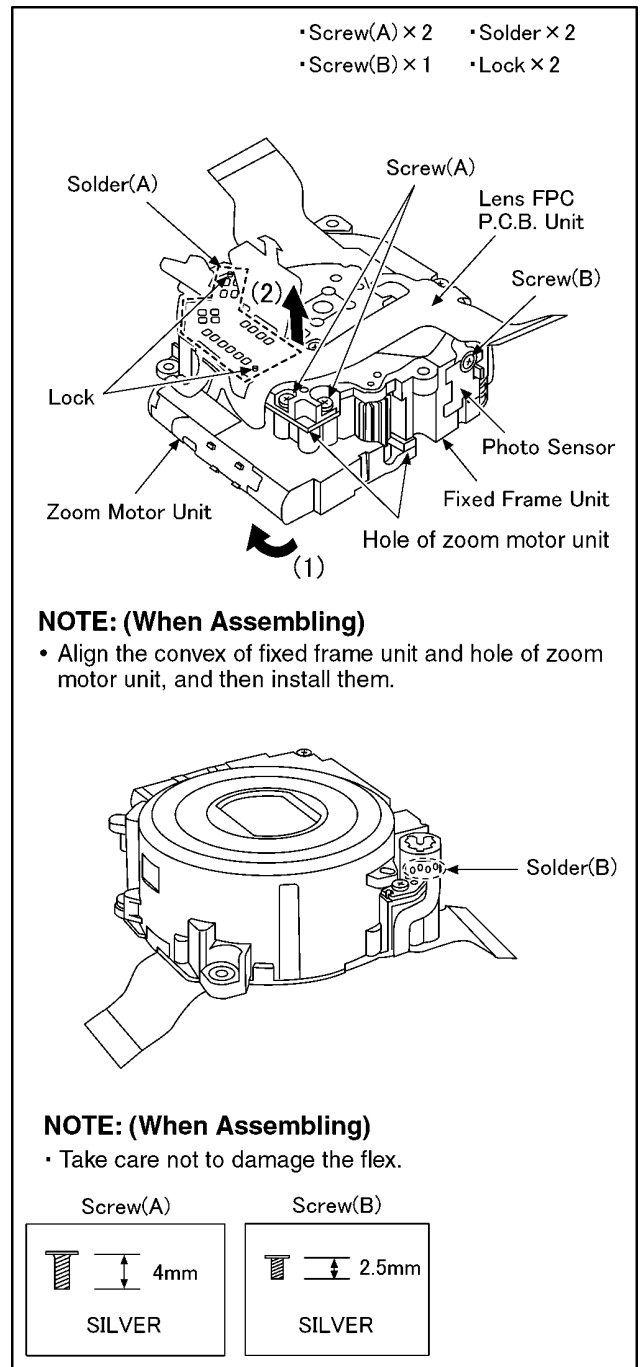
## 8.4. Disassembly Procedure for the Lens

### NOTE: When Disassembling and Assembling for the Lens

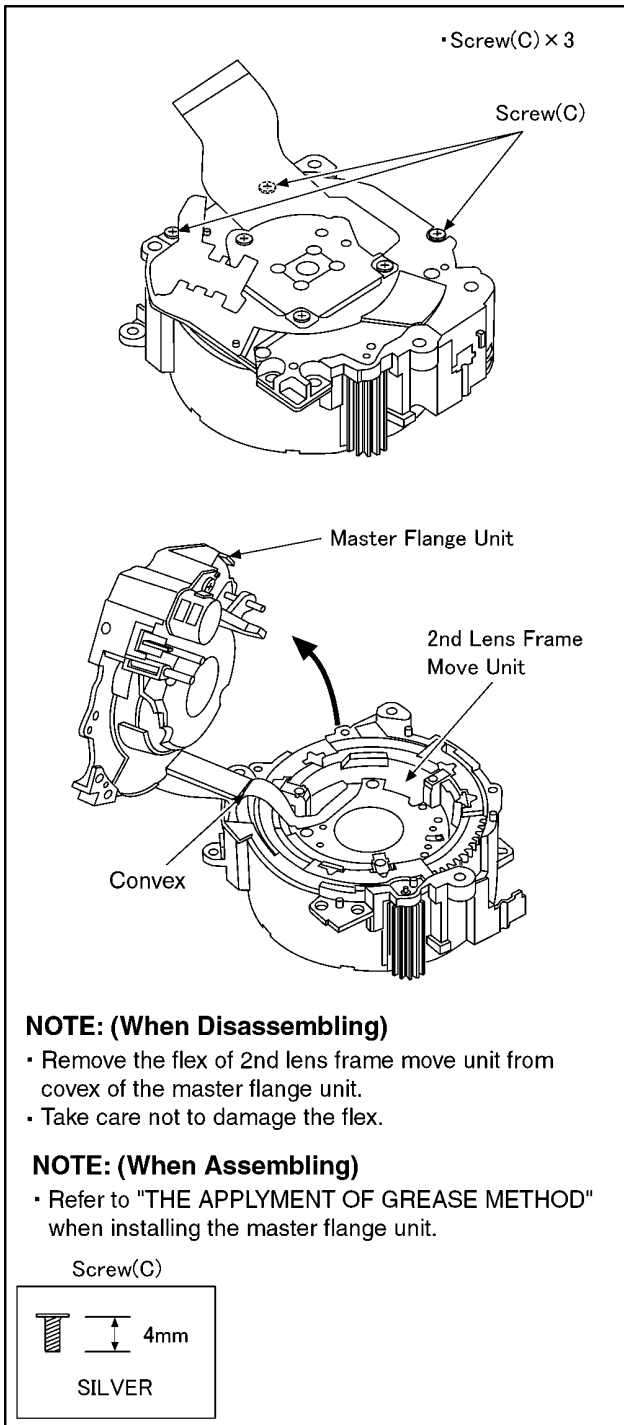
1. To minimize the possibility of the CCD being dirt, perform disassemble and/or assemble under the condition of the CCD is being mounted.  
Disassembling procedures for the CCD unit, refer to item 8.6.
2. Take care that the dust and dirt are not entered into the lens.  
In case of the dust is putted on the lens, blow off them by airbrush.
3. Do not touch the surface of lens.
4. Use lens cleaning KIT (BK)(VFK1900BK).
5. Apply the grease (RFKZ0472) to the point where is shown to "Grease apply" in the figure.  
When the grease is applied, use a toothpick and apply thinly.
6. When repair the fixed frame, drive frame and direct frame, must be unit exchange.

### 8.4.1. Removal of the Zoom Motor Unit and Lens FPC P.C.B. Unit

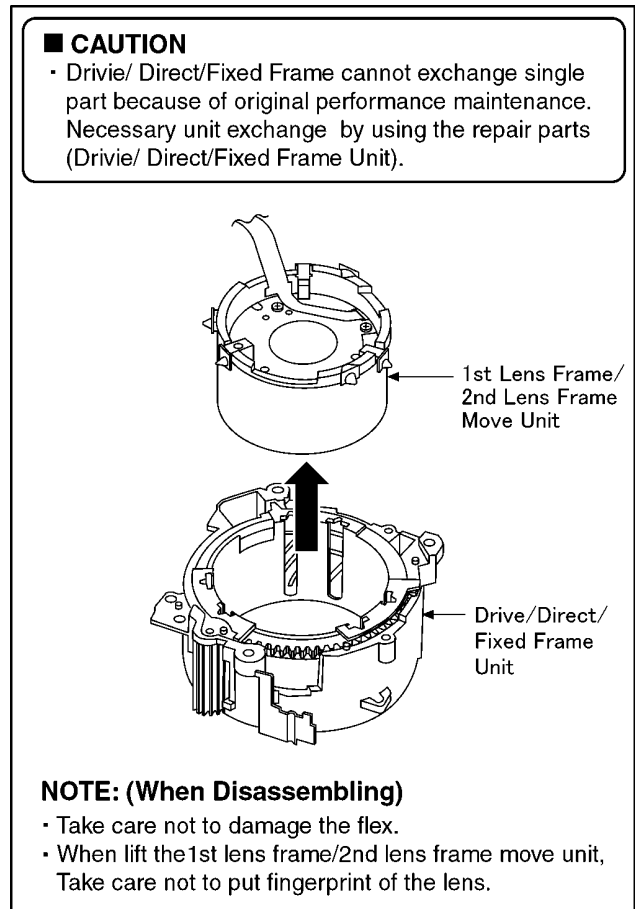
1. Remove the 1 solder (A).
2. Remove the 1 solder (B).
3. Unscrew the 2 screws (A).
4. Unscrew the 1 screw (B).
5. Remove the 2 locks.
6. Remove the zoom motor unit to the indicated by arrow (1).
7. Remove the lens FPC P.C.B. unit to the indicated by arrow (2).



