

Service Manual

Digital Camera

LUMIX



**DMC-LZ7P
DMC-LZ7PC
DMC-LZ7PL
DMC-LZ7EB
DMC-LZ7EE
DMC-LZ7EF
DMC-LZ7EG
DMC-LZ7EGM
DMC-LZ7GC
DMC-LZ7GK
DMC-LZ7GN**

Vol. 1

Colour

(S).....Silver Type

(K).....Black Type (except PL/EB/GC/GK/GN)

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 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 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

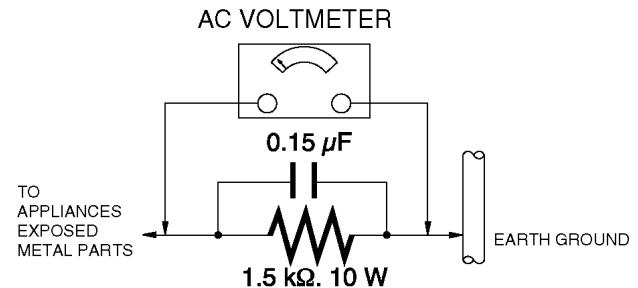


Figure. 1

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 (ERG5SJ102:1kΩ /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.

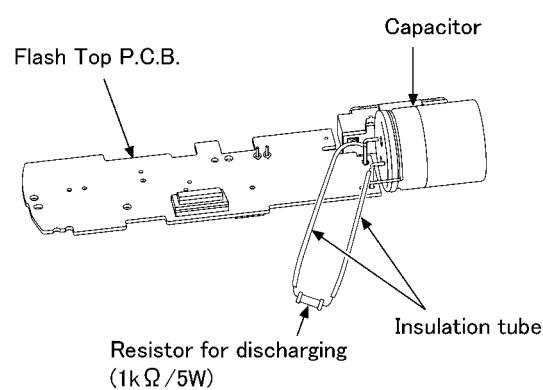


Fig. F1

2 Warning

2.1. Prevention of Electro Static 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 electro static 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 :

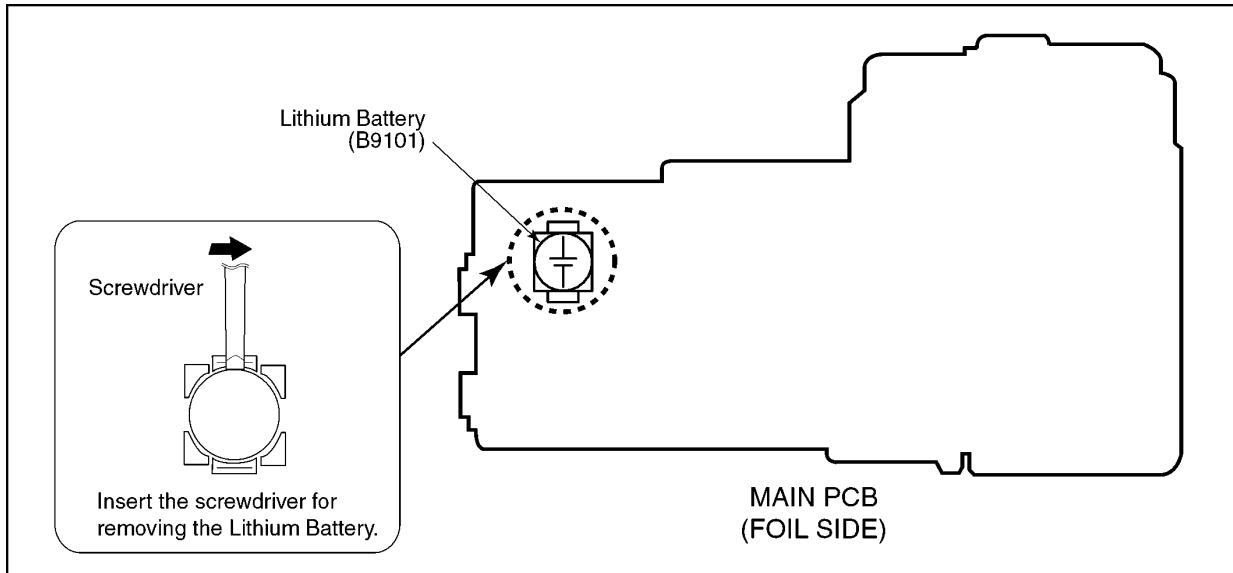
Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

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. Remove the Lithium battery (Ref. No. "B9101" at foil side of MAIN PCB) and then replace it into new one.



NOTE:

This Lithium battery is a critical component.

(Type No.: ML614S/ZT 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 manufacturier.

NOTE:

Above caution are also applicable for below batteries which is for DMC-LZ7 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 (VEP56042A) : Excluding replacement of Lithium Battery

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

There are five kinds of DMC-LZ7, regardless of the colours.

- a) DMC-LZ7S
- b) DMC-LZ7P/PC
- c) DMC-LZ7EB/EF/EG/EGM/GN
- d) DMC-LZ7EE
- e) DMC-LZ7PL/GC/GK

(DMC-LZ7S is exclusively Japan domestic model.)

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.

a) DMC-LZ7S

DMC-LZ7S is exclusively Japan domestic model.

b) DMC-LZ7P/PC

The nameplate for these models show the following Safty registration mark.



c) DMC-LZ7EB/EF/EG/EGM/GN

The nameplate for these models show the following Safty registration mark.



d) DMC-LZ7EE

The nameplate for this model show the following Safty registration mark.



e) DMC-LZ7PL/GC/GK

The nameplate for these models do not show any above Safty registration mark.

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/EGM/PL/GC/GK/EF/EB/EE/GN and PC".

Otherwise, once "NONE(JAPAN)" or "P"(North America) are selected, "EG/EGM/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.27MB)
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:

• Preparation. Proceed the picture back up from the unit (Refer to above "CAUTION 2")

• Step 1. The temporary cancellation of initial setting:

Set the mode dial to "[Normal picture mode] (Red camera mark)".

While keep pressing [E.ZOOM] and "[UP] of Cross key" simultaneously, turn the Power on.

• Step 2. The cancellation of initial setting:

Set the mode dial to "[Playback]".

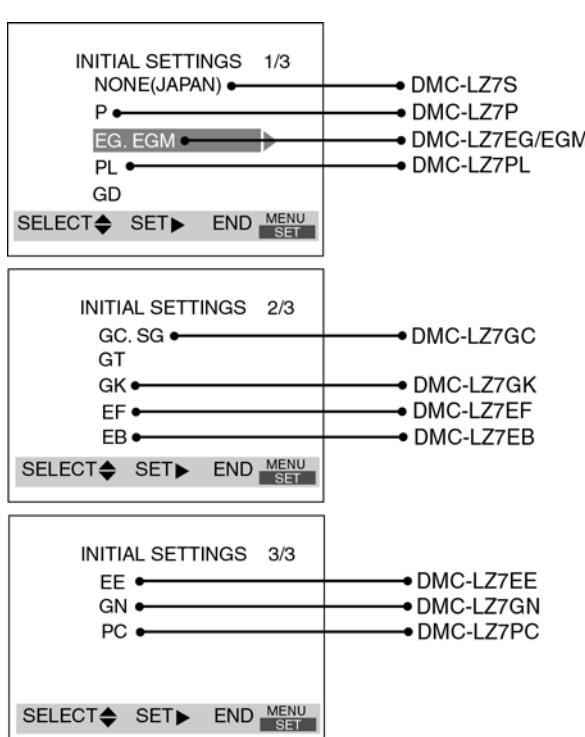
Press [E.ZOOM] and "[UP] of Cross key" simultaneously, then turn the Power off.

• Step 3. Turn the Power on:

Set the mode dial to "[Normal picture mode] (Red camera mark)", and then turn the Power on.

• Step 4. Display the INITIAL SETTING:

While keep pressing [MENU] and "[RIGHT] of Cross key" simultaneously, turn the Power off.



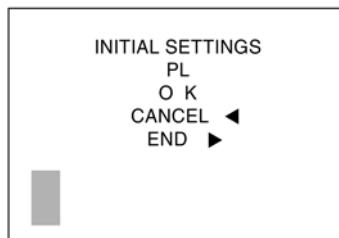
• **Step 5. Set the INITIAL SETTING: (Refer to “CAUTION 1”)**

[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 Cross key", and then press the "[RIGHT] of Cross key".



The only set area is displayed, and then press the "[RIGHT] of Cross key" 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”)**

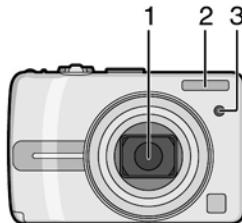
	MODEL	VIDEO OUTPUT	LANGUAGE	DATE	REMARKS
a)	DMC-LZ7S	NTSC	Japanese	Year/Month/Date	
b)	DMC-LZ7P/PC/PL	NTSC	English	Month/Date/Year	
c)	DMC-LZ7EB/EG/EGM/GC/GN	PAL	English	Date/Month/Year	
d)	DMC-LZ7EF	PAL	French	Date/Month/Year	
e)	DMC-LZ7EE	PAL	Russian	Date/Month/Year	
f)	DMC-LZ7GK	PAL	Chinese (simplified)	Year/Month/Date	

4 Specifications

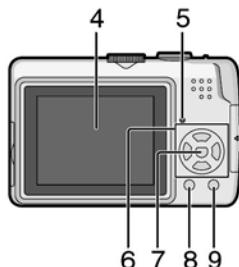
Digital Camera:	Information for your safety	LCD monitor:	2.5" low-temperature polycrystalline TFT LCD [Approx. 115,000 pixels] (field of view ratio about 100%)
Power Source: Power Consumption:	DC 3.0 V 1.5 W (When recording) 0.6 W (When playing back)	Flash:	Flash range: Approx. 50 cm (1.64 feet) to 5.4 m (17.7 feet) (Wide, [ISO AUTO] mode) AUTO, AUTO/Red-eye reduction, Forced ON (Forced ON/Red-eye reduction), Forced OFF, Slow sync./Red-eye reduction
Camera effective pixels:	7,200,000 pixels	Microphone:	Monaural
Image sensor:	1/2.5" CCD, total pixel number 7,380,000 pixels, Primary color filter	Recording media:	Built-in Memory (Approx. 27 MB)/SD Memory Card/SDHC Memory Card/MultiMediaCard (Still pictures only)
Lens:	Optical 6x zoom, f=6.1 mm to 36.6 mm (35 mm film camera equivalent: 37 mm to 222 mm)/F2.8 to F4.5	Picture size	
Digital zoom:	Max. 4x	Still picture:	When the aspect ratio setting is [4:3] 3072×2304 pixels, 2560×1920 pixels, 2048×1536 pixels, 1600×1200 pixels, 1280×960 pixels, 640×480 pixels When the aspect ratio setting is [3:2] 3072×2048 pixels, 2048×1360 pixels When the aspect ratio setting is [16:9] 3072×1728 pixels, 1920×1080 pixels When the aspect ratio setting is [4:3] 640×480 pixels (only when using card), 320×240 pixels When the aspect ratio setting is [16:9] 848×480 pixels (only when using card) Fine/Standard
Extended optical zoom:	Max. 9x	Motion pictures:	
Focus:	Normal/Macro, 5-area-focusing/3-area-focusing (High speed)/1-area-focusing (High speed)/1-area-focusing/Spot-focusing	Quality:	JPEG (based on "Design rule for Camera File system", based on "Exif 2.21" standard)/DPOF corresponding "QuickTime Motion JPEG" (Audio recording is available)
Focus range:	Normal: 50 cm (1.64 feet) (Wide)/1.2 m (3.94 feet) (Tele) to ∞ Macro/Simple/Motion picture/Intelligent ISO sensitivity: 5 cm (0.16 feet) (Wide)/50 cm (1.64 feet) (Tele) to ∞ Scene mode: There may be differences in the above settings.	Recording file format	
Shutter system:	Electronic shutter+Mechanical shutter	Still Picture:	
Motion picture recording:	When the aspect ratio setting is [4:3] 640×480 pixels (Only when using a card)/320×240 pixels When the aspect ratio setting is [16:9] 848×480 pixels (Only when using a card) 30 or 10 frames/second with audio.	Motion pictures:	"USB 2.0" (Full Speed) NTSC/PAL Composite (Switched by menu), Audio line output (monaural)
Burst recording		Terminal	Dedicated jack (8 pin)
Burst speed:	Changes depending on the type of card, picture size and quality.	DIGITAL/AV OUT	Type1 jack
Number of recordable pictures:	Depends on the remaining capacity of the built-in memory or the card. (Performance in burst recording is only with SD Memory Card/SDHC Memory Card. MultiMediaCard performance will be less.)	DC IN:	Approx. 98.5 mm (W)×62.3 mm (H)×33.1 mm (D) [3 22/25" (W)×2 9/20" (H)×1 3/10" (D)] (excluding the projecting parts)
ISO sensitivity:	AUTO/ 100/200/400/800/1250 [HIGH SENS.] mode: 3200	Dimensions:	Approx. 184 g/6.49 oz (excluding card and batteries), Approx. 230 g/8.11 oz (with card and batteries)
Shutter speed:	8 seconds to 1/2000th of a second [STARRY SKY] mode: 15 seconds, 30 seconds, 60 seconds Motion picture mode: 1/30th of a second to 1/6400th of a second	Mass:	0 °C to 40 °C (32 °F to 104 °F)
White balance:	Auto white balance/Daylight/Cloudy/Shade/Halogen/White set	Operating temperature:	10% to 80%
Exposure (AE):	Program AE	Operating humidity:	
Metering mode:	Exposure compensation (1/3 EV Step, -2 EV to +2 EV) Multiple		

5 Location of Controls and Components

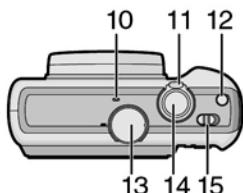
Names of the Components



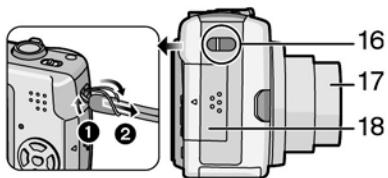
1 Lens
2 Flash
3 Self-timer indicator
AF assist lamp



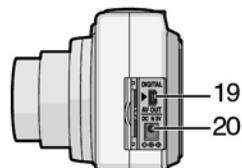
4 LCD monitor
5 Status indicator
6 Cursor buttons
◀/Self-timer button
▼/[REV] button
▶/Flash setting button
▲/Exposure compensation/White balance fine adjustment/Backlight compensation in simple mode button
7 [MENU/SET] button
8 [DISPLAY]/[HIGH ANGLE] button
9 [FUNC]/Delete button



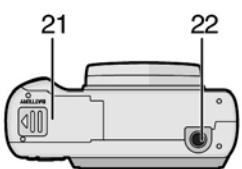
10 Microphone
11 Zoom lever
12 [E.ZOOM] button
13 Mode dial
14 Shutter button
15 Camera ON/OFF switch



16 Strap eyelet
• When detaching the strap, untie the knot in the string with a pointed object and then detach it.
17 Lens barrel
18 Card door



19 [DIGITAL/AV OUT] socket
20 [DC IN] socket
• Always use a genuine Panasonic AC adaptor (DMW-AC6PP; optional).