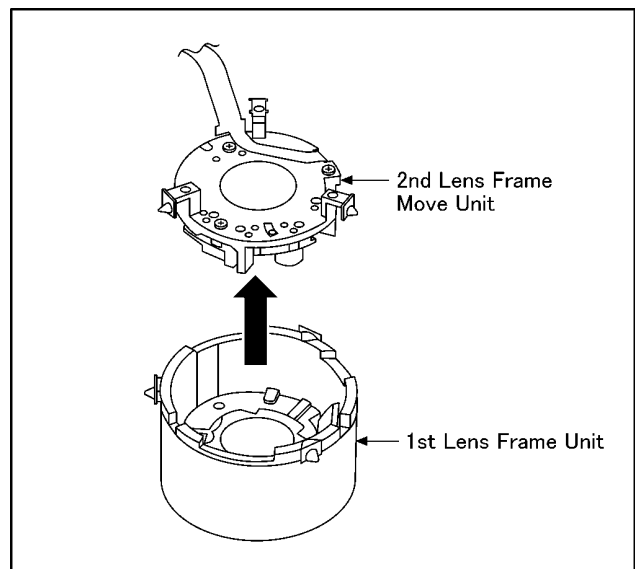
### 8.4.2. Removal of the Master Flange Unit



### 8.4.3. Removal of the 1st Lens Frame/2nd Lens Frame Move Unit



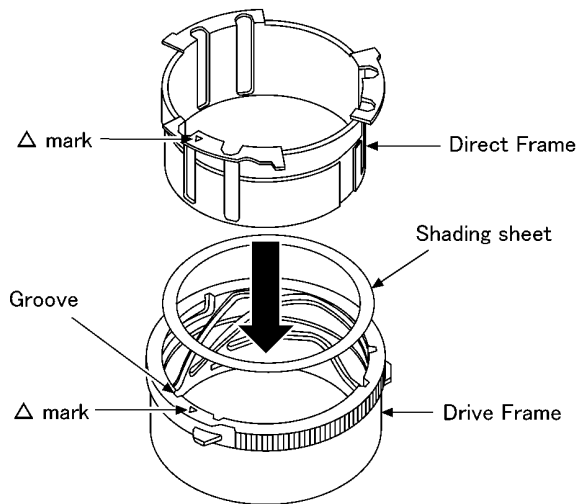
### 8.4.4. Removal of the 2nd Lens Frame Move Unit



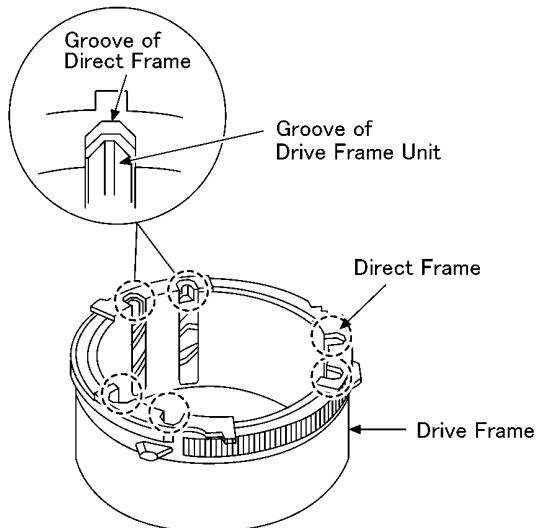
## 8.5. Assembly Procedure for the Lens

### 8.5.1. Phase alignment of the Direct Frame and Drive Frame Unit

- Insert the shading sheet to drive frame.  
(When insert the shading sheet, so that the luster side facing to subject side)
- Align the  $\Delta$  mark of direct frame and groove in the interior of  $\Delta$  mark of drive frame, and then install the direct frame to drive frame.

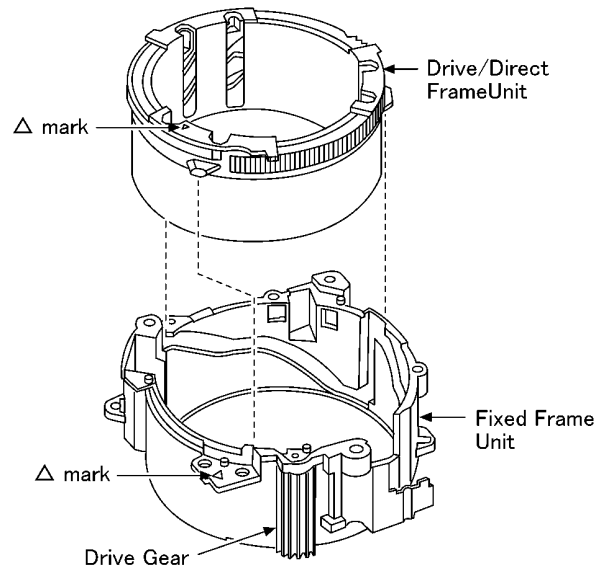


- Move the external U cut of direct frame to gear edge, and then align the phase of the groove (6 points).



### 8.5.2. Phase alignment of the Drive/Direct Unit and Fixed Frame Unit

- Align the  $\Delta$  mark, and then install the drive/direct frame unit to fixed frame unit.

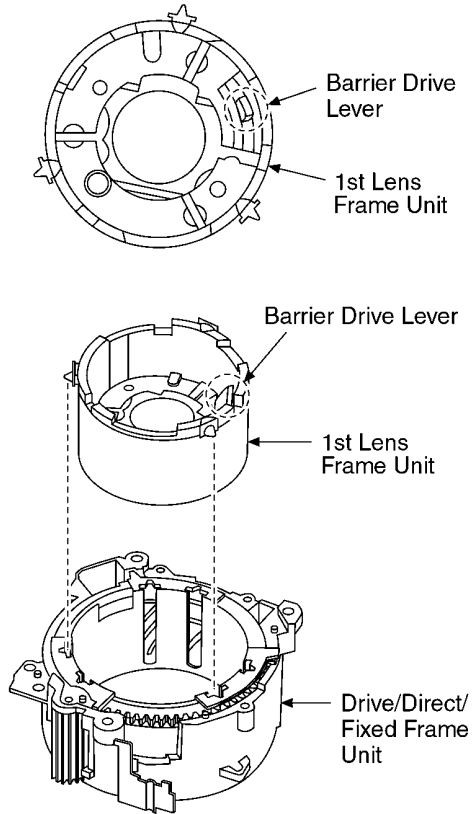


#### NOTE: (When Assembling)

- With aligning the phase of the drive/direct frame unit, confirm the gear of drive unit is engaged with the fixed frame unit firmly.

### 8.5.3. Assembly for the 1st Lens Frame Unit and Drive/Direct/Fixed Frame Unit

- Inserts the 1st lens frame unit to the drive/direct/fixed frame unit so that the barrier drive lever may become the position of the figure below.

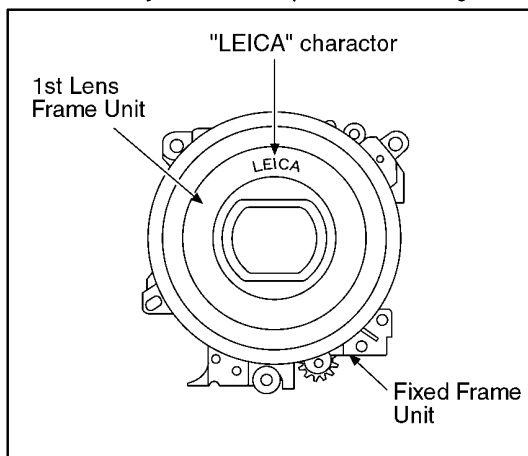


**NOTE: (When Assembling)**

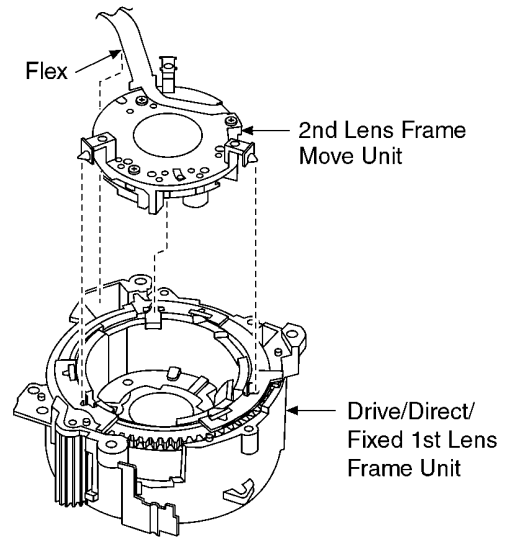
Take care not to put fingerprint of the lens.

**FRONT VIEW**

- Install the 1st lens frame unit so that the "LEICA" character may become the position of the figure below.



### 8.5.4. Assembly for the 2nd Lens Frame Move Unit and Drive/Direct/Fixed Frame/1st Lens Frame Unit



**NOTE: (When Assembling)**

Take care not to put fingerprint of the lens.

### 8.5.5. Assembly for the Master Flange Unit and Drive/Direct/Fixed Frame/1st Lens Frame/2nd Lens Frame Move Unit

• Screw(C) × 3

- Align the flex insert part of fixed frame unit and convex of the master flange unit, and then insert the master flange unit.

• Turn the Drive Gear in the direction of an arrow, and then confirm the lens shutter is closed.

4mm  
SILVER

### 8.6. Removal of the CCD Unit

To prevent the CCD unit from catching the dust and dirt, do not remove the CCD unit except for replacing.

• Screw(D) × 3      • Optical Filter × 1  
• CCD Cushion × 1

3mm  
BLACK

CCD side (red is pale)  
 ↑  
 ↓  
 Lens side (red is deep)

CCD Cushion  
 Optical Filter

**NOTE: (When Assembling)**

Definitions of mount side of Optical filter.

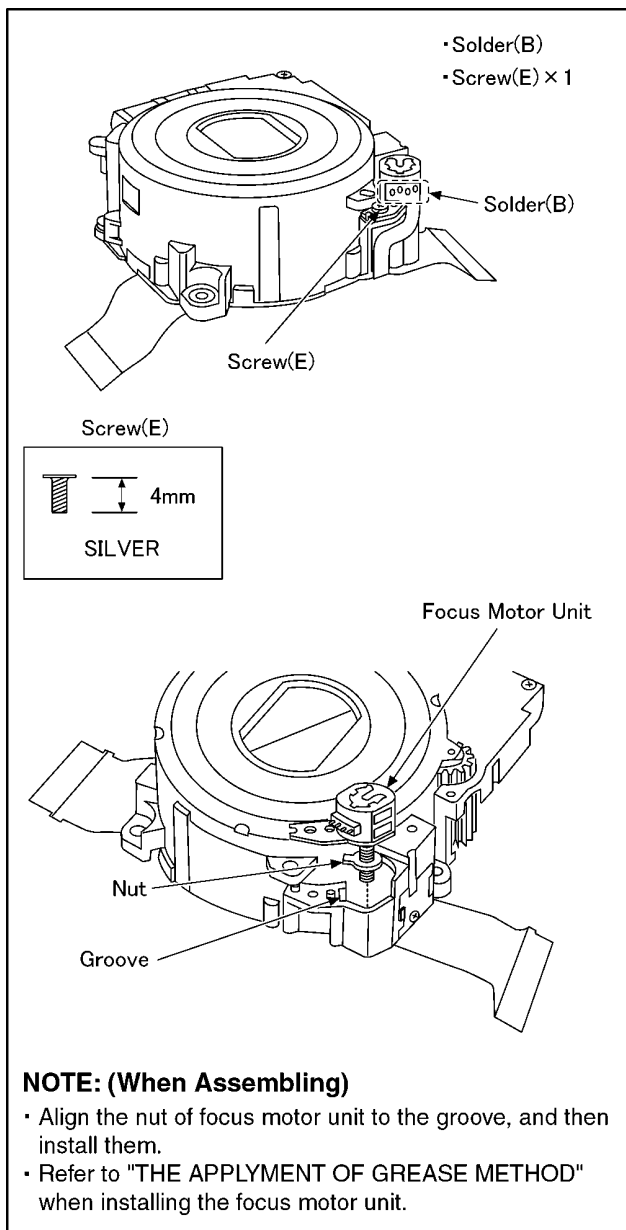
- \*Set the optical filter under the condition of reflecting the fluorescent lamp can be seen by your eyes.
- \*Although depth of the red color may be changed in accordance with seeing angle, compare the deepest red color in both sides to define each side.
- Lens side: red color is deeper than the other side.
- CCD side: red color is paler than the other side.

It can be easy to confirm the red color density on the blue paper.

- \*The optical filter might stuck to CCD unit.

When replace the CCD unit, remove the optical filter, and then install it with CCD unit.

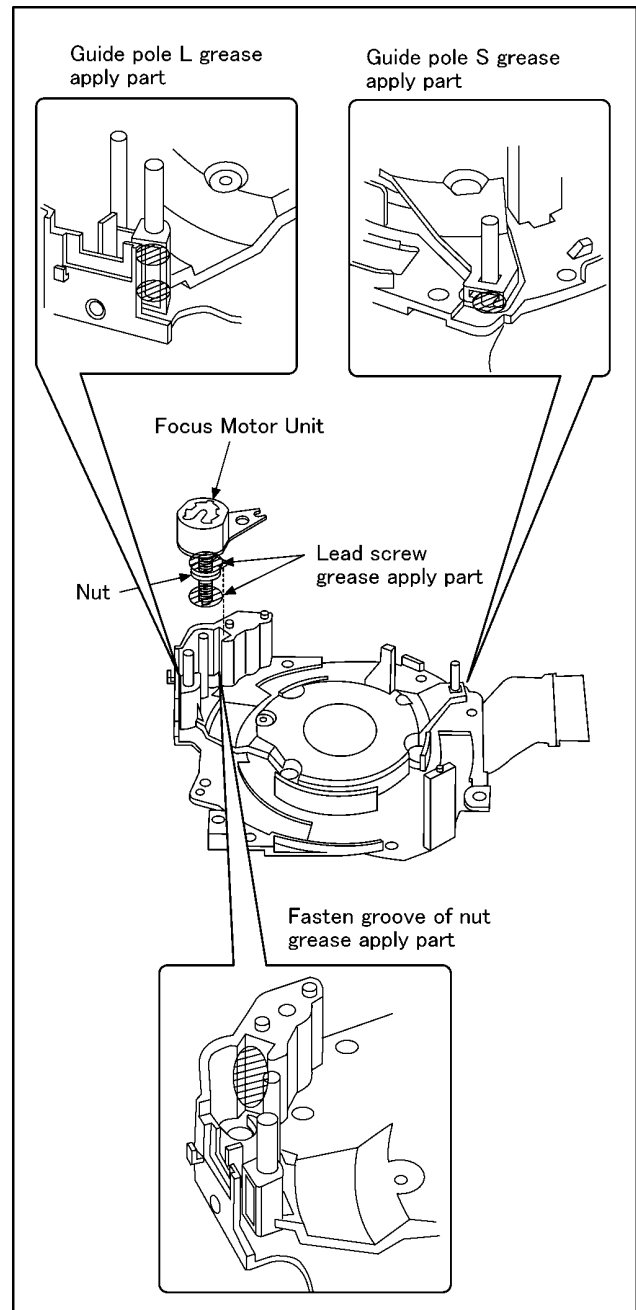
## 8.7. Removal of the Focus Motor Unit



## 8.8. The Applyment of Grease Method

The grease apply point of lens unit are as follows.  
Apply grease additionally in the specified position if necessary.  
When the grease is applied, use a toothpick and apply thinly.

- Lead screw/Guide pole L,S/Fasten groove of nut
  - Grease: RFKZ0472
  - Amount of apply: 2 - 4 mg



# 9 Measurements and Adjustments

## 9.1. Matrix Chart for Replaced Part and Necessary Adjustment

The relation between Replaced part and Necessary Adjustment is shown in the following table.

When concerned part is replaced, be sure to achieve the necessary adjustment(s).

As for Adjustment condition/procedure, consult the "Adjustment Manual" which is available in Adjustment software.

The Adjustment software is available at "TSN Website", therefore, access to "TSN Website" at "Support Information from NWBG/VDBG-PAVC".

**NOTE:**

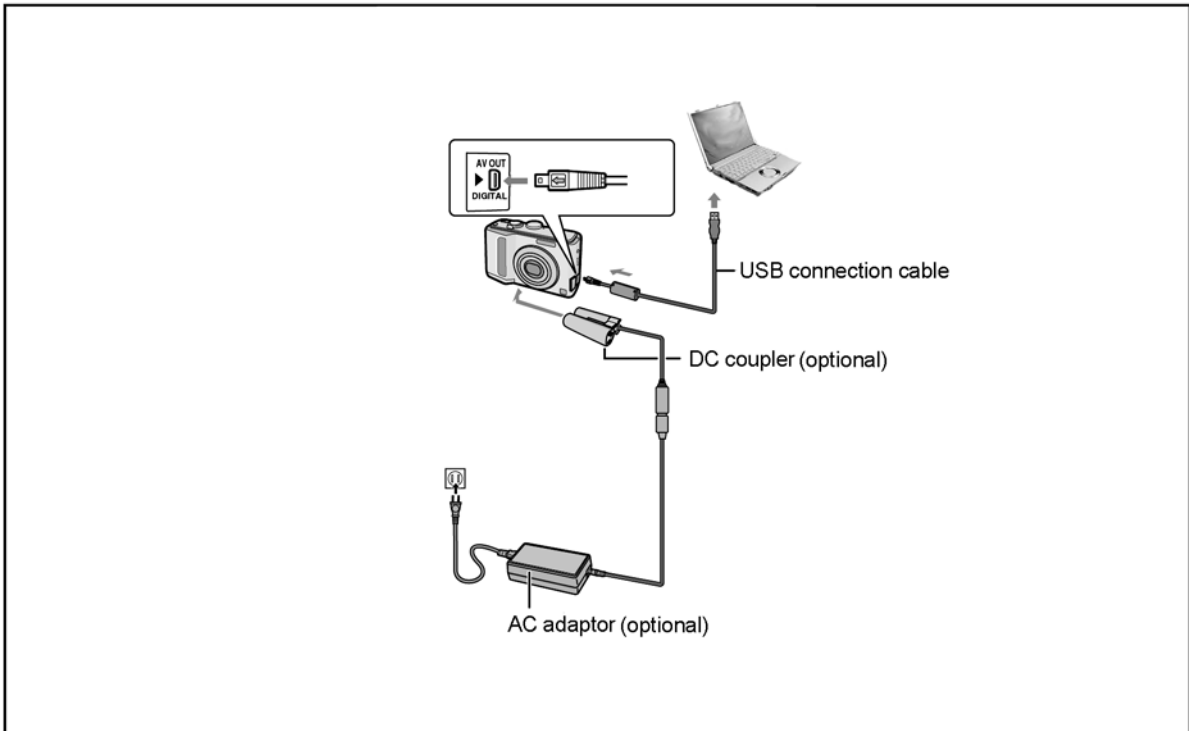
After adjustments have been terminated, make sure to achieve "INITIAL SETTINGS".