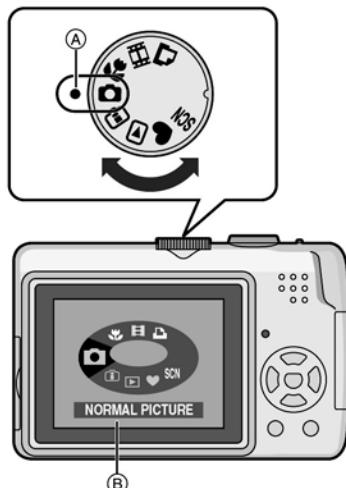


21 Battery door
22 Tripod receptacle
• When you use a tripod, make sure the tripod is stable when the camera is attached to it.

About The Mode Dial

If you turn on this unit and then rotate the mode dial, you can not only switch between recording and playback but also switch to macro mode to take a close-up picture of a subject or to a scene mode that matches your recording purpose.

■ Switching the mode dial



Adjust part (A) to the desired mode.

Rotate the mode dial slowly and surely to adjust to each mode. (Do not adjust it to parts where there is no mode.)

- The above screen (B) appears on the LCD monitor if the mode dial is rotated.

■ Basic

■ : Normal picture mode

Use this mode for normal recording.

■ : Simple mode

This mode is recommended for beginners.

■ : Playback mode

This mode allows you to play back recorded pictures.

■ Advanced

■ : Intelligent ISO sensitivity mode

This allows you to set the optimal ISO sensitivity and shutter speed according to the movement and the brightness of the subject.

■ : Macro mode

This mode allows you to take a close-up picture of a subject.

■ : Scene mode

This allows you to take pictures that match the scene being recorded.

■ : Motion picture mode

This mode allows you to record motion pictures.

■ : Print mode

This mode allows you to print recorded pictures.

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 mode dial to “[Normal picture mode] (Red camera mark)”.

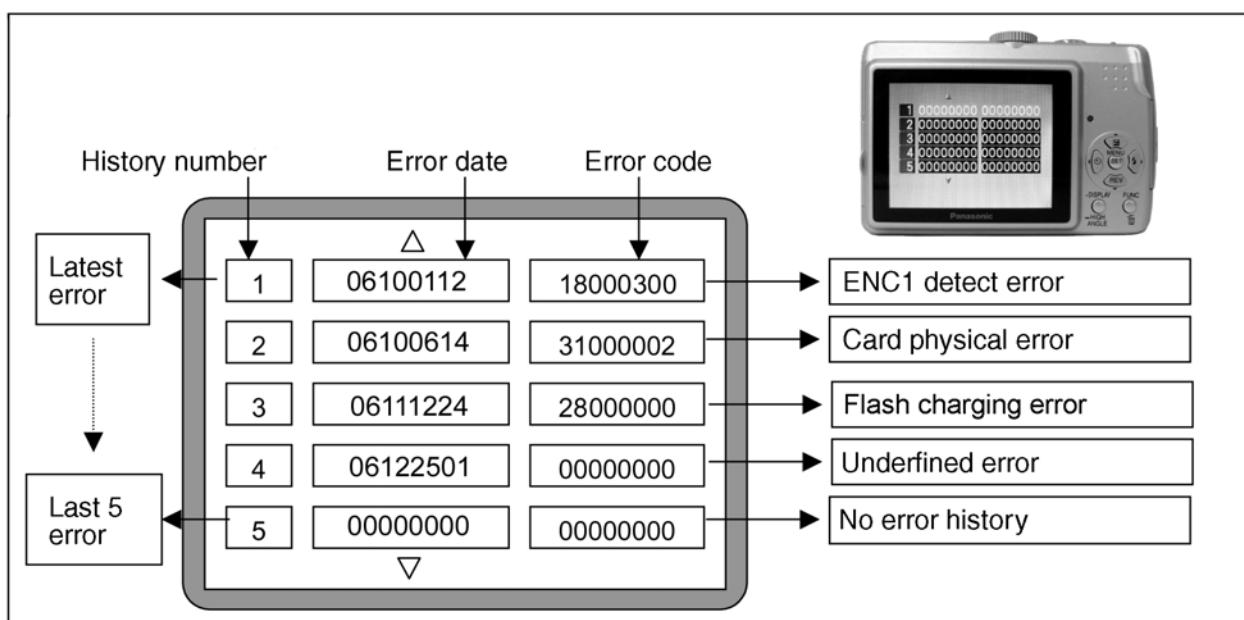
While keep pressing [E.ZOOM] and “[UP] of Cross key” simultaneously, turn the Power on.

• 2. The display of error code:

Press [E.ZOOM], [MENU] and “[LEFT] of Cross key” 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 Cross key” : It can be scroll up or down one.

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

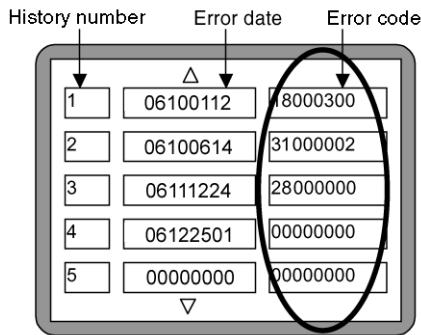
• 4. How to read the error date:

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 (IC7101: X axis) detect error on Main P.C.B.. IC7101 (Gyro element) or IC6001 (VENUS 3)	
				4000	GYRO (Y) error. Gyro (IC7102: Y axis) detect error on Main P.C.B.. IC7102 (Gyro element) or IC6001 (VENUS 3)	
				5000	MREF error (Reference voltage error). IC7001 (LENS drive) or IC6001 (VENUS 3)	
				6000	Drive voltage (X) error. VENUS 3 AD value error, LENS Unit, LENS flex breaks etc.	
				7000	Drive voltage (Y) error. VENUS 3 AD value error, LENS Unit, LENS flex breaks etc.	
		C.B./Zoom		0100	HP Low detect error (C.B. encoder (full retract) always Low detect). FP9001-(2,10) signal line or IC6001 (VENUS 3)	
				0200	HP High detect error (C.B. encoder (full retract) always High detect). FP9001-(1,12) signal line or IC6001 (VENUS 3)	
				0300	ENC1 detect error (C.B. motor encoder detect error). FP9001-(2) signal line or IC6001 (VENUS 3)	
				0400	ENC2 detect error (C.B. motor encoder detect error). FP9001-(10) signal line or IC6001 (VENUS 3)	
		Focus		0001	HP Low detect error (Focus encoder always Low detect error). FP9001-(27) signal line or IC6001 (VENUS 3)	
				0002	HP High detect error (Focus encoder always High detect error). FP9001-(27) signal line or IC6001 (VENUS 3)	
		Lens	18*1	0000	Power ON time out error. Lens drive system	
				18*2	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-(247) signal line or Flash charging circuit
					EEPROM read error IC6002 (FLASH ROM)
	FLASH ROM (EEPROM Area)	FLASH ROM (EEPROM Area)	2B*0	0001	EEPROM write error IC6002 (FLASH ROM)
				0002	SYSTEM IC initialize failure error Communication between IC6001 (VENUS 3) and IC9101 (SYSTEM)
	SYSTEM	RTC	2C*0	0001	SYSTEM IC initialize failure error Communication between IC6001 (VENUS 3) and IC9101 (SYSTEM)
SOFT	CPU	Reset	30*0	0001	NMI reset 0007 (30000001-30000007 are caused by factors)
				0007	
	Card	Card	31*0	0001	Card logic error SD memory card data line or IC6001 (VENUS 3)
				0002	Card physical error SD memory card data line or IC6001 (VENUS 3)
				0004	Write error SD memory card data line or IC6001 (VENUS 3)
				0005	Format error
			39*0		
	CPU, ASIC hard	Stop	38*0	0001	Camera task finish process time out. Communication between Lens system and IC6001 (VENUS 3)
				0002	Camera task invalid code error. IC6001 (VENUS 3)
				0100	File time out error in recording motion image IC6001 (VENUS 3)
				0200	File data send error in recording motion image IC6001 (VENUS 3)
				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	Imperfect zoom lens processing. Zoom lens
				0001	Software error. (0-7bit : command, 8-15bit : status)
			35*1	0000	Though record preprocessing is necessary, it is not called.
			35*2	0000	Though record preprocessing is necessary, it is not completed.
			3C*0	0000	Imperfect zoom lens processing.

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.

6.2. Confirmation of Firmware Version

The Firmware version can be confirmed by ordering the following steps::

- **Step 1. The temporary cancellation of initial setting:**

Set the mode dial to “[Normal picture mode] (Red camera mark)”.

Insert the SD memory card which has a few photo data.

While keep pressing [E.ZOOM] and “[UP] of Cross key” simultaneously, then turn the power on.

- **Step 2. Confirm the version:**

Set the mode dial to “[Playback]” and then press [DISPLAY] to switch to LCD with indication. (Fig. A)

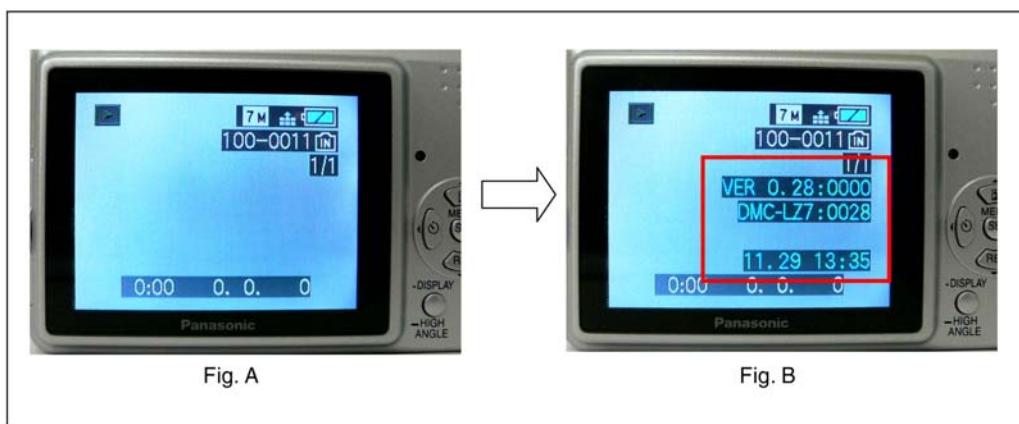
Press [E.ZOOM] and “[DOWN] of Cross key” simultaneously. (No need to keep pressing.)

(The version information is displayed on the LCD with light blue colour letters.) (Fig. B)

CAUTION:

The version information does not display if the LCD has switched to LCD with indication already.

In this case, press [DISPLAY] to switch to LCD with indication.



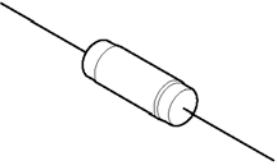
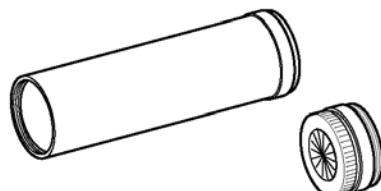
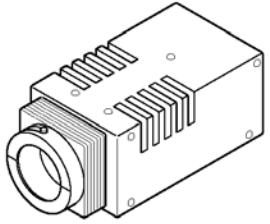
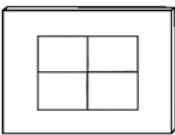
<Point>

- The firmware version and EEPROM version can be confirmed with the information (1).
- The information (2), (3) are just reference.

7 Service Fixture & Tools

7.1. Service Fixture and Tools

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

Resistor for Discharging ERG5SJ102	Infinity Lens (with Focus Chart) VFK1164TCM02	LIGHT BOX VFK1164TDVLB
 An equivalent type of Resistor may be used.		 ※ with DC Cable
TR Chart RFKZ0434	Lens Cleaning Kit (BK) VFK1900BK	Grease (for lens) VFK1829
	 * Only supplied as 10 set/box.	
Furoyl grease (for focus motor) VFK1850	T3 Torx Driver RFKZ0334	Dome type magnifying glass VFK1835
		

7.2. When Replacing the Main PCB

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

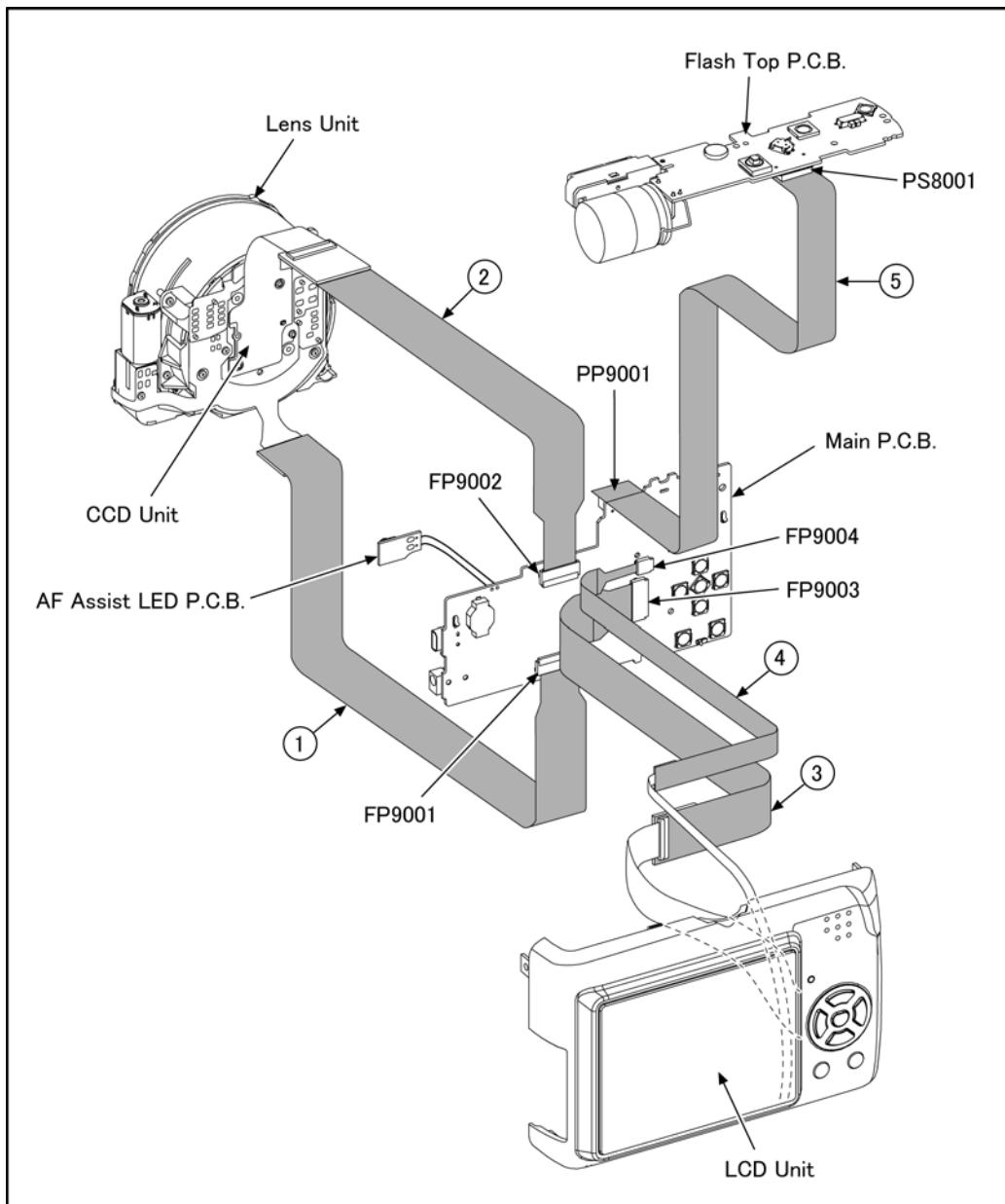
The adjustment instruction is available at "software download" on the "Support Information from NWBG/VDBG-PAVC" web-site in "TSN system", together with Maintenance software.