Adjustment Item		Replaced Part				
		Main P.C.B.	VENUS (IC6001)	Flash-ROM (IC6002)	Lens Part (Excluding CCD)	CCD Unit
Camera Section	OIS hall element adjustment (OIS)	○	○	○	○	-
	Back focus adjustment (BF)	○	○	○	○	○*1
	Shutter adjustment (SHT)	○	○	○	○	○
	ISO sensitivity adjustment (ISO)	○	○	○	○	○
	AWB adjustment High brightness coloration inspection (WBL)	○	○	○	○	○
	CCD white scratch compensation (WKI)	○	○	○	-	○*1
	CCD black scratch compensation (BKI)	○	○	○	-	○*1

\*1: This adjustment is necessary, not only replacing CCD unit but also removing it from the lens unit.

**NOTE:**

\*There is no LCD adjustment in this model.



# 10 Maintenance

## 10.1. Cleaning Lens and LCD Panel

Do not touch the surface of lens and LCD Panel with your hand.

When cleaning the lens, use air-Blower to blow off the dust.

When cleaning the LCD Panel, dampen the lens cleaning paper with lens cleaner, and the gently wipe the their surface.

**Note:**

The Lens Cleaning KIT ; VFK1900BK (Only supplied as 10 set/Box) is available as Service Aid.



# Service Manual

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## Diagrams and Replacement Parts List

### Digital Camera

Model No.

DMC-LZ10P	DMC-LZ10EF
DMC-LZ10PC	DMC-LZ10EG
DMC-LZ10PL	DMC-LZ10GC
DMC-LZ10E	DMC-LZ10GK
DMC-LZ10EB	DMC-LZ10GN
DMC-LZ10EE	

Vol. 1  
 Colour  
 (S).....Silver Type (except EF/EG/GN)  
 (K).....Black Type

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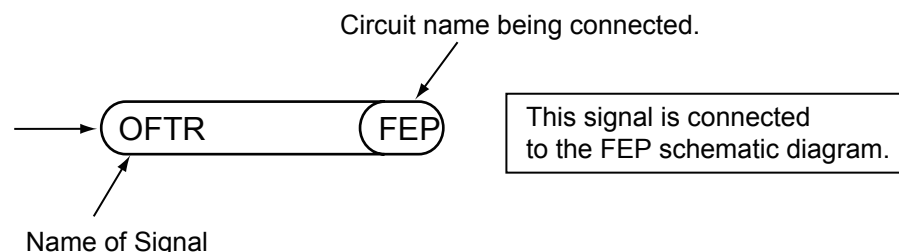
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## S1. About Indication of The Schematic Diagram

### S1.1. Important Safety Notice

COMPONENTS IDENTIFIED WITH THE MARK  $\triangle$  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE SAME TYPE.

1. Although reference number of the parts is indicated on the P.C.B. drawing and/or schematic diagrams, it is NOT mounted on the P.C.B. when it is displayed with "\$" mark.
2. It is only the "Test Round" and no terminal (Pin) is available on the P.C.B. when the TP (Test Point) indicated as "●" mark.
3. The voltage being indicated on the schematic diagram is measured in "Standard-Playback" mode when there is no specify mode is mentioned.
4. Although the voltage and waveform available on here is measured with standard frame, it may be differ from actual measurement due to modification of circuit and so on.
5. The voltage being indicated here may be include observational-error (deviation) due to internal-resistance and/or reactance of equipment. Therefore, handle the value indicated on here as reference.
6. Use the parts number indicated on the Replacement Parts List .
7. Indication on Schematic diagrams:



## S2. Voltage Chart

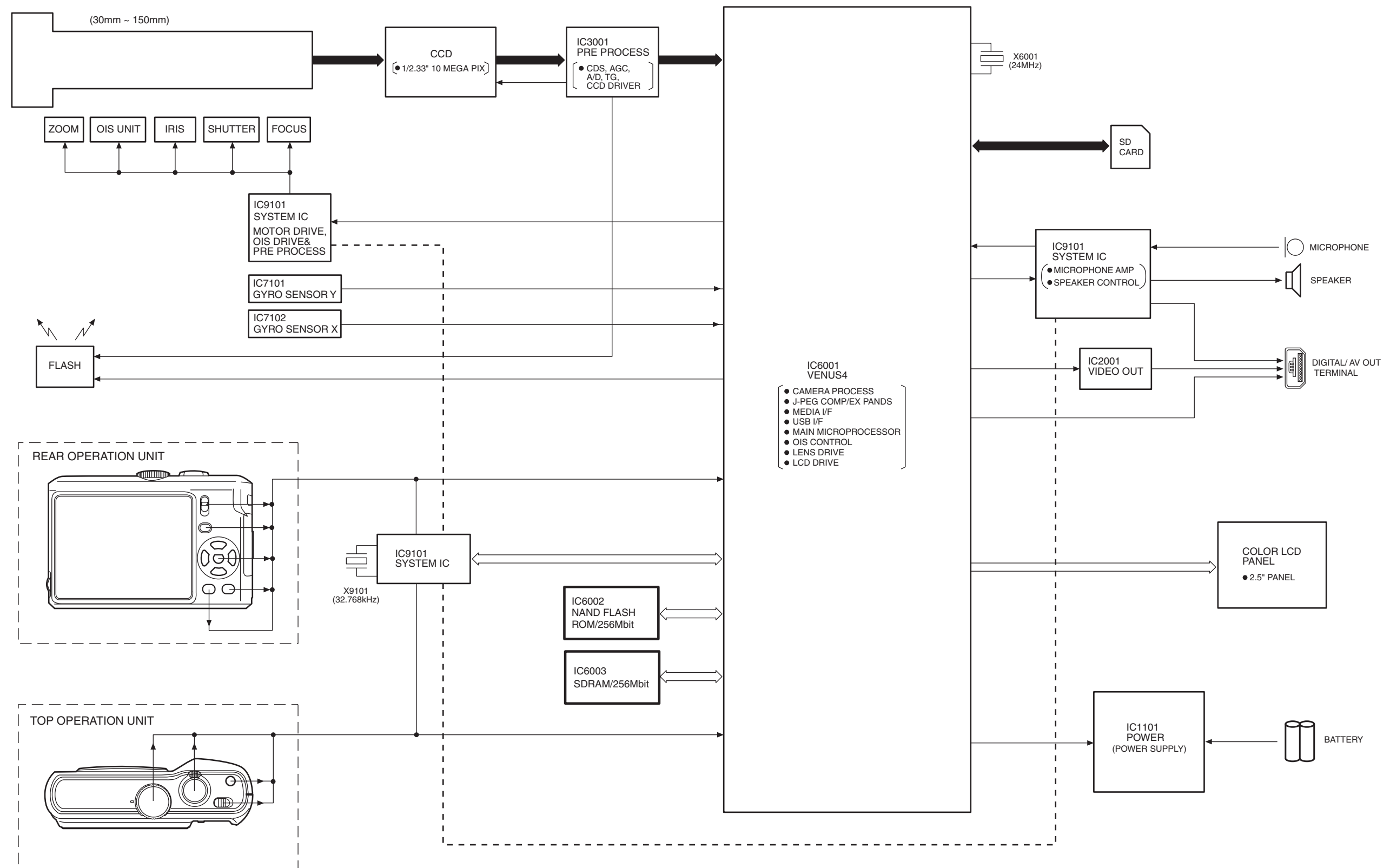
Note) Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.  
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

### S2.1. Flash Top P.C.B.

REF No.	PIN No.	POWER ON
IC8001	1	0
IC8001	2	0
IC8001	3	6.2
IC8001	4	0
IC8001	5	0
Q8002	1	0
Q8002	2	0
Q8002	3	0
Q8002	4	0
Q8002	5	0
Q8002	6	0
Q8002	7	0
Q8002	8	0
Q8009	1	3
Q8009	2	3
Q8009	3	0
Q8009	4	0
Q8009	5	3
Q8009	6	3

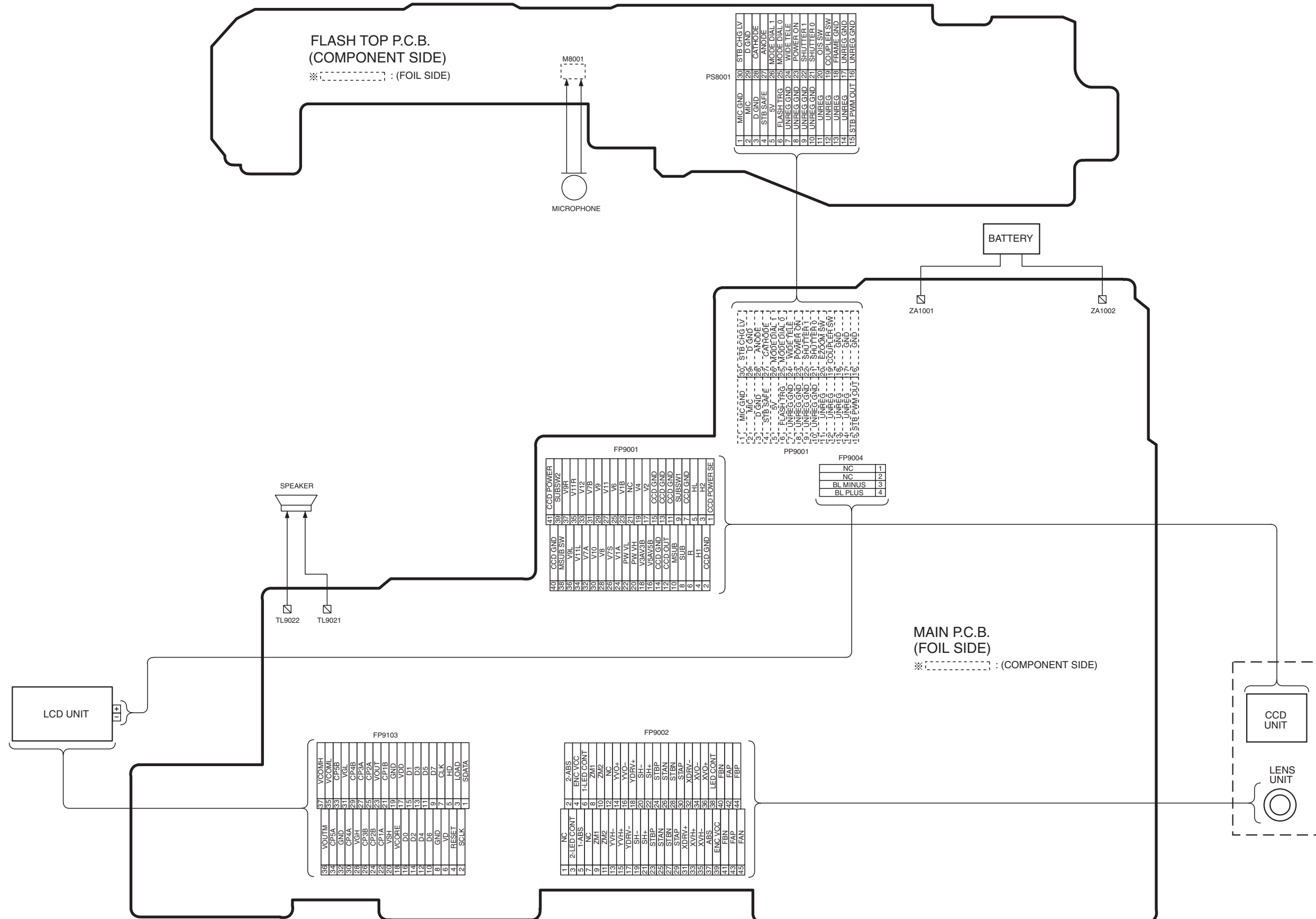
# S3. Block Diagram

## S3.1. Overall Block Diagram

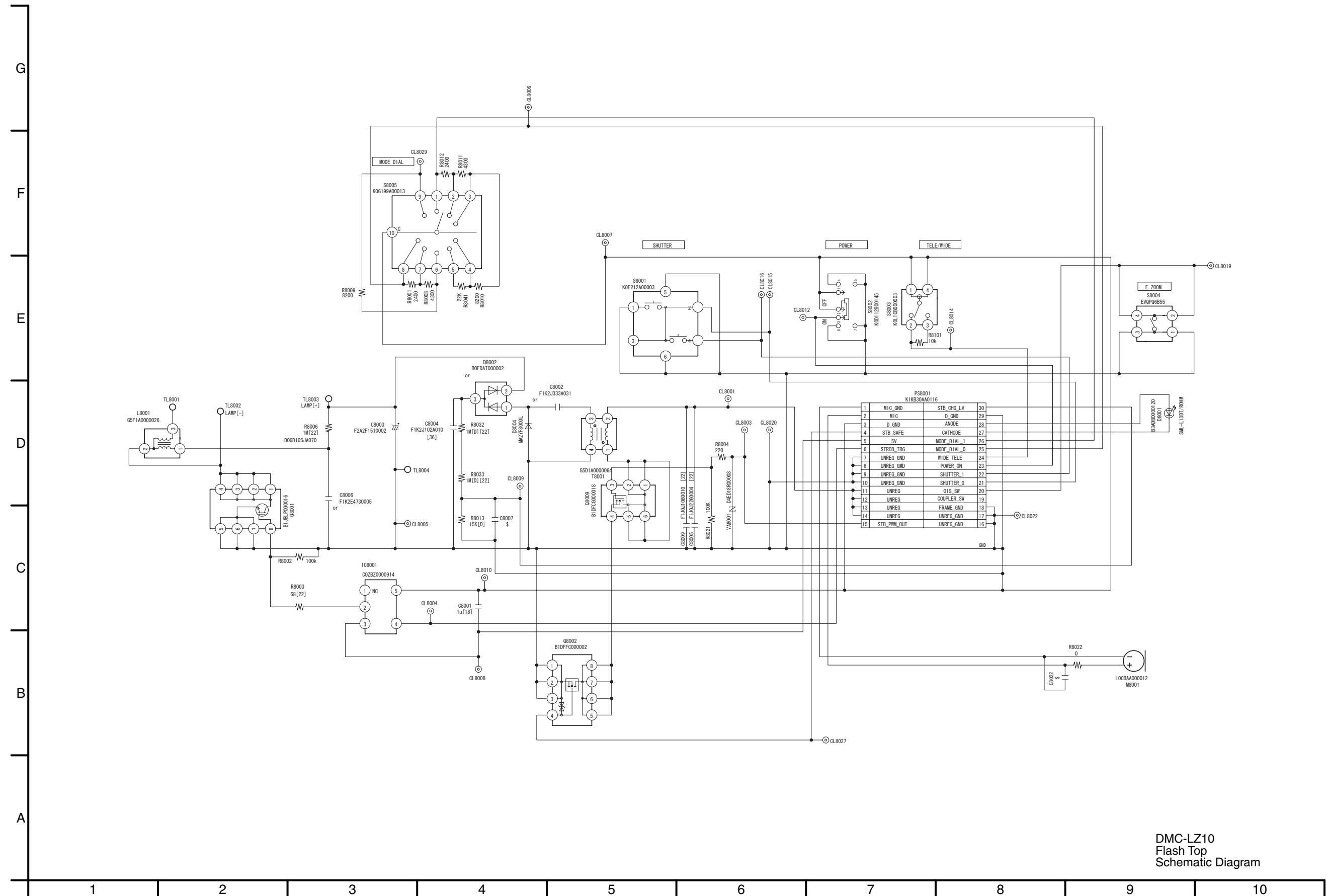


# S4. Schematic Diagram

## S4.1. Interconnection