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	VFK1951	FP9001 (MAIN) - LENS UNIT	39PIN 0.3 FFC
2	VFK1978	FP9002 (MAIN) - CCD UNIT	31PIN 0.3 FFC
3	VFK1950	FP9003 (MAIN) - LCD UNIT	33PIN 0.3 FFC
4	VFK1974	FP9004 (MAIN) - LCD UNIT	4PIN 0.5 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".

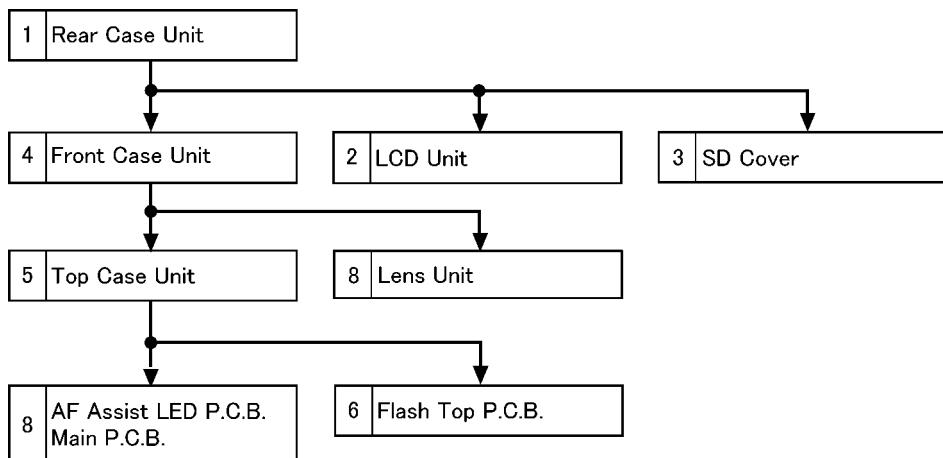
The capacitor voltage is not lowered soon even if the AC Cord is unplugged or the battery is removed.

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

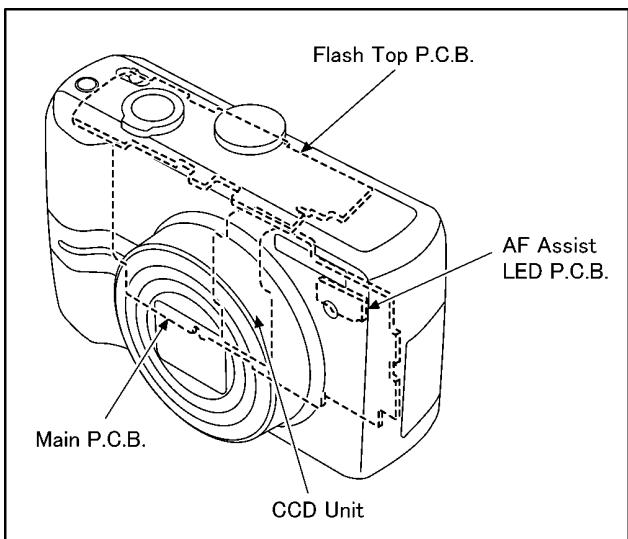
3. DO NOT allow other parts to touch the high voltage circuit on FLASH TOP PCB.

8 Disassembly and Assembly Instructions

8.1. Disassembly Flow Chart



8.2. PCB Location



8.3. Disassembly Procedure

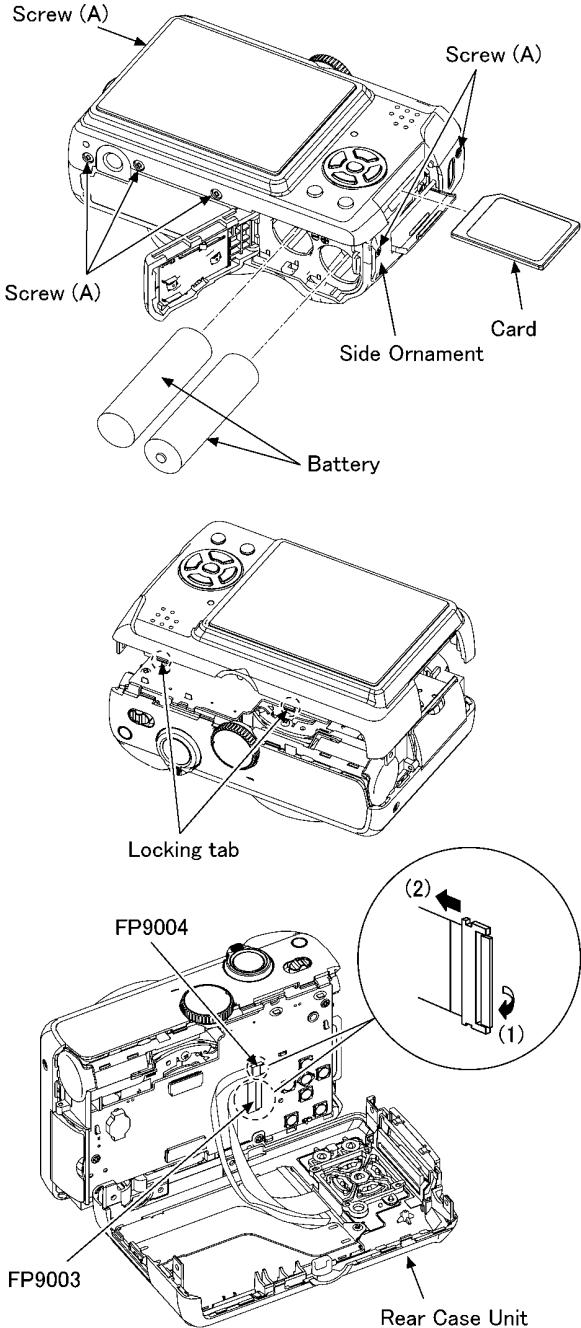
No.	Item	Fig	Removal
1	Rear Case Unit	Fig. D1	Card Battery 6 Screws (A) Side Ornament FP9003(Flex) FP9004(Flex) 2 Locking tabs Rear Case Unit
2	LCD Unit	Fig. D2	1 Screw (B) LCD Holder B LCD Unit
3	SD Cover	Fig. D3	Rear Knob SD Earth Plate Shaft Earth Plate LED Panel R SD Cover
4	Front Case Unit	Fig. D4	1 Screw (C) FP9001(Flex) FP9002(Flex) Front Case Unit
5	Top Case Unit	Fig. D5	1 Screw (D) PP9001(Connector) Top Case Unit
6	Flash Top P.C.B.	Fig. D6	3 Screws (E) 2 Locking tabs Flash Top P.C.B.
		Fig. D7	NOTE (When Installing)
7	AF Assist LED P.C.B. Main P.C.B.	Fig. D8	2 Locking tabs AF Panel Solder (2 points) 3 Screws (F) AF Assist LED P.C.B. Main P.C.B.
8	Lens Unit	Fig. D9	3 Screws (G) Lens Unit

8.3.1. Removal of the Rear Case Unit

NOTE:

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

- Card
- Side Ornament
- Battery
- FP9003(Flex)
- Screw (A) x 6
- FP9004(Flex)
- Locking tab x 2



NOTE: (When Replacing)

When remove the flex, pull up the connector in the direction of arrow (1), and then remove the flex in the direction of arrow (2).