Diagram

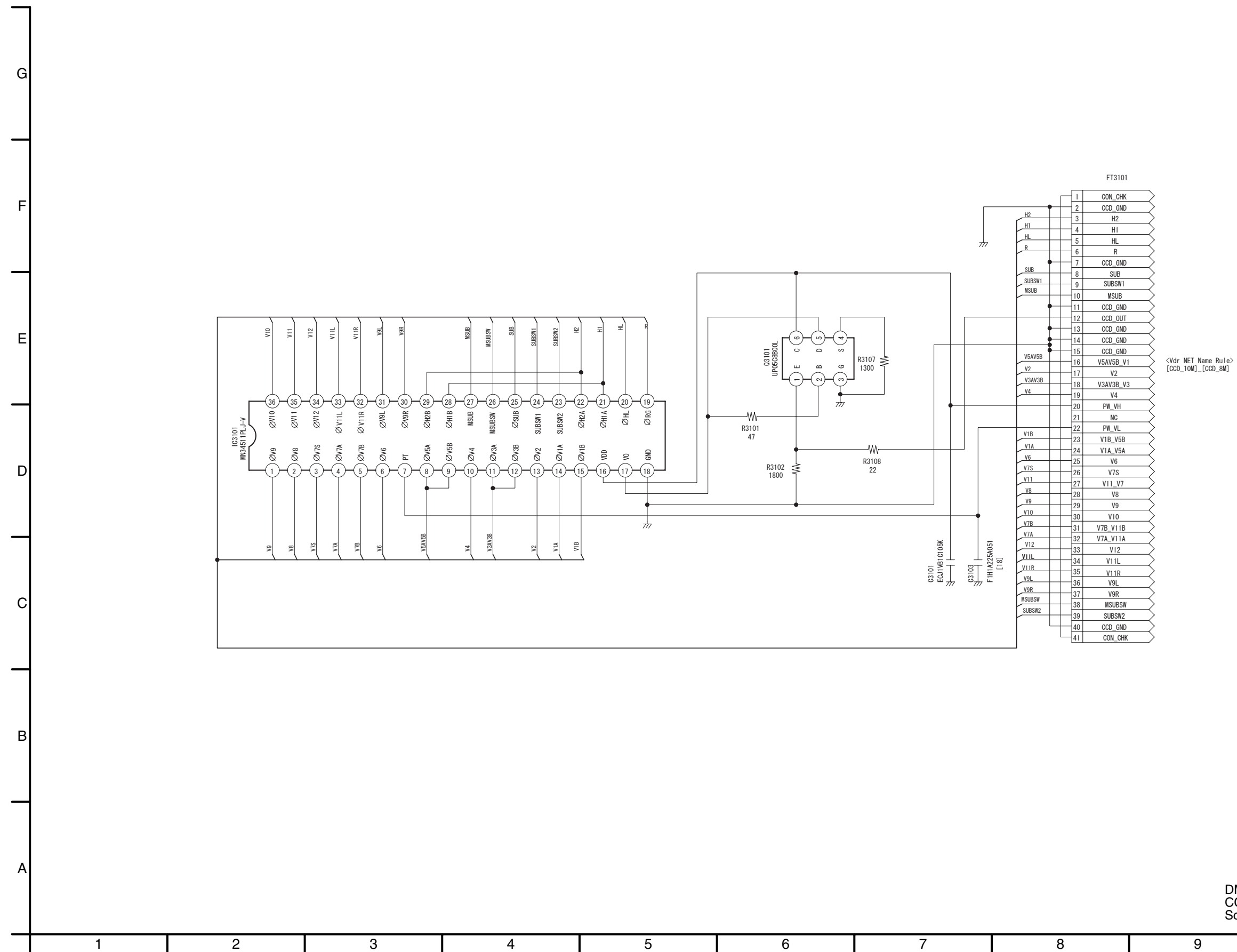


# S4.2. Flash Top Schematic Diagram



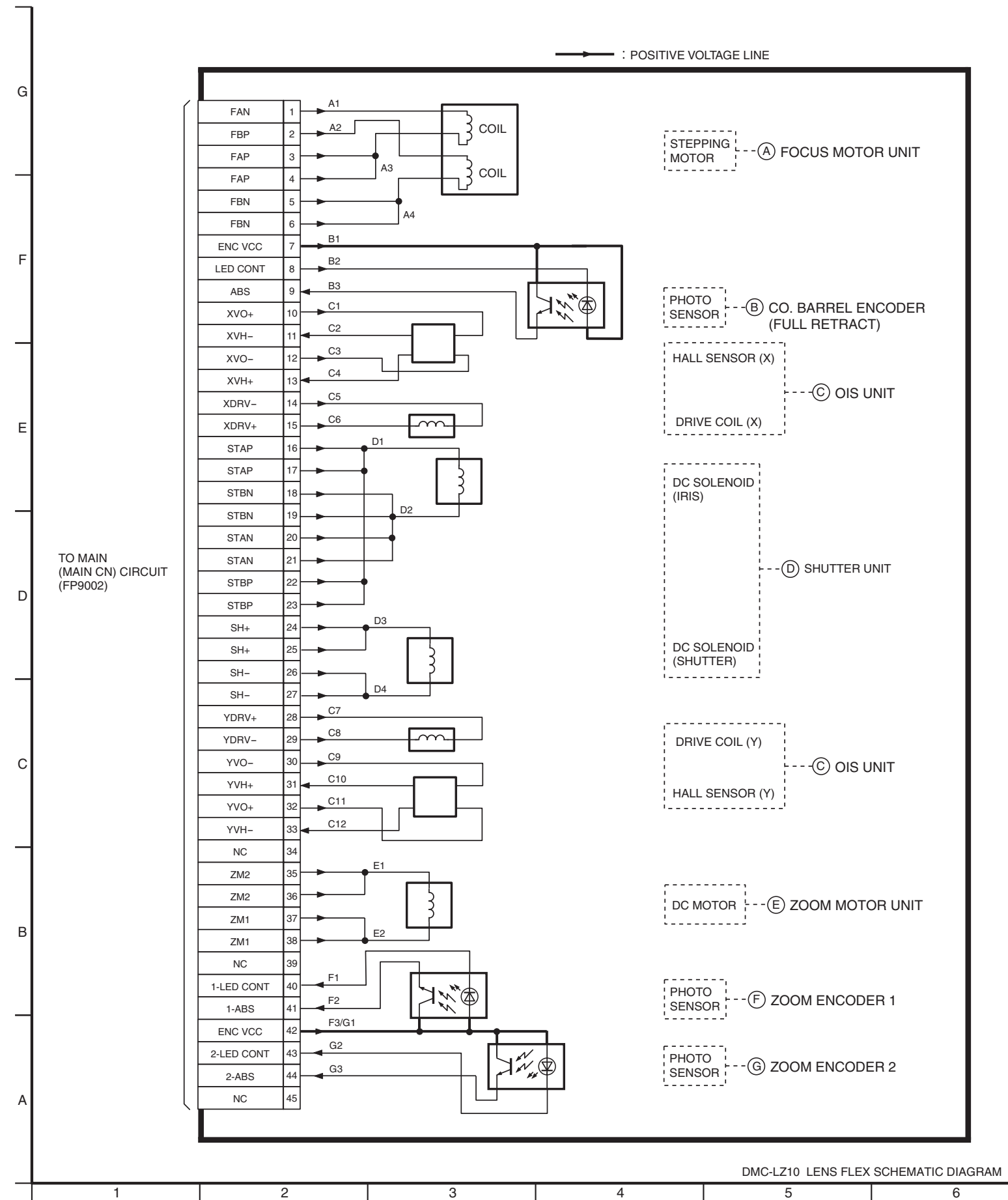
DMC-LZ10  
Flash Top  
Schematic Diagram

### S4.3. CCD Flex Schematic Diagram



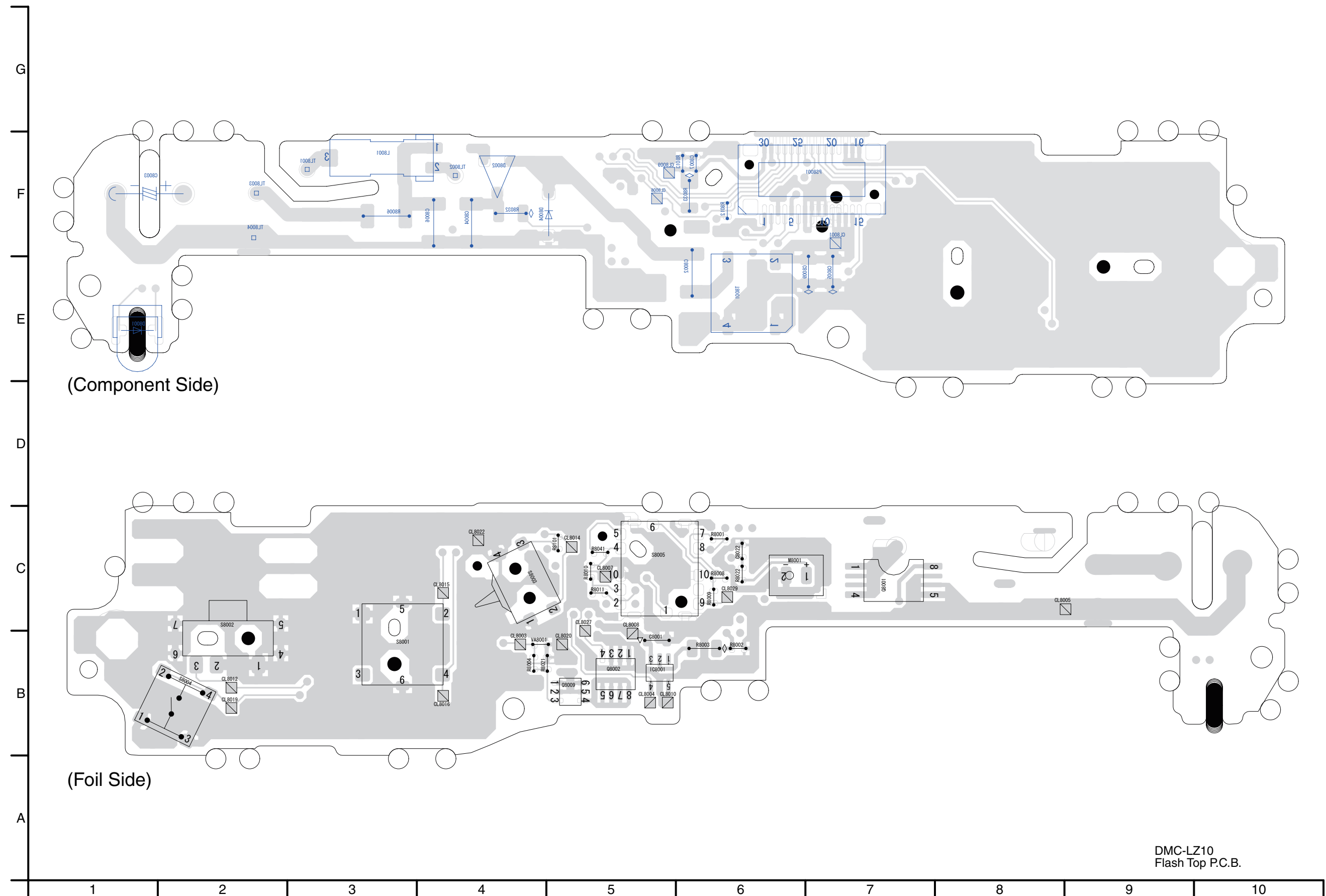
DMC-LZ10  
CCD Flex  
Schematic Diagram

# S4.4. Lens Flex Schematic Diagram



# S5. Print Circuit Board

## S5.1. Flash Top P.C.B.

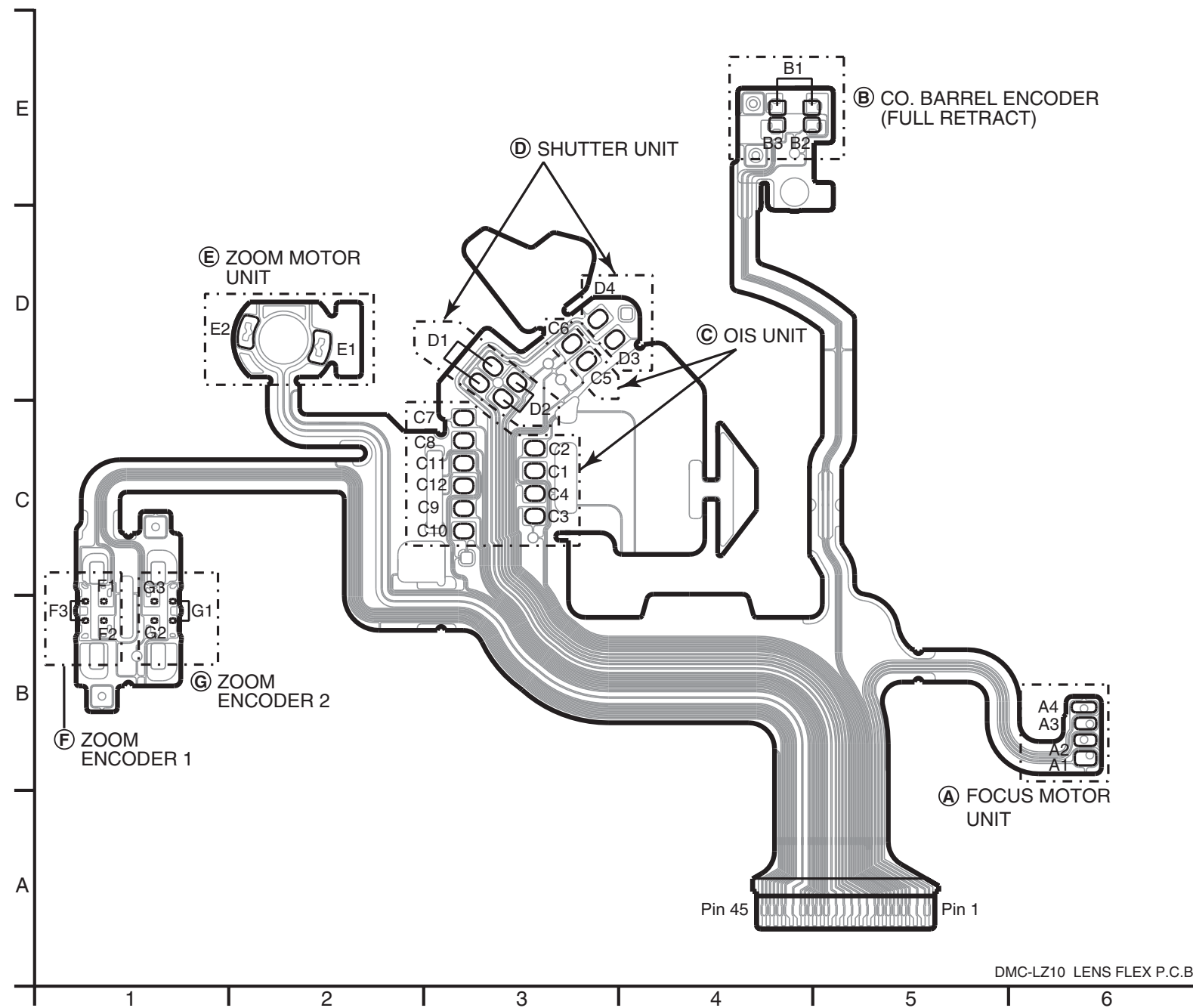


DMC-LZ10  
Flash Top P.C.B.





S5.3. Lens Flex P.C.B.



## S6. Replacement Parts List

- Note: 1.\* Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE  
Components identified with the mark  $\triangle$  have the special characteristics for safety.  
When replacing any of these components, use only the same type.
3. Unless otherwise specified,  
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P=uuF.
4. The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
5. Supply of CD-ROM, in accordance with license protection, is allowable as replacement parts only for customers who accidentally damaged or lost their own.

**E.S.D. standards for Electrostatically Sensitive Devices, refer to PREVENTION OF ELECTROSTATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES section.**

**Definition of Parts supplier:**

1. Parts marked with [MBI] in the remarks column are supplied from **Matsushita Battery Industrial Co., Ltd.**
2. Parts marked with [PAVC-CSG] in the remarks column are supplied from **PAVC COMPANY CS Group (PAVC-CSG).**  
Others are supplied from **PAVCSG (ASPC).**



Ref.No	Part No.	Part Name & Description	Pcs	Remarks	Ref.No	Part No.	Part Name & Description	Pcs	Remarks
					C8004	F1K2J102A010	C.CAPACITOR 630V 1000P	1	
					C8005	F1J0J2260004	C.CAPACITOR CH 6.3V 22U	1	
					C8006	F1K2E4730002	C.CAPACITOR 250V 0.047U	1	
					C8009	F1J0J1060010	C.CAPACITOR CH 6.3V 10U	1	
					D8001	B3ADB0000120	AF LED	1	E.S.D.
					D8002	B0EDAT000002	DIODE	1	E.S.D.
					D8004	MA2YF8000L	DIODE	1	E.S.D.
					IC8001	C0ZBZ0000914	IC	1	E.S.D.
					L8001	G5F1A0000026	CHIP INDUCTOR	1	
					M8001	L0CBAA000012	MICROPHONE	1	
					PS800	K1KB30AA0116	CONNECTOR 30P	1	
					Q8001	B1JBLP000016	TRANSISTOR	1	E.S.D.
					Q8002	B1DFFC000002	TRANSISTOR	1	E.S.D.
					Q8009	B1DFCG000018	TRANSISTOR	1	E.S.D.
					R8001	ERJ2GEJ242X	M.RESISTOR CH 1/16W 2.4K	1	
					R8002	ERJ2GEJ104X	M.RESISTOR CH 1/16W 100K	1	
					R8003	ERJ6GEYJ680V	M.RESISTOR CH 1/10W 68	1	
					R8004	ERJ2GEJ221X	M.RESISTOR CH 1/16W 220	1	
					R8006	ERJ8GEYJ105V	M.RESISTOR CH 1/8W 1M	1	
					R8008	ERJ2GEJ432X	M.RESISTOR CH 1/16W 4.3K	1	
					R8009	ERJ2GEJ822X	M.RESISTOR CH 1/16W 8.2K	1	
					R8010	ERJ2GEJ822X	M.RESISTOR CH 1/16W 8.2K	1	
					R8011	ERJ2GEJ432X	M.RESISTOR CH 1/16W 4.3K	1	
					R8012	ERJ2GEJ242X	M.RESISTOR CH 1/16W 2.4K	1	
					R8013	ERJ2RHD153X	M.RESISTOR CH 1/16W 15K	1	
					R8021	ERJ2GEJ104X	M.RESISTOR CH 1/16W 100K	1	
					R8022	ERJ2GE0R00X	M.RESISTOR CH 1/16W 0	1	
					R8032	ERJ6RED105V	M.RESISTOR CH 1/16W 1M	1	
					R8033	ERJ6RED105V	M.RESISTOR CH 1/16W 1M	1	
					R8041	ERJ2GEJ223X	M.RESISTOR CH 1/16W 22K	1	
					R8101	ERJ2GEJ103X	M.RESISTOR CH 1/16W 10K	1	
					S8001	K0F212A00003	SWITCH	1	
					S8002	K0D112B00145	SWITCH	1	
					S8003	K0L1CB000003	SWITCH	1	
					S8004	EVQPO6B55	SWITCH	1	
					S8005	K0G199A00013	SWITCHE	1	
					T8001	G5D1A0000064	DC-DC TRANSFORMER	1	
					VA800	D4ED18R00008	VARISTOR	1	
					##	VEK0L75	CCD UNIT		E.S.D.[PAVC-CSG]
					C3101	ECJ1VB1C105K	C.CAPACITOR CH 16V 1U	1	[PAVC-CSG]
					C3103	F1H1A225A051	C.CAPACITOR CH 10V 2.2U	1	[PAVC-CSG]
					Q3101	UP05C8B00L	TRANSISTOR	1	[PAVC-CSG] E.S.D.
					R3101	ERJ2GEJ470	M.RESISTOR CH 1/16W 47	1	[PAVC-CSG]
					R3102	ERJ2GEJ182	M.RESISTOR CH 1/16W 1.8K	1	[PAVC-CSG]
					R3107	ERJ2GEJ132	M.RESISTOR CH 1/16W 1.3K	1	[PAVC-CSG]
					R3108	ERJ2GEJ220	M.RESISTOR CH 1/16W 22	1	[PAVC-CSG]
					##	VEP58050A	FLASH TOP P.C.B.		(RTL)E.S.D.
					C8001	ECJ1VB0J105K	C.CAPACITOR CH 6.3V 1U	1	
					C8002	F1K2J333A031	C.CAPACITOR 630V 0.033U	1	