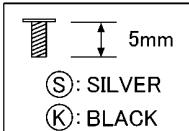


Fig. D1

8.3.2. Removal of the LCD Unit

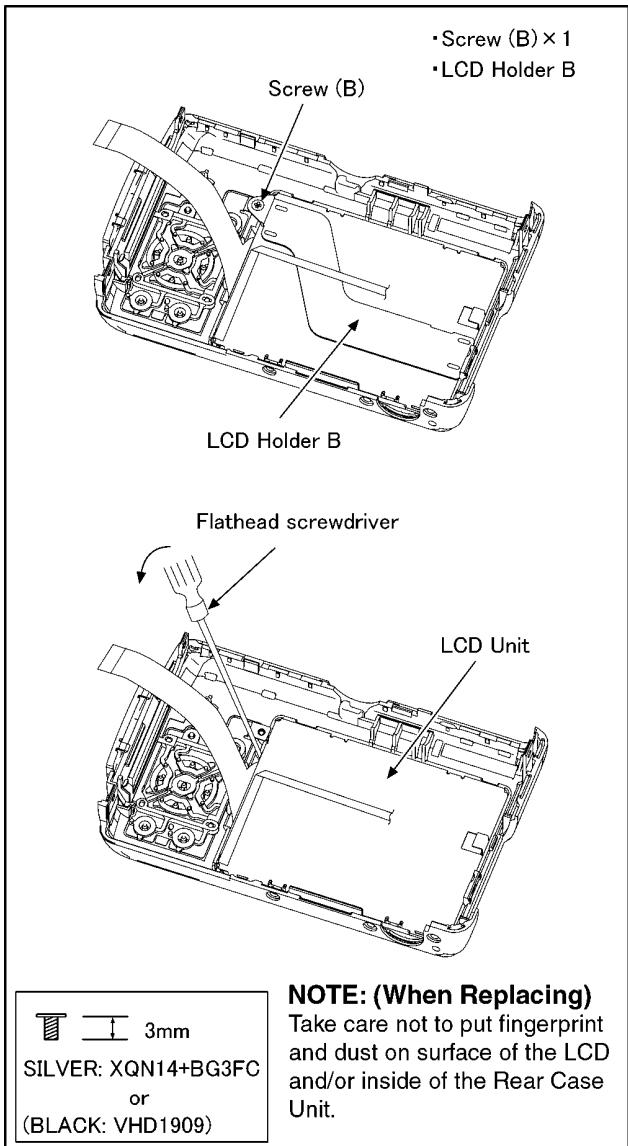


Fig. D2

8.3.3. Removal of the SD Cover

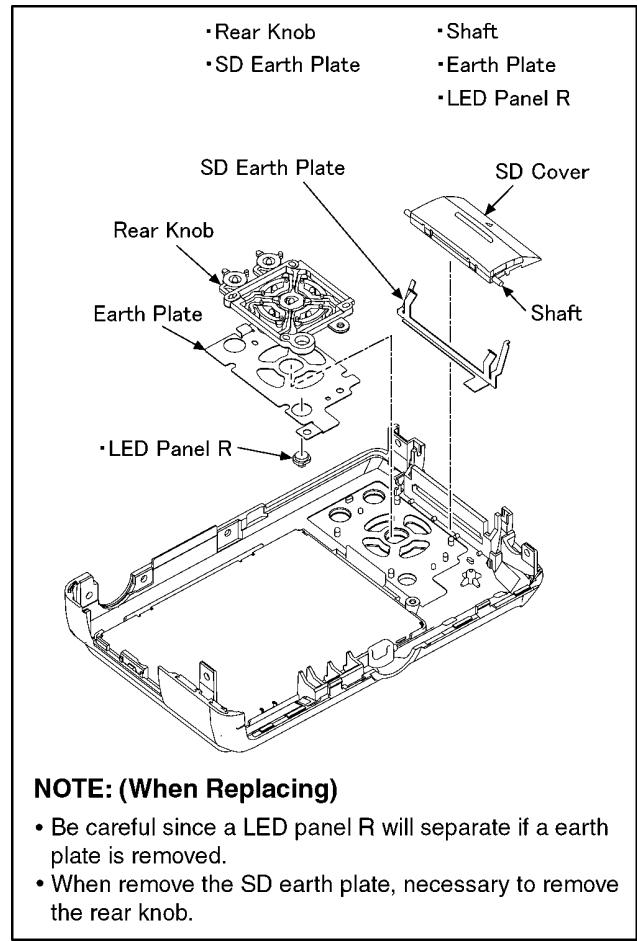


Fig. D3

8.3.4. Removal of the Front Case Unit

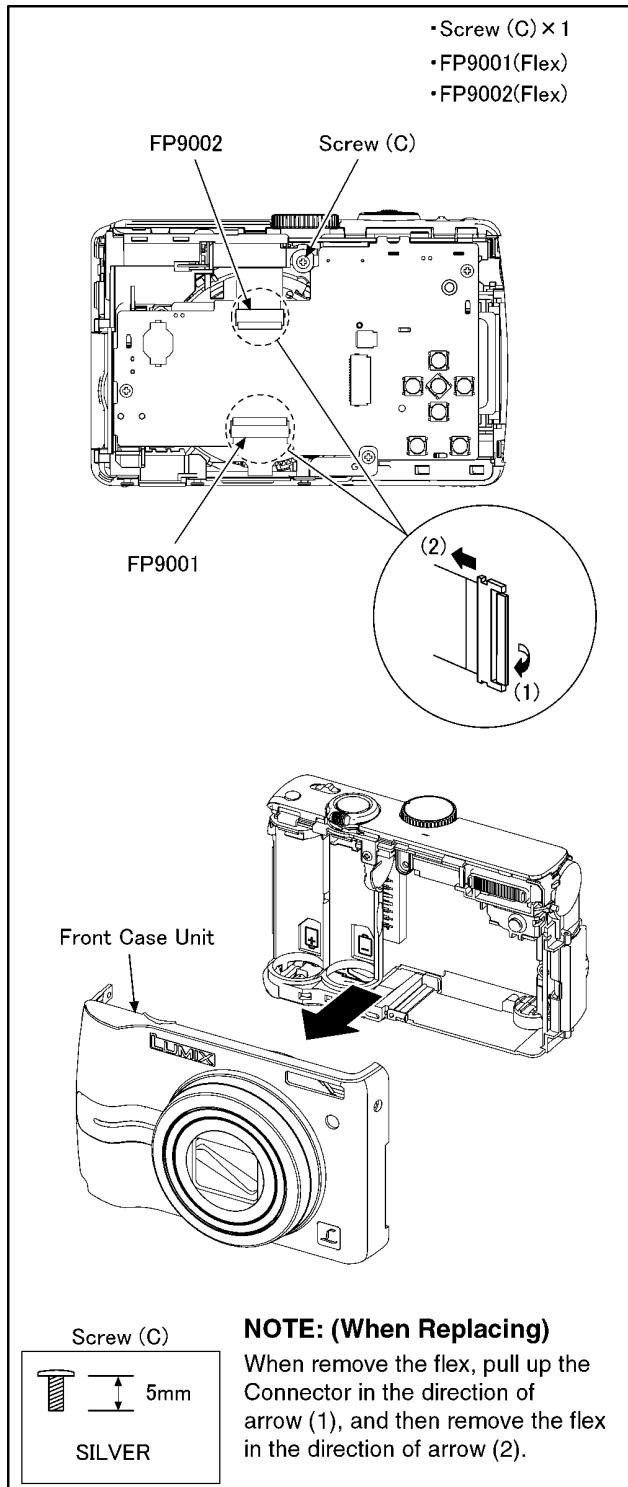


Fig. D4

8.3.5. Removal of the Top Case Unit

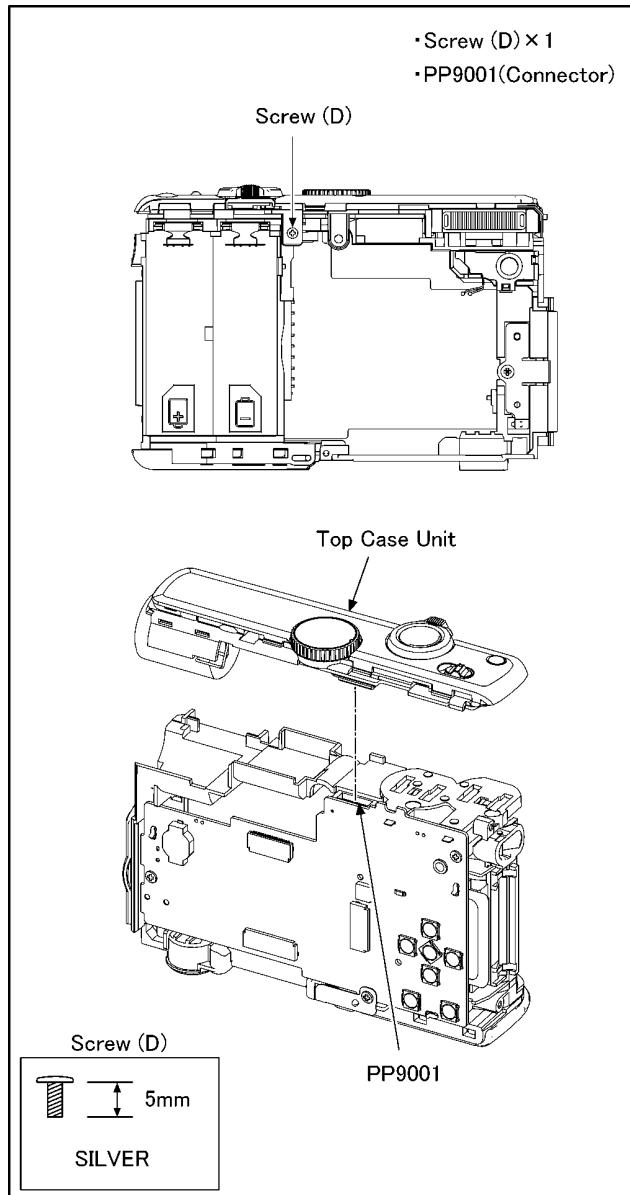


Fig. D5

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

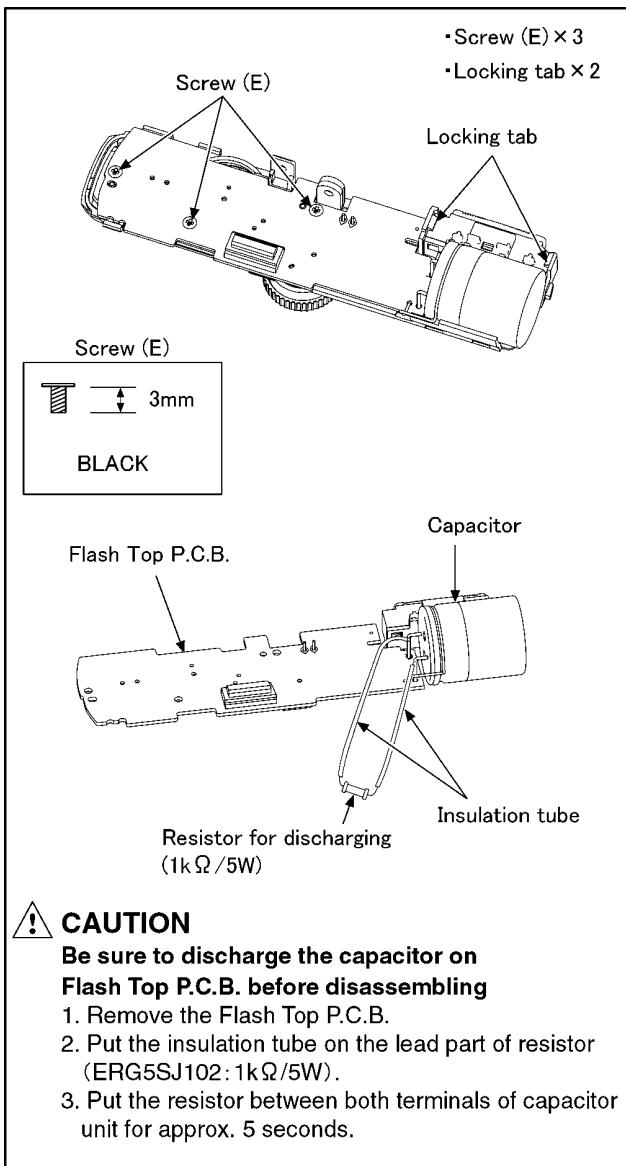


Fig. D6

8.3.7. Removal of the AF Assist LED P.C.B. and Main P.C.B.

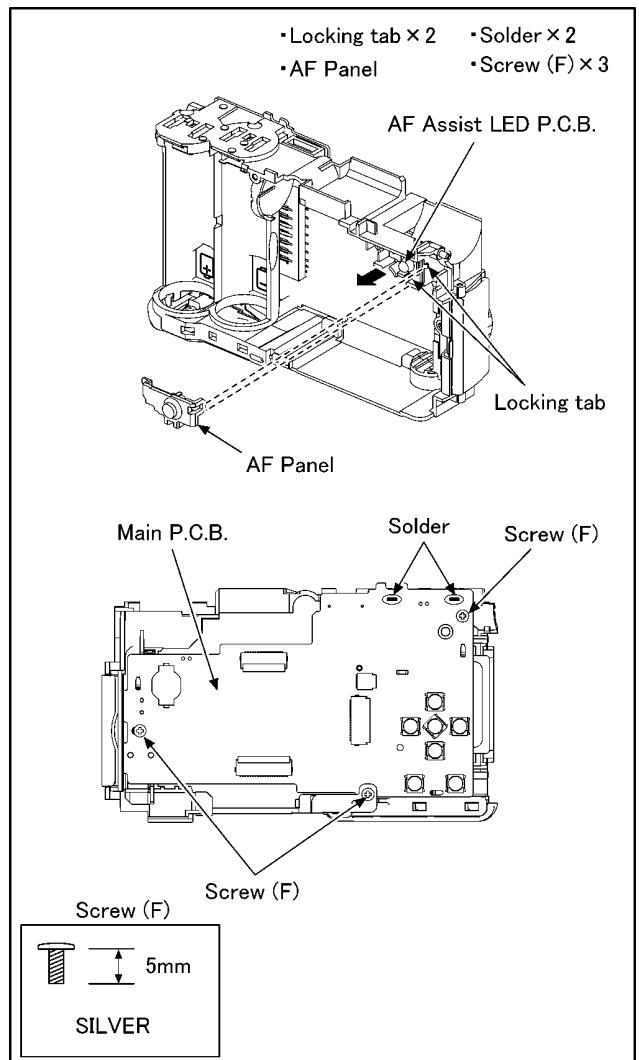


Fig. D8

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.

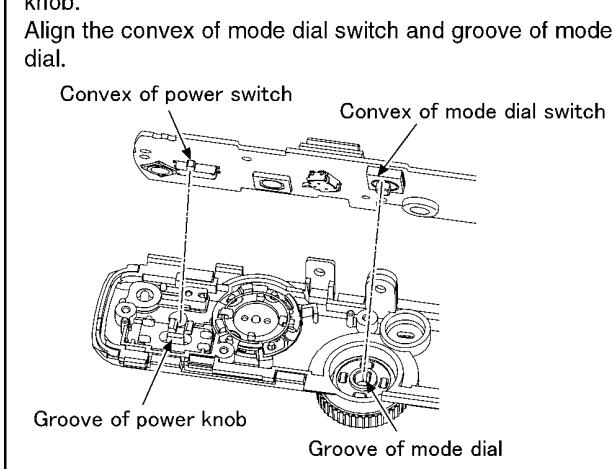


Fig. D7

8.3.8. Removal of the Lens Unit

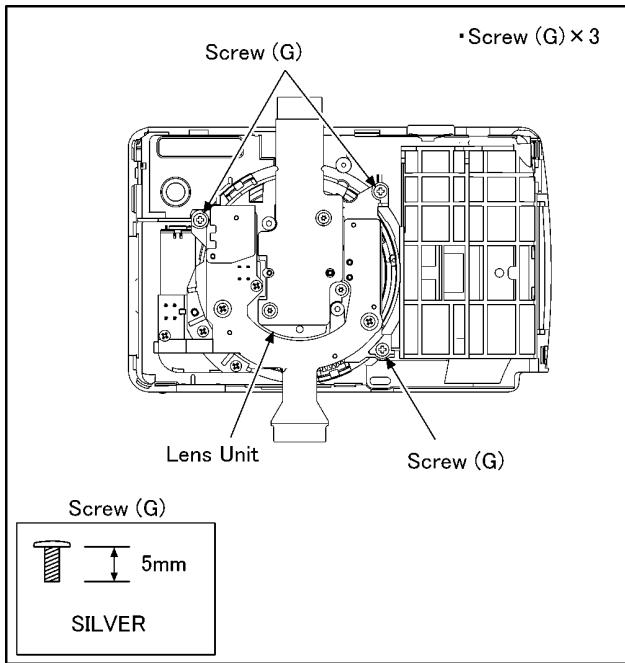


Fig. D9

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.)

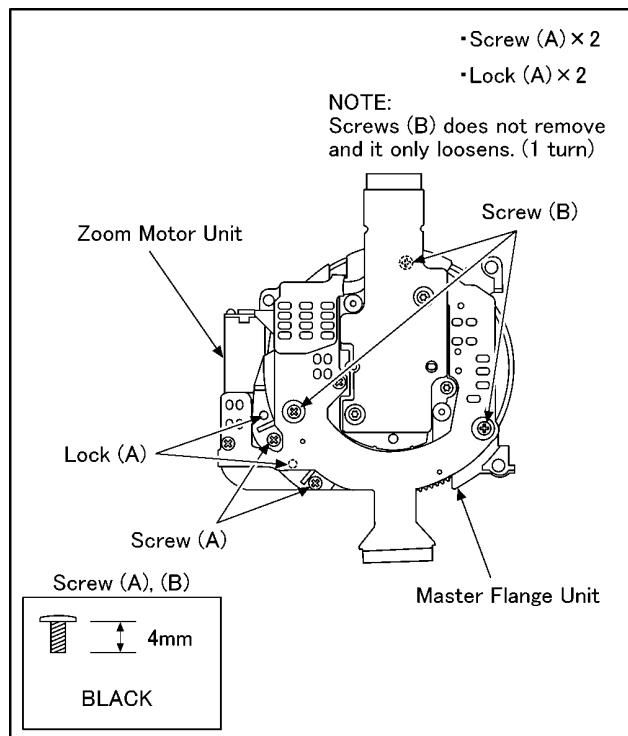
8.4. Disassembly Procedure for the Lens

NOTE: When Disassembling and Assembling for the Lens

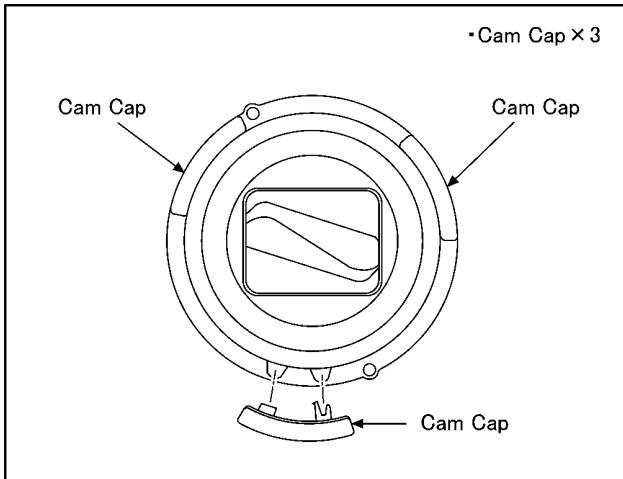
1. To minimize the possibility of the CCD being dirt, perform disassemble and/or assemble under the condition of the CCD is being mounted.
Disassembling procedures for the CCD unit, refer to item 8.6.
2. Take care that the dust and dirt are not entered into the lens.
In case of the dust is putted on the lens, blow off them by airbrush.
3. Do not touch the surface of lens.
4. Use lens cleaning KIT (BK)(VFK1900BK).

8.4.1. Removal of the Direct Frame/Drive Frame/1st Lens Frame/2nd Lens Frame Unit

1. Unscrew the 2 screws (A).
2. Remove the zoom motor unit to the lock (A) (2 points).
3. Losen the 3 screws (B) (1 turn).