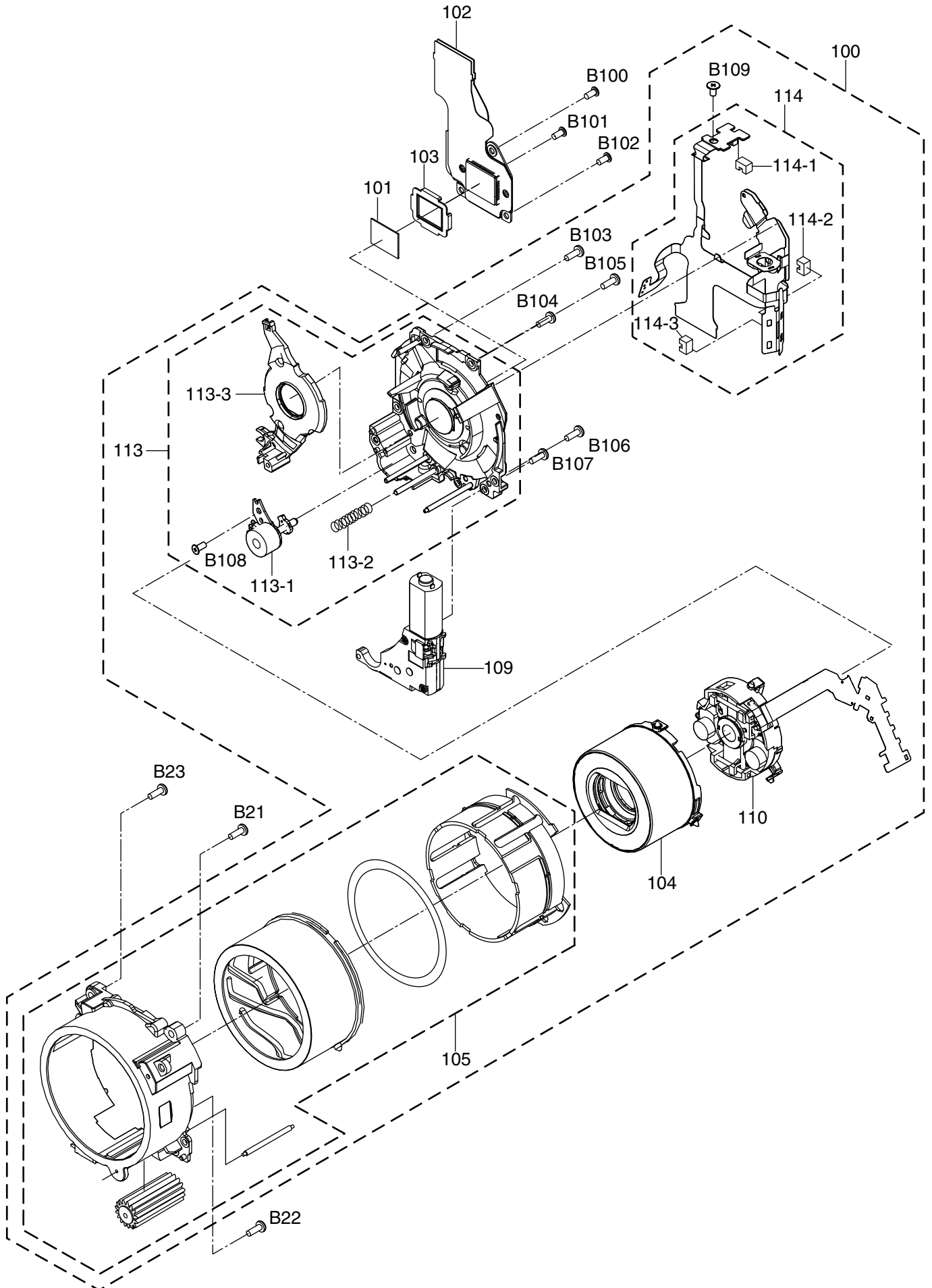
DMC-LZ10P-S/K,PC-S/K,PL-S/K,EB-S/K,EE-S/K,EF-K,EG-K,E-S/K,GC-S/K,GK-S/K,GN-K

Ref.No	Part No.	Part Name & Description	Pcs	Remarks	Ref.No	Part No.	Part Name & Description	Pcs	Remarks
200	VPF1301	CAMERA BAG	1		209	VPK3548	PACKING CASE (FOR MADE IN CHINA)	1	P-S,PC-S
201	K1HA08CD0007	USB CABLE W/PLUG	1		209	VPK3420	PACKING CASE (FOR MADE IN JAPAN)	1	P-S,PC-S [PAVC-CSG]
202	K1HA08CD0008	AV CABLE W/PLUG	1		209	VPK3552	PACKING CASE (FOR MADE IN CHINA)	1	P-K,PC-K
203	VFC4297-A	HAND STRAP	1		209	VPK3475	PACKING CASE (FOR MADE IN JAPAN)	1	P-K,PC-K [PAVC-CSG]
204	VFF0400-S	CD-ROM	1	P,PC See "Notes" [PAVC-CSG]	209	VPK3549	PACKING CASE (FOR MADE IN CHINA)	1	PL-S,EB-S,EE-S,E-S,GC-S
204	VFF0401-S	CD-ROM	1	[EXCEPT P/PC] See "Notes" [PAVC-CSG]	209	VPK3421	PACKING CASE (FOR MADE IN JAPAN)	1	PL-S,EB-S,EE-S,E-S,GC-S [PAVC-CSG]
▲ 205	VFF0404-C	CD-ROM(INSTRUCTION BOOK)	1	PL,EG,E,GC	209	VPK3553	PACKING CASE (FOR MADE IN CHINA)	1	PL-K,EB-K,EE-K,EF-K,EG-K, E-K,GC-K,GN-K
▲ 206	VQT1L86	INSTRUCTION BOOK (ENGLISH)	1	P,PC	209	VPK3476	PACKING CASE (FOR MADE IN JAPAN)	1	PL-K,EB-K,EE-K,EF-K,EG-K, E-K,GC-K,GN-K [PAVC-CSG]
▲ 206	VQT1L87	INSTRUCTION BOOK (SPANISH)	1	P	209	VPK3550	PACKING CASE	1	GK-S
▲ 206	VQT1L88	INSTRUCTION BOOK (CANADIAN FRANCH)	1	PC	209	VPK3554	PACKING CASE	1	GK-K
▲ 206	VQT1L89	SIMPLIFIED O/I (ENGLISH/SPANISH)	1	PL	210	VPN6652	CUSHION	1	
▲ 206	VQT1L90	SIMPLIFIED O/I (PORTUGUESE)	1	PL	211	VPF1100	BAG, POLYETHYLENE	1	
▲ 206	VQT1L91	SIMPLIFIED O/I (GERMAN/FRENCH)	1	EG	216	VPN6692	PAD	1	
▲ 206	VQT1L92	SIMPLIFIED O/I (ITALIAN/DUTCH)	1	EG					
▲ 206	VQT1L93	SIMPLIFIED O/I (SPANISH/PORTUGUESE)	1	EG					
▲ 206	VQT1L94	SIMPLIFIED O/I (SWEDISH/DANISH)	1	E					
▲ 206	VQT1L95	SIMPLIFIED O/I (POLISH/CZECH)	1	E					
▲ 206	VQT1L96	SIMPLIFIED O/I (HUNGARIAN/FINNISH)	1	E					
▲ 206	VQT1L97	INSTRUCTION BOOK (FRENCH)	1	EF					
▲ 206	VQT1L98	INSTRUCTION BOOK (ENGLISH)	1	EB					
▲ 206	VQT1P75	INSTRUCTION BOOK (RUSSIAN)	1	EE					
▲ 206	VQT1P76	INSTRUCTION BOOK (UKRAINIAN)	1	EE					
▲ 206	VQT1M01	SIMPLIFIED O/I (ENGLISH/CHINESE(TRADITIONAL))	1	GC					
▲ 206	VQT1M02	SIMPLIFIED O/I (ARABIC/PERSIAN)	1	GC					
▲ 206	VQT1P77	INSTRUCTION BOOK (CHINESE(SIMPLIFIED))	1	GK					
▲ 206	VQT1M04	INSTRUCTION BOOK (ENGLISH)	1	GN					
207	VQT1M47	O/I SOFTWARE (ENGLISH/CANADIAN FRENCH)	1	P,PC					
207	VQT1M48	O/I SOFTWARE (ENGLISH/SPANISH/PORTUGUESE)	1	PL					
207	VQT1M49	O/I SOFTWARE (GERMAN/FRENCH/ITALIAN/DUTCH/SPANISH/PORTUGUESE)	1	EG					
207	VQT1M50	O/I SOFTWARE (FINNISH/SWEDISH/DANISH/POLISH/CZECH/HUNGARIAN)	1	E					
207	VQT1M51	O/I SOFTWARE (FRENCH)	1	EF					
207	VQT1M52	O/I SOFTWARE (ENGLISH)	1	EB,GN					
207	VQT1M53	O/I SOFTWARE (RUSSIAN/UKRAINIAN)	1	EE					
207	VQT1M54	O/I SOFTWARE (ENGLISH/CHINESE(TRADITIONAL)/ARABIC/PERSIAN)	1	GC					
207	VQT1R29	O/I SOFTWARE (CHINESE(SIMPLIFIED))	1	GK					





## S7.2. Camera Lens Section



### S7.3. Packing Parts and Accessories Section