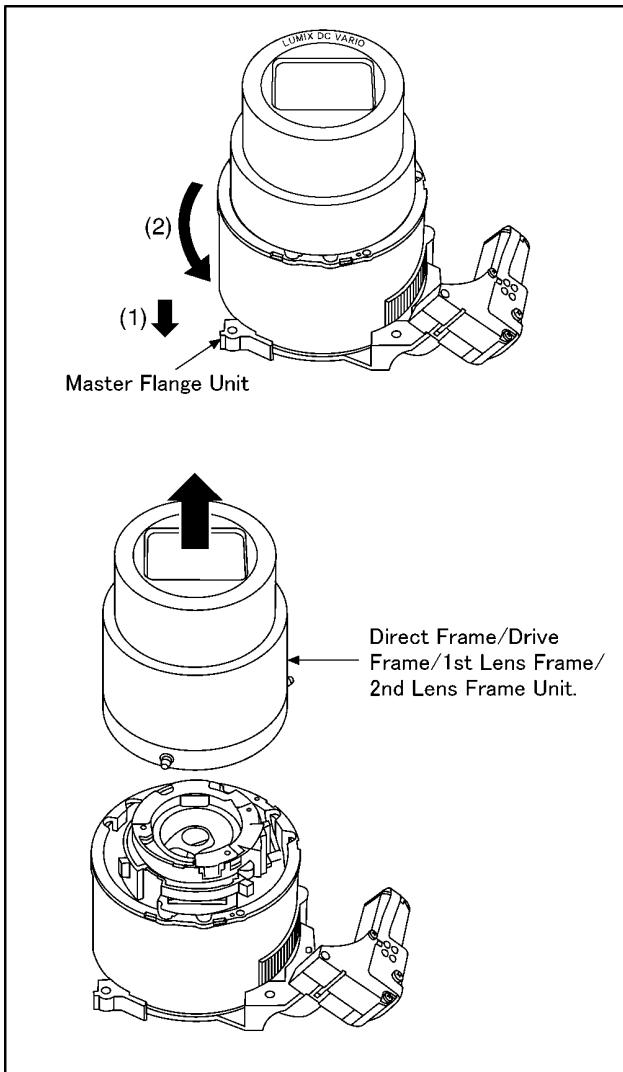


4. Remove the 3 cam caps.



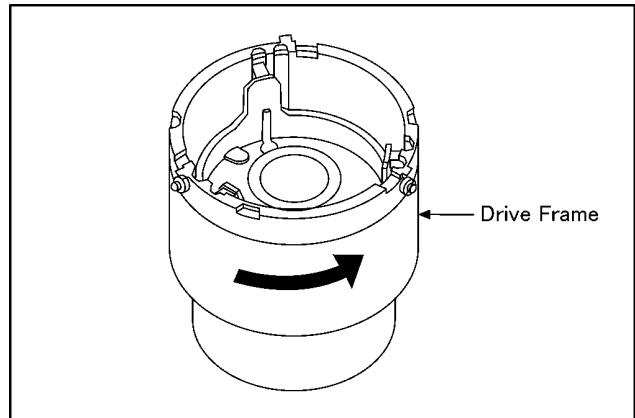
5. Pull down the plate part of master flange unit (refer to arrow(1)), and then turn the master flange unit to counter-clockwise fully (refer to arrow(2)).

6. Remove the direct frame/drive frame/1st lens frame/2nd lens frame unit to the indicated by arrow.

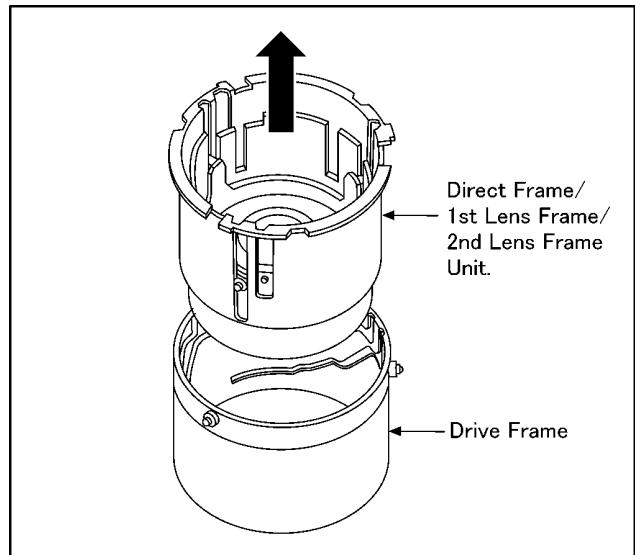


8.4.2. Removal of the Direct Frame Unit

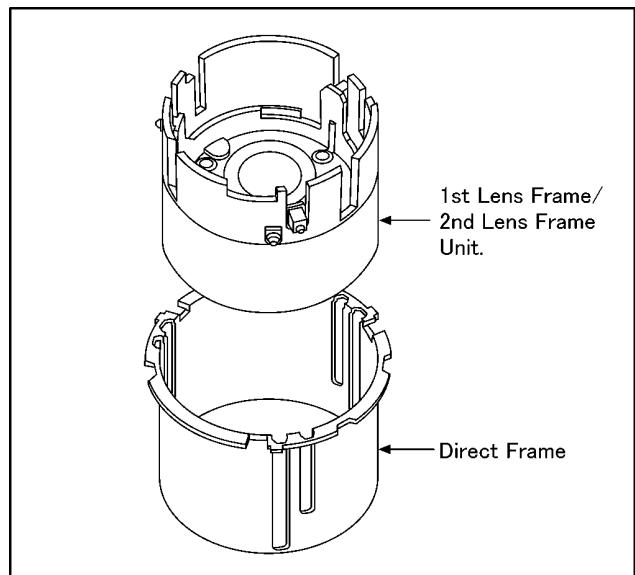
1. Turn the drive frame unit to the indicated by arrow. (Retracting direction)



2. Remove the direct frame/1st lens frame/2nd lens frame unit from drive frame to the indicated by arrow.



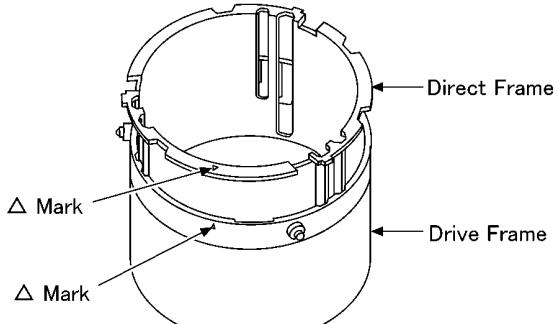
3. Push the 1st lens frame/2nd lens frame unit from lens front side, and then remove the 1st lens frame/2nd lens frame unit from direct frame.



8.5. Assembly Procedure for the Lens

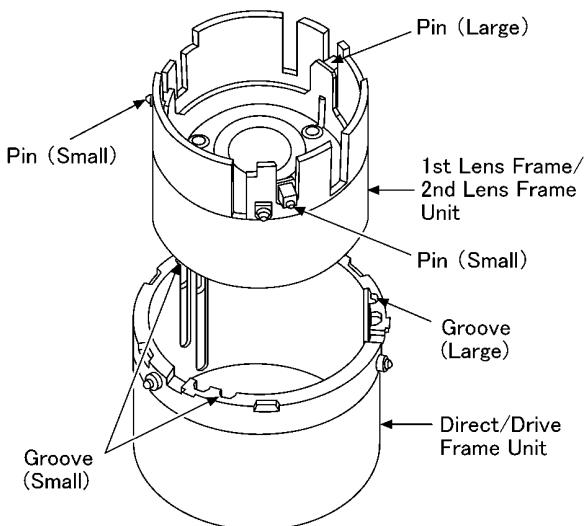
8.5.1. Phase alignment of the Direct Frame and Drive Frame Unit

Align the Δ mark, and then install the direct frame to drive frame

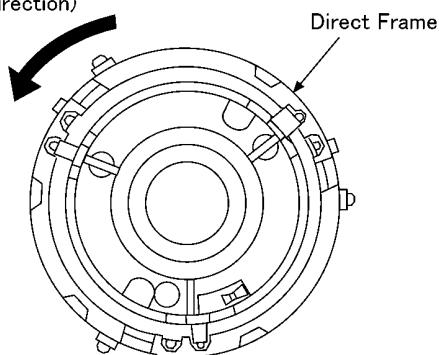


8.5.2. Phase alignment of the Direct/Drive Frame Unit and 1st Lens Frame/2nd Lens Frame Unit

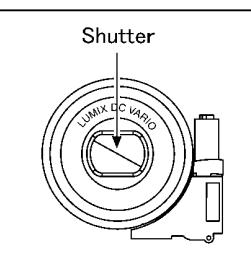
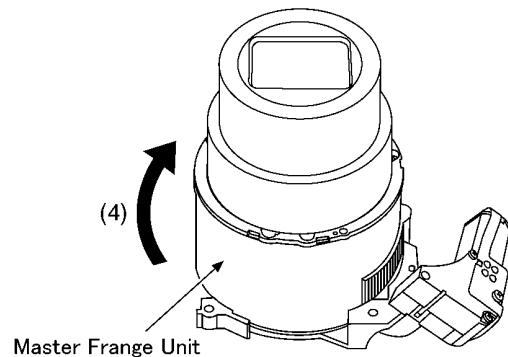
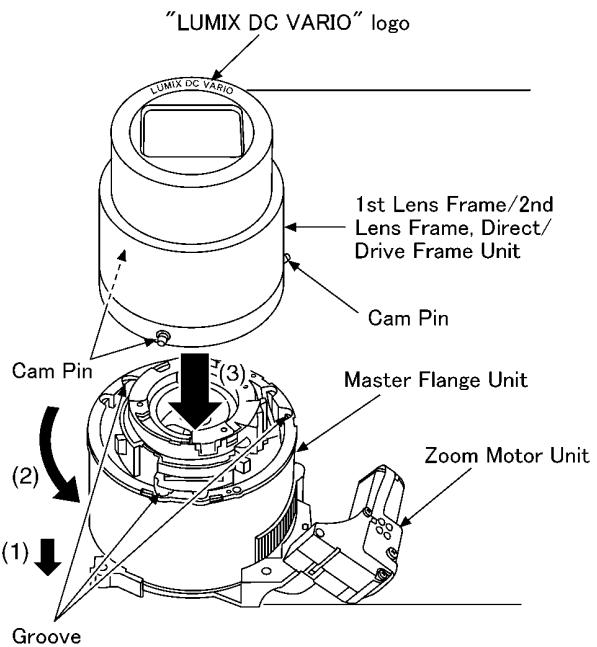
Align the pin (large) of 2nd lens frame unit and the groove (large) of direct/drive frame unit, and then install the 1st lens frame/2nd lens frame unit to direct/drive frame unit.



Turn the direct frame to the indicated by arrow.
(Exiting direction)



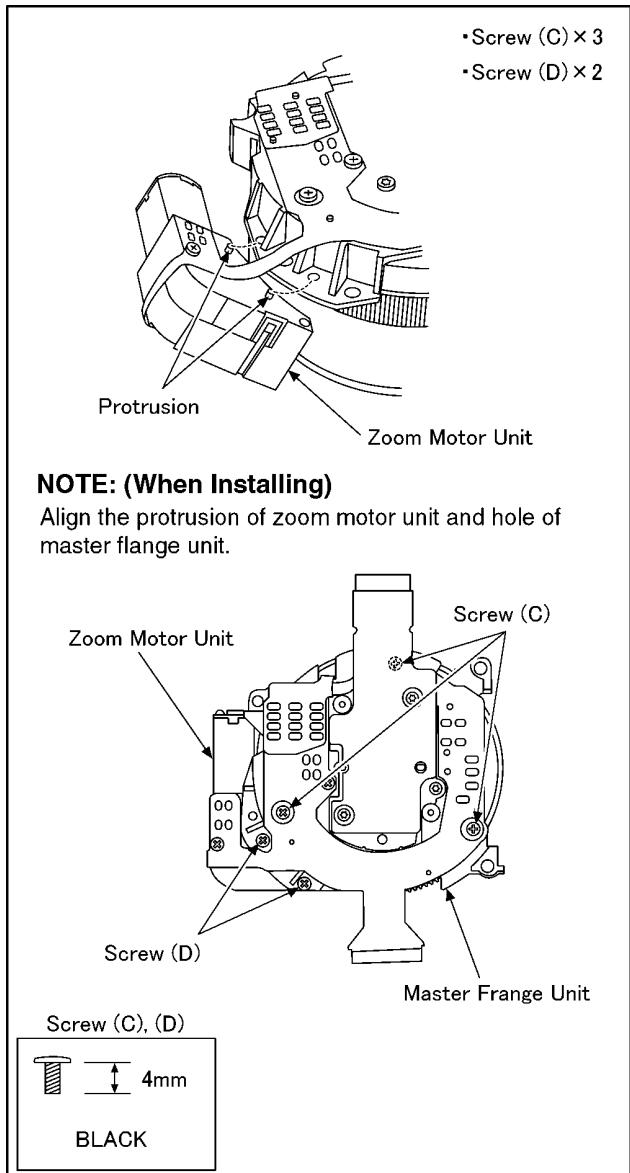
8.5.3. Phase alignment of the 1st Lens Frame/2nd Lens Frame/Drive Frame/ Direct Frame Unit and Master Flange Unit



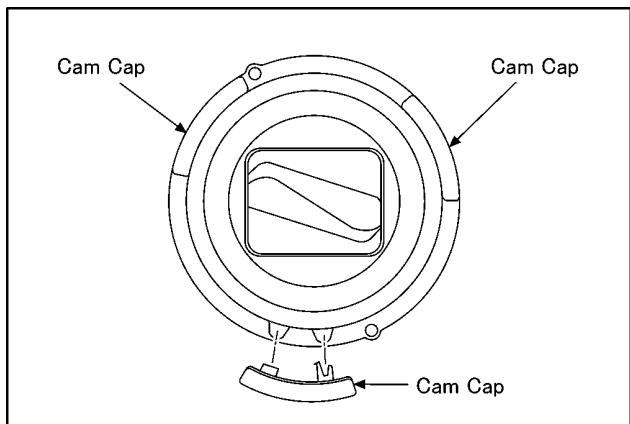
NOTE: (When Installing)

1. Pull down the plate part of master flange unit (refer to arrow(1)), and then turn the master flange unit to counterclockwise fully (refer to arrow(2)).
2. Set the "LUMIX DC VARIO" logo of 1st lens frame unit and zoom motor unit become position relations of an upper figure (refer to arrow(3)), and then install the cam pin of drive frame to the groove of cam frame.
3. After install, turn the master flange unit to clockwise fully (full retract) (refer to arrow(4)).
4. Confirm the shutter is closed when full retract state.

8.5.4. Assembly for the Zoom Motor Unit



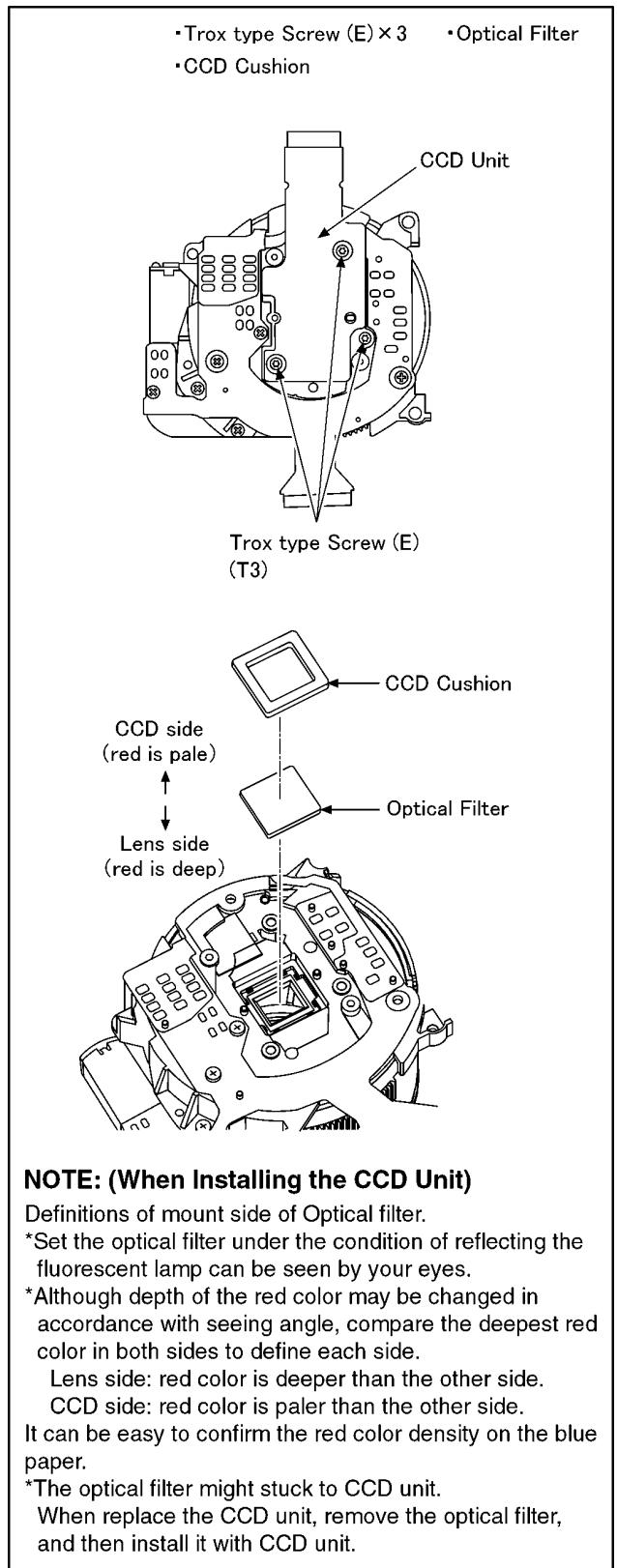
8.5.5. Assembly for the Cam Cap



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.

- Torx driver (T3) Part No. RFKZ0334



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:

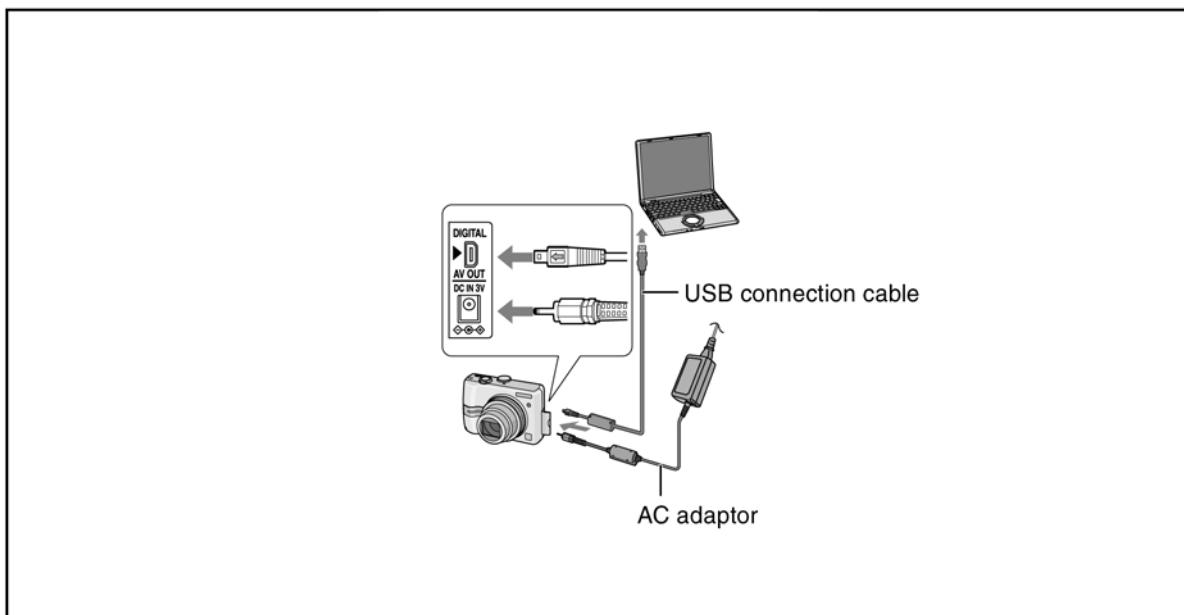
After adjustments have been terminated, make sure to achieve "INITIAL SETTINGS".

		Replaced Part				
Adjustment Item		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)	○	○	○	○	
	Shutter adjustment (SHT)	○	○	○	○	○
	ISO sensitivity adjustment (ISO)	○	○	○	○	○
	AWB adjustment High brightness coloration inspection (WBL)	○	○	○	○	○
	CCD white scratch compensation (WKI)	○	○	○		○

NOTE:

*There is no LCD adjustment in this model.

*There is no CCD Black scratch compensation adjustment (BKI) in this model.



10 Maintenace

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

Diagrams and Replacement Parts List

Digital Camera

Model No.

DMC-LZ7EB	DMC-LZ7GC
DMC-LZ7EF	DMC-LZ7GN
DMC-LZ7EGM	DMC-LZ7GK
DMC-LZ7EG	DMC-LZ7PC
DMC-LZ7PL	DMC-LZ7P
DMC-LZ7EE	

Vol. 1
 Colour
 (S).....Silver Type
 (K).....Black Type (except LZ7EB/PL/GC/GN/GK)

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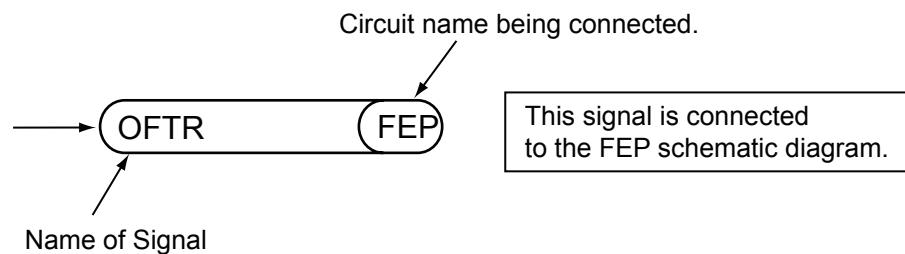
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S1. About Indication of The Schematic Diagram

S1.1. Important Safety Notice

COMPONENTS IDENTIFIED WITH THE MARK  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

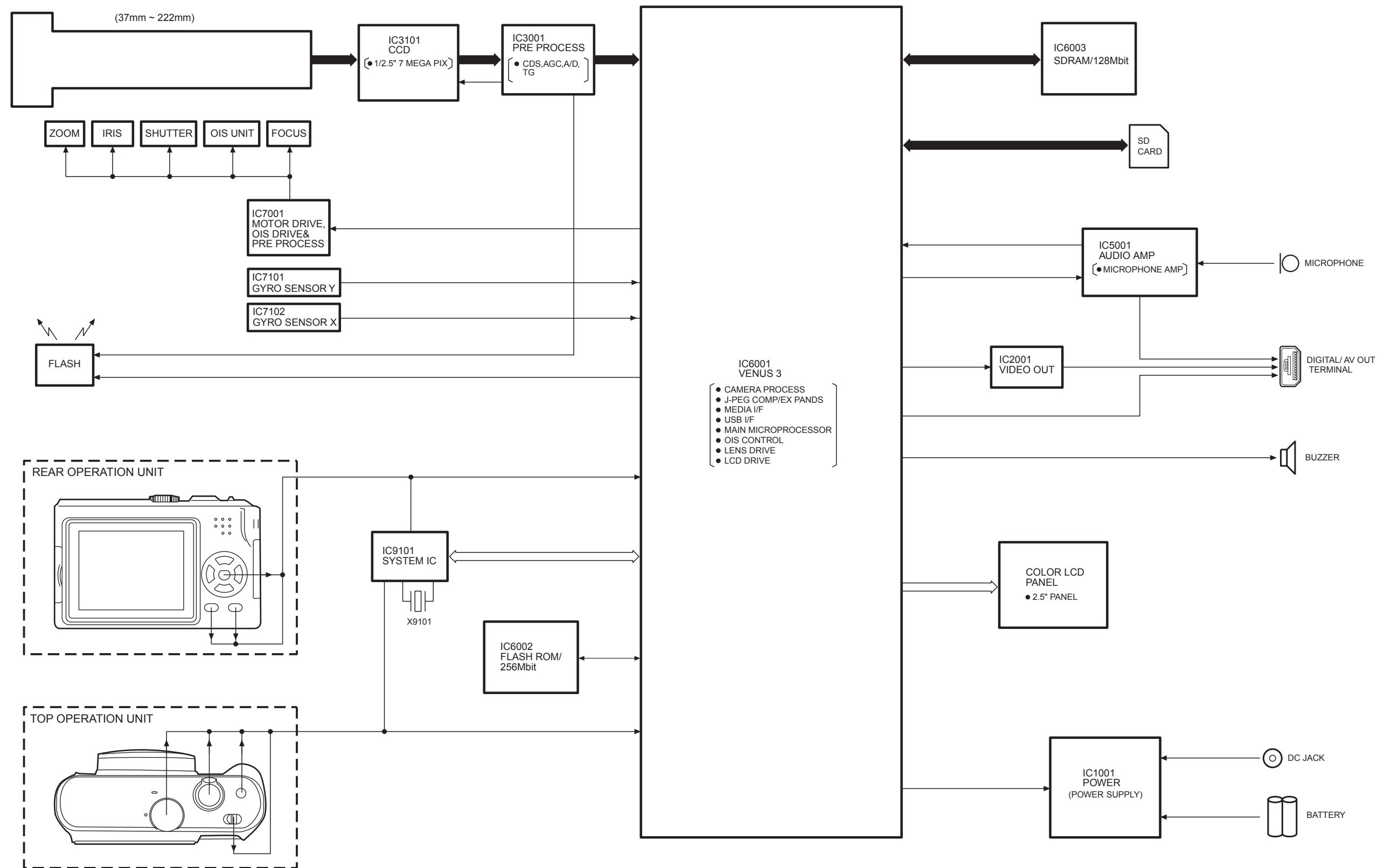
Note) Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.
Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

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

REF No.	PIN No.	POWER ON
IC8001	1	0
IC8001	2	0
IC8001	3	5.7
IC8001	4	0
IC8001	5	0
Q8002	1	0
Q8002	2	0
Q8002	3	0
Q8002	4	0
Q8002	5	0.1
Q8002	6	0.1
Q8002	7	0.1
Q8002	8	0.1
Q8009	1	3
Q8009	2	3
Q8009	3	0
Q8009	4	0.1
Q8009	5	3
Q8009	6	3

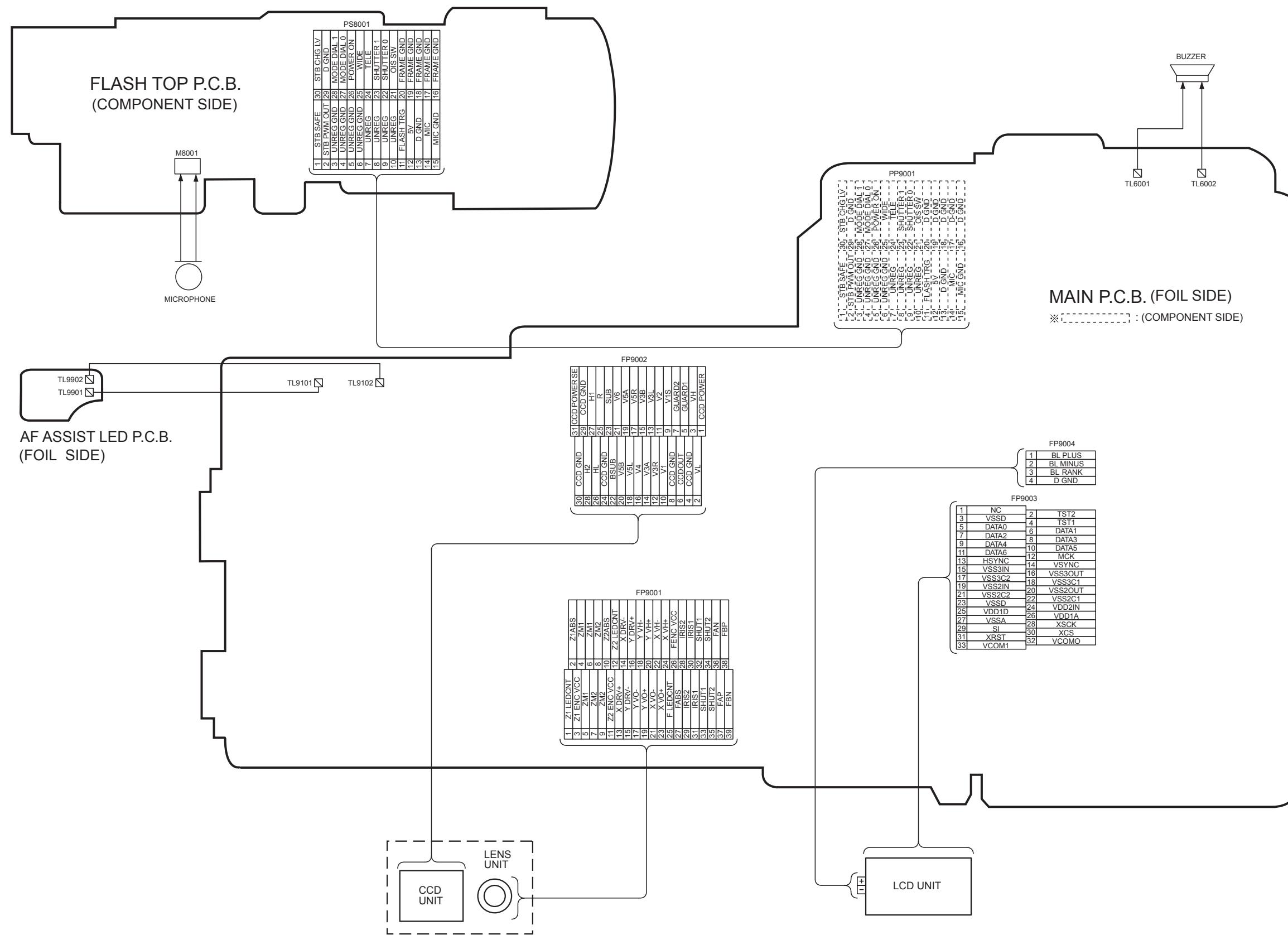
S3. Block Diagram

S3.1. Overall Block Diagram

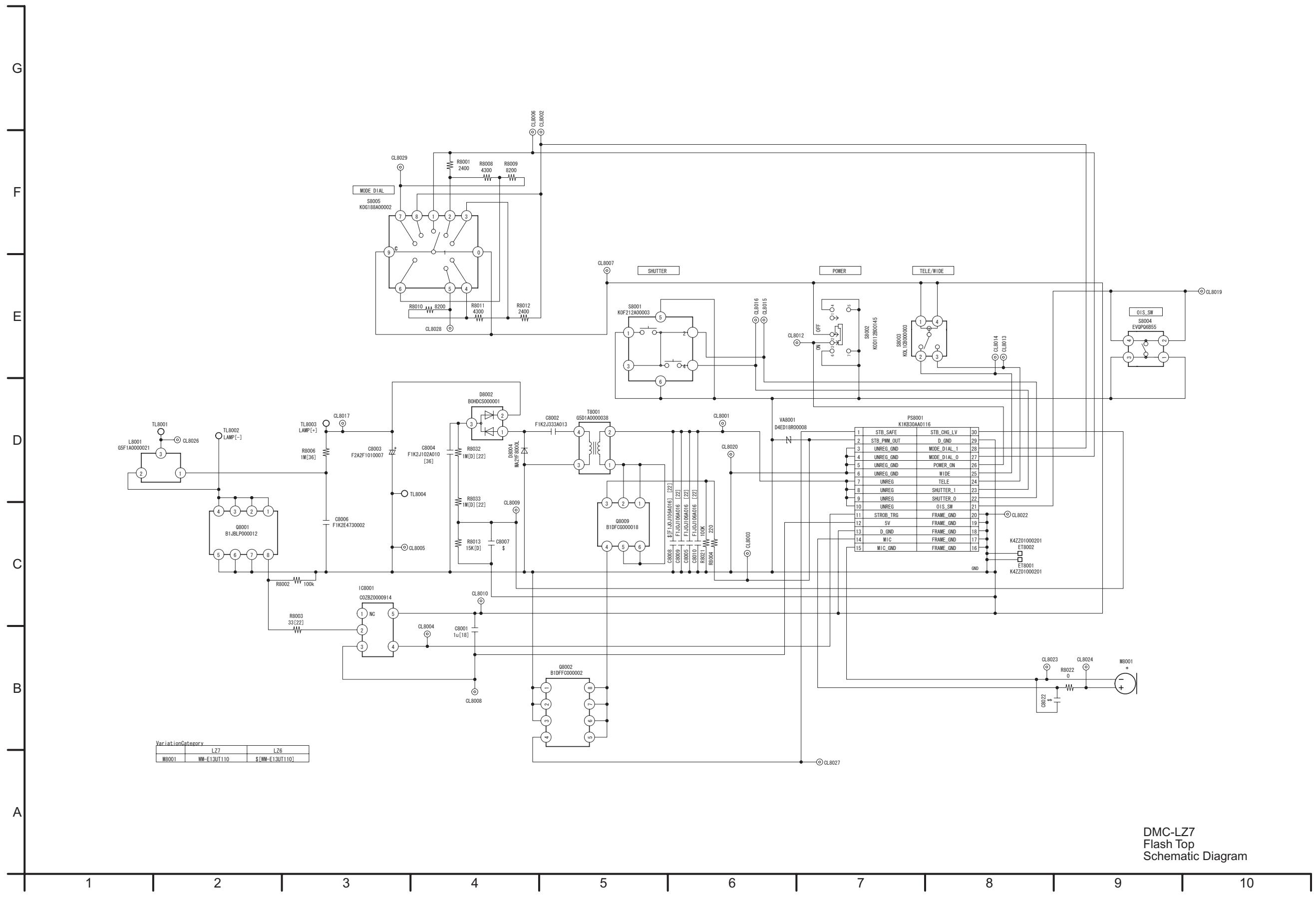


S4. Schematic Diagram

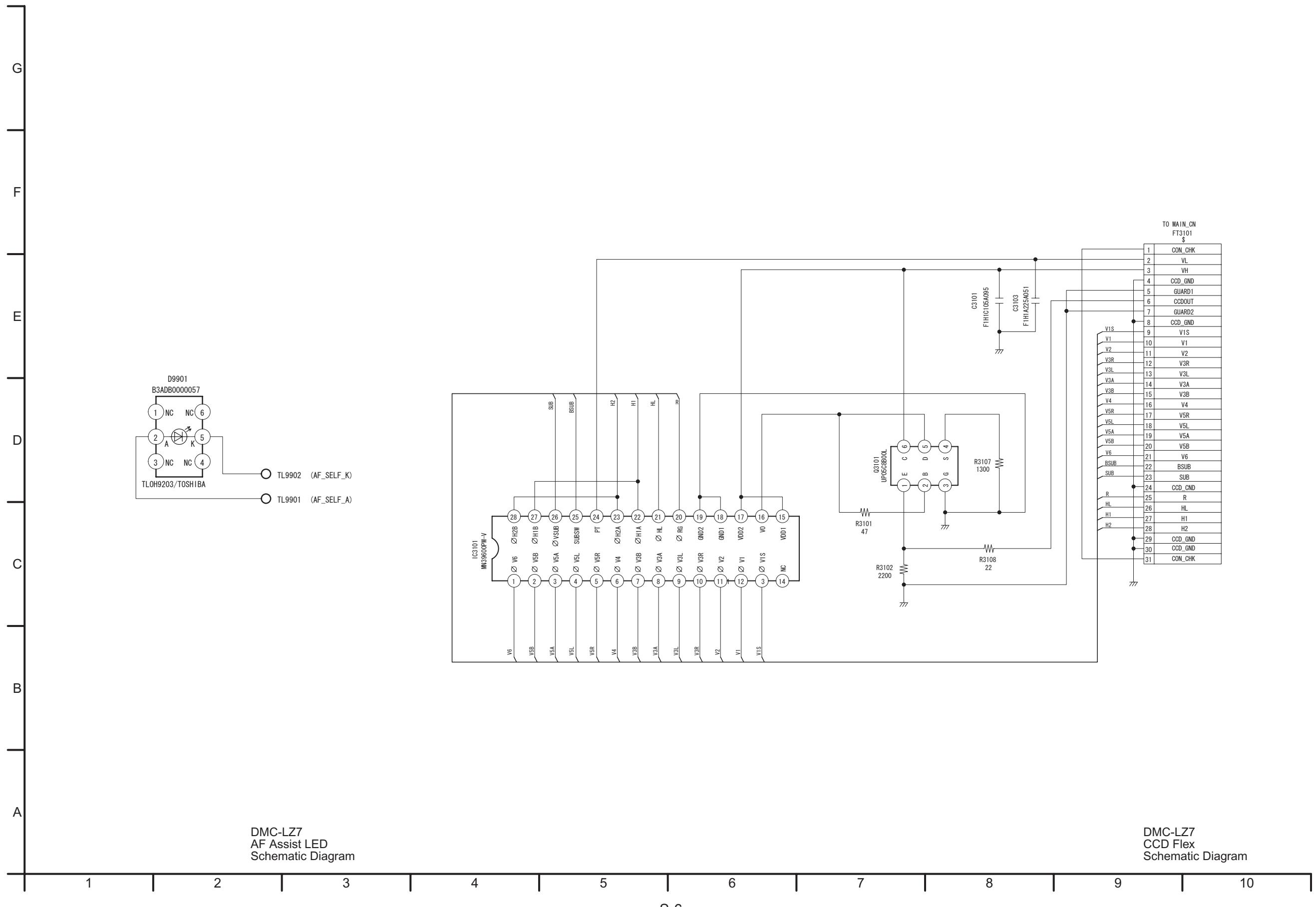
S4.1. Interconnection Diagram



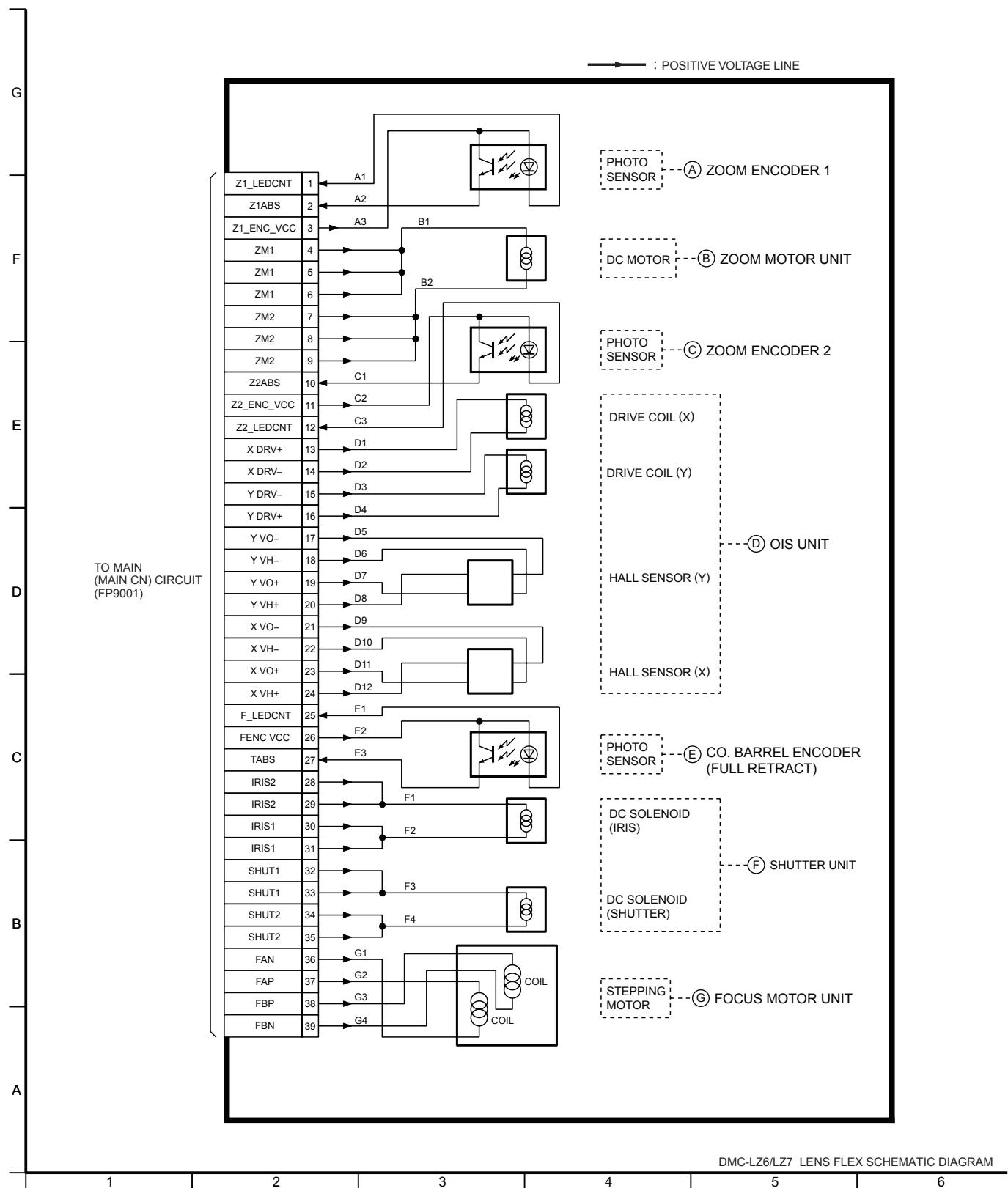
S4.2. Flash Top Schematic Diagram



S4.3. AF Assist LED Schematic Diagram / S4.4. CCD Flex Schematic Diagram



S4.5. Lens Flex Schematic Diagram

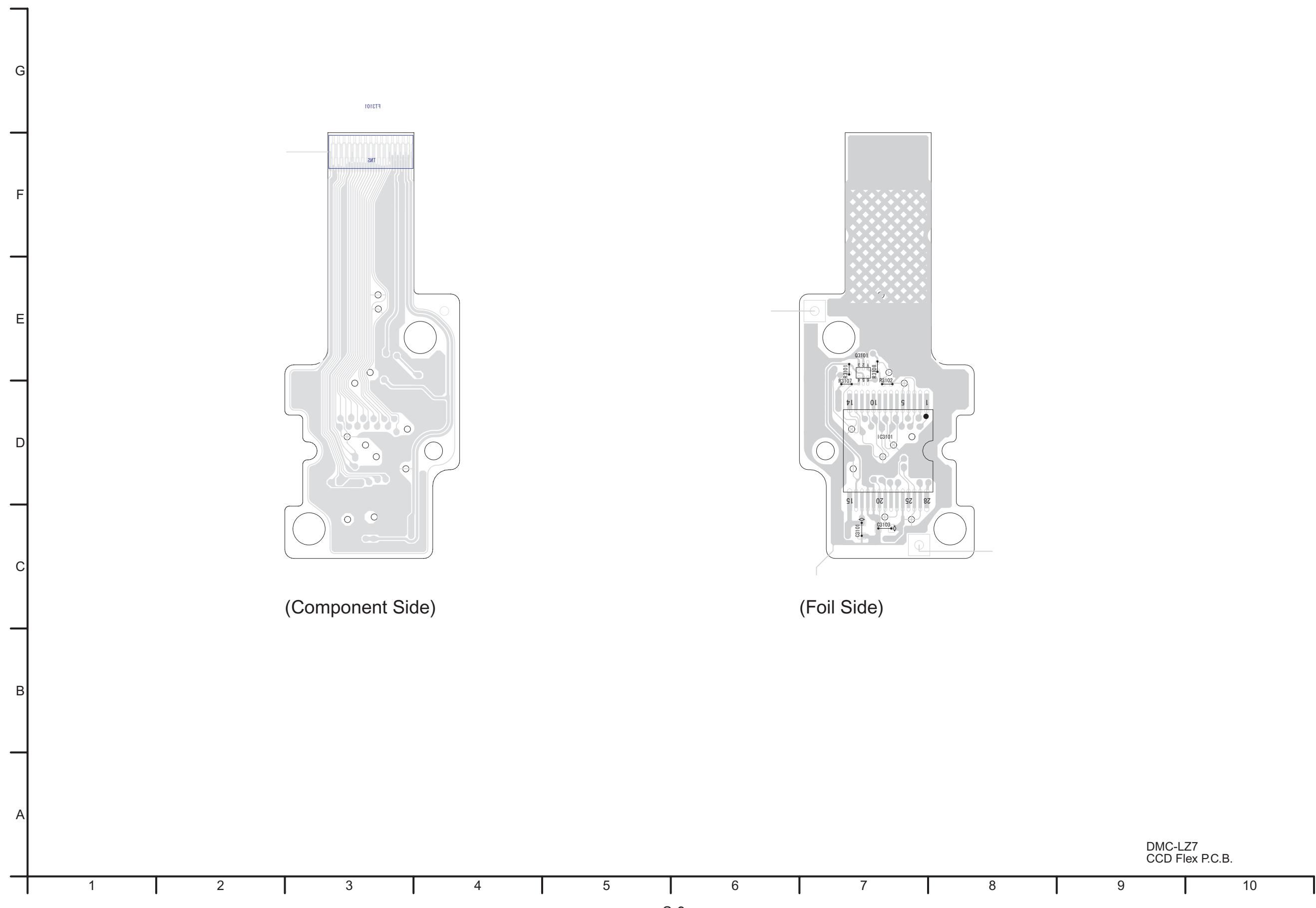


S5. Print Circuit Board

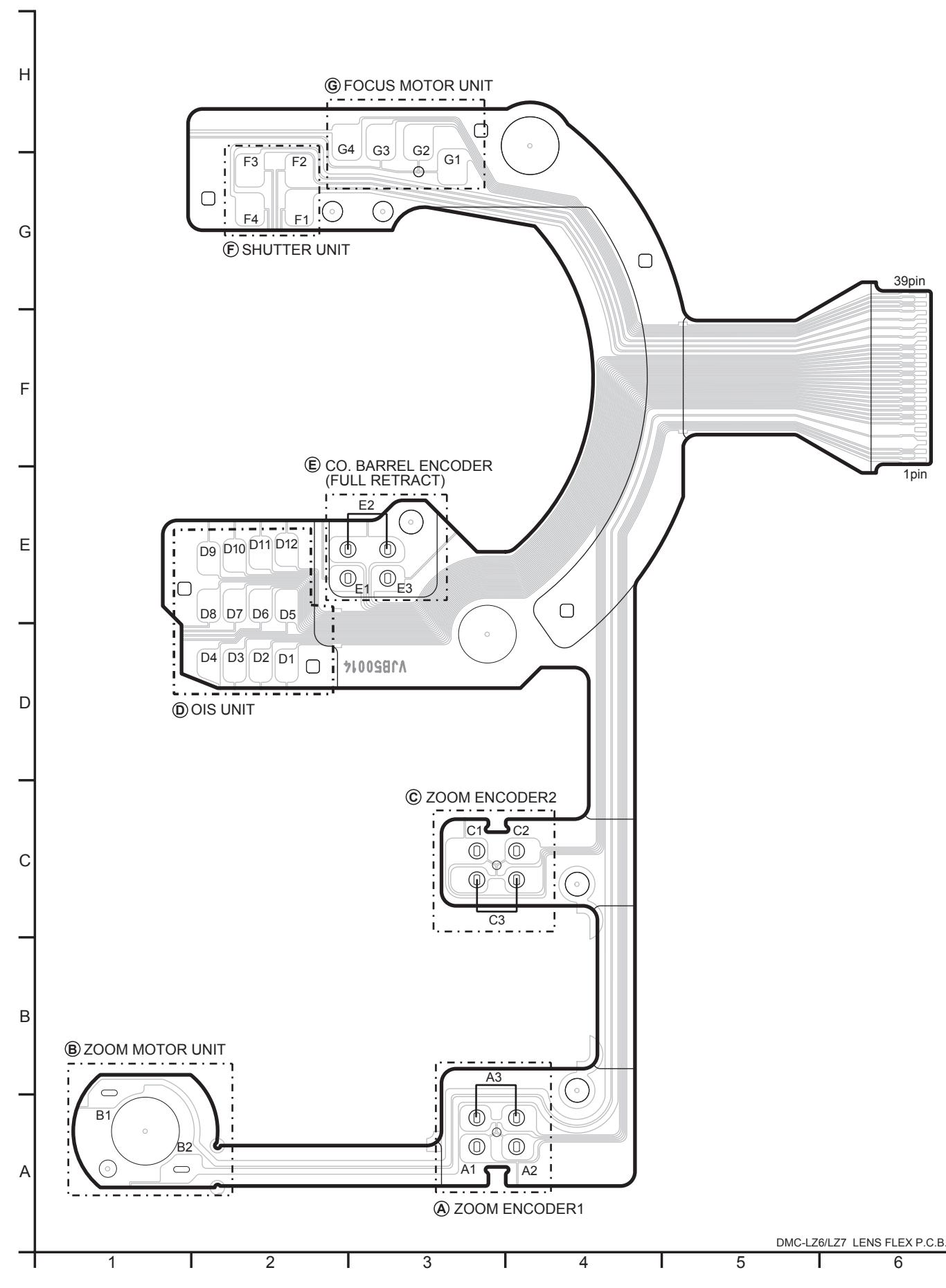
S5.1. Flash Top P.C.B. / S5.2. AF Assist LED P.C.B.



S5.3. CCD Flex P.C.B.



S5.4. 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  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.

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).

DMC-LZ7EB-S,EF-S/K,EGM-S/K,EG-S/K,PL-S,EE-S/K,GC-S,GN-S,GK-S,PC-S/K,P-S/K vol.1
M1(Cabi1)

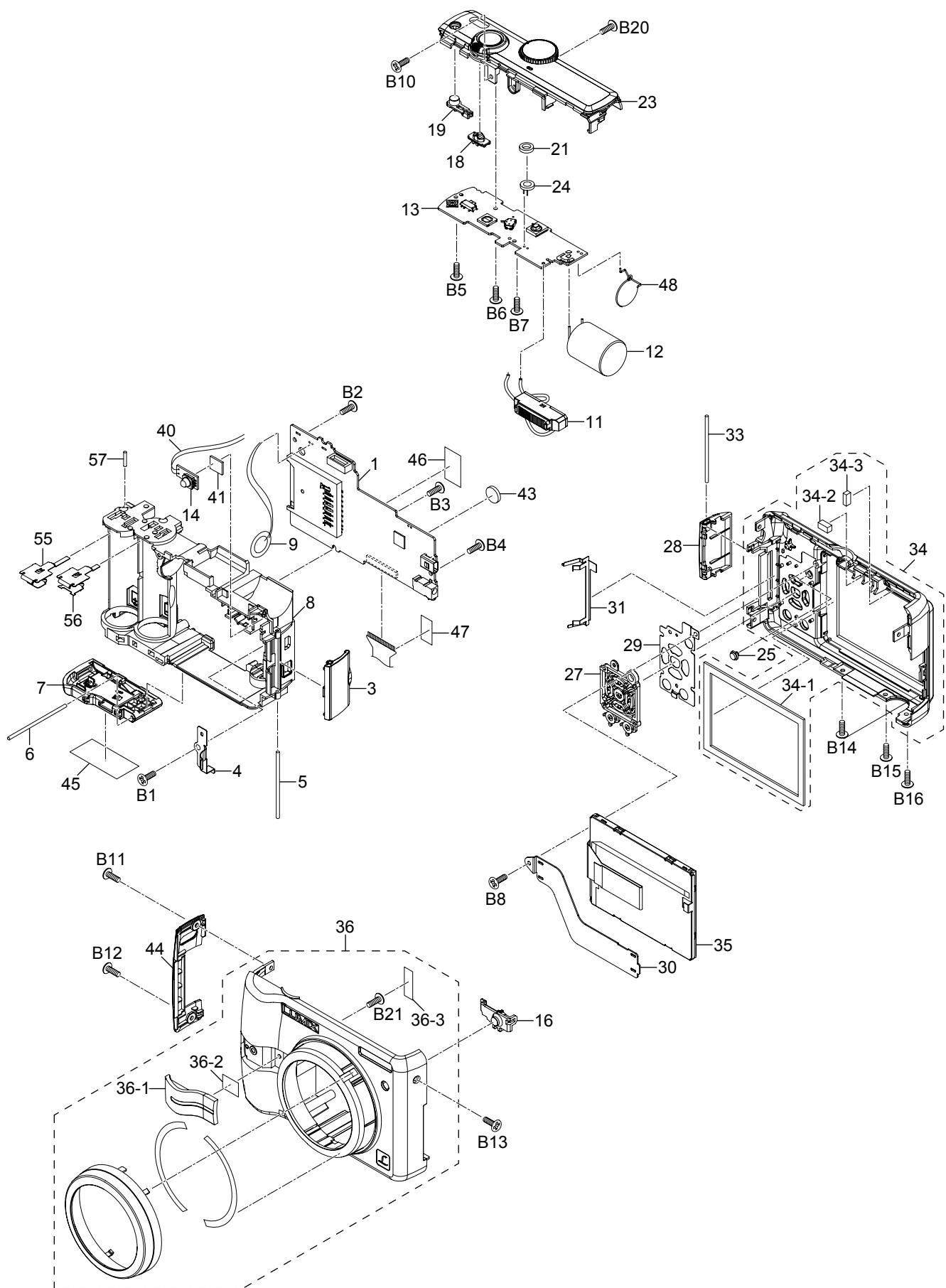
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	VEP56042A	MAIN P.C.B.	1	(RTL) E.S.D.[PAVC-CSG]	B15	XQN16+BJ5FN	SCREW	1	[PAVC-CSG]
3	VKF4164	JACK COVER	1	(-S)	B16	XQN16+BJ5FN	SCREW	1	[PAVC-CSG]
3	VKF4179	JACK COVER	1	(-K)	B20	XQN16+BJ5FN	SCREW	1	[PAVC-CSG]
4	VMC2026	JACK SPRING	1		B21	VHD1909	SCREW	1	
5	VMS7812	JACK SHAFT	1						
6	VMS7813	BATT.DOOR SHAFT	1						
7	VYF3128	BATTERY DOOR UNIT	1	(-S)					
7	VYF3130	BATT.DOOR UNIT	1	(-K)					
8	VMP8785	FRAME	1						
9	LODCDD000008	BUZZER	1						
11	EFN-AMW502D	FLASH UNIT	1						
12	F2A2F1010007	E.CAPACITOR	1	(C8003)					
13	VEP58034A	FLASH TOP P.C.B.	1	(RTL) E.S.D.					
14	VEP59036A	AF ASSIST LED P.C.B.	1	(RTL) E.S.D.					
16	VGL1232	AF PANEL	1						
18	VGU0A90	POWER KNOB	1						
19	VGU0A92	Q.ZOOM KNOB	1						
21	VMT1735	MIC DUMPER	1						
23	VYK2A36	TOP CASE UNIT	1						
24	WM-E13UT110	MICROPHONE UNIT	1	(M8001)					
25	VGL1231	LED PANEL R	1						
27	VGU0A87	REAR KNOB	1	(-S)					
27	VGU0A97	REAR KNOB	1	(-K)					
28	VYF3129	SD COVER UNIT	1	(-S)					
28	VYF3131	SD COVER UNIT	1	(-K)					
29	VMA0V22	EARTH PLATE	1						
30	VMA0V27	LCD HOLDER B	1	[PAVC-CSG]					
31	VMA0V23	SD COVER SPRING	1						
33	VMS7812	SD SHAFT	1						
34	VKM7062KIT	REAR CASE	1	(-S) [PAVC-CSG]					
34	VKM7080KIT	REAR CASE	1	(-K) [PAVC-CSG]					
34-1	VMX3606	LCD CUSHION D	1	[PAVC-CSG]					
34-2	VMT1752	FPC MOUNTED CUSHION	1	[PAVC-CSG]					
34-3	VGQ9415	GASKET	1	[PAVC-CSG]					
35	VYQ3923	LCD UNIT	1	[PAVC-CSG]					
36	VYK2A43	FRONT CASE UNIT	1	(-S)					
36	VYK2A54	FRONT CASE UNIT	1	(-K)					
36-1	VGK3295	GRIP PIECE	1						
36-2	VZT0754	GRIP TAPE	1						
36-3	VGQ9289	GRIP SHEET	1						
40	VEZ59036A	AF ASSIST WIRE U	1						
41	VMT1734	AF CUSHION	1						
43	ML614S/ZT	BATTERY	1	(B9101)(MBI)					
44	VGK3298	SIDE ORNAMENT	1	[PAVC-CSG]					
45	VGH4929	CAUTION LABEL A	1	PC-S [PAVC-CSG]					
45	VGH4935	CAUTION LABEL C	1	PC-K [PAVC-CSG]					
46	VGQ9416	DPR SHEET A	1	[PAVC-CSG]					
47	VGQ9417	DPR SHEET B	1	[PAVC-CSG]					
48	VMB4098	C EARTH SPRING	1						
55	VJH1259	BATT.TERMINAL-	1						
56	VXQ1419	BATT.TERMINAL(U)	1						
57	VMS7698	STRAP SHAFT	1						
B1	VHD1909	SCREW	1						
B2	XQN16+BJ5FN	SCREW	1	[PAVC-CSG]					
B3	XQN16+BJ5FN	SCREW	1	[PAVC-CSG]					
B4	XQN16+BJ5FN	SCREW	1	[PAVC-CSG]					
B5	VHD1909	SCREW	1						
B6	VHD1909	SCREW	1						
B7	VHD1909	SCREW	1						
B8	XQN14+BG3FC	SCREW	1	[PAVC-CSG] VHD1909					
B10	XQN16+BJ5FN	SCREW	1	(-S) [PAVC-CSG]					
B10	XQN16+BJ5FJK	SCREW	1	(-K) [PAVC-CSG]					
B11	XQN16+BJ5FN	SCREW	1	(-S) [PAVC-CSG]					
B11	XQN16+BJ5FJK	SCREW	1	(-K) [PAVC-CSG]					
B12	XQN16+BJ5FN	SCREW	1	(-S) [PAVC-CSG]					
B12	XQN16+BJ5FJK	SCREW	1	(-K) [PAVC-CSG]					
B13	XQN16+BJ5FN	SCREW	1	(-S) [PAVC-CSG]					
B13	XQN16+BJ5FJK	SCREW	1	(-K) [PAVC-CSG]					
B14	XQN16+BJ5FN	SCREW	1	[PAVC-CSG]					

DMC-LZ7EB-S,EF-S/K,EGM-S/K,EG-S/K,PL-S,EE-S/K,GC-S,GN-S,GK-S,PC-S/K,P-S/K vol.1
M3(Packing)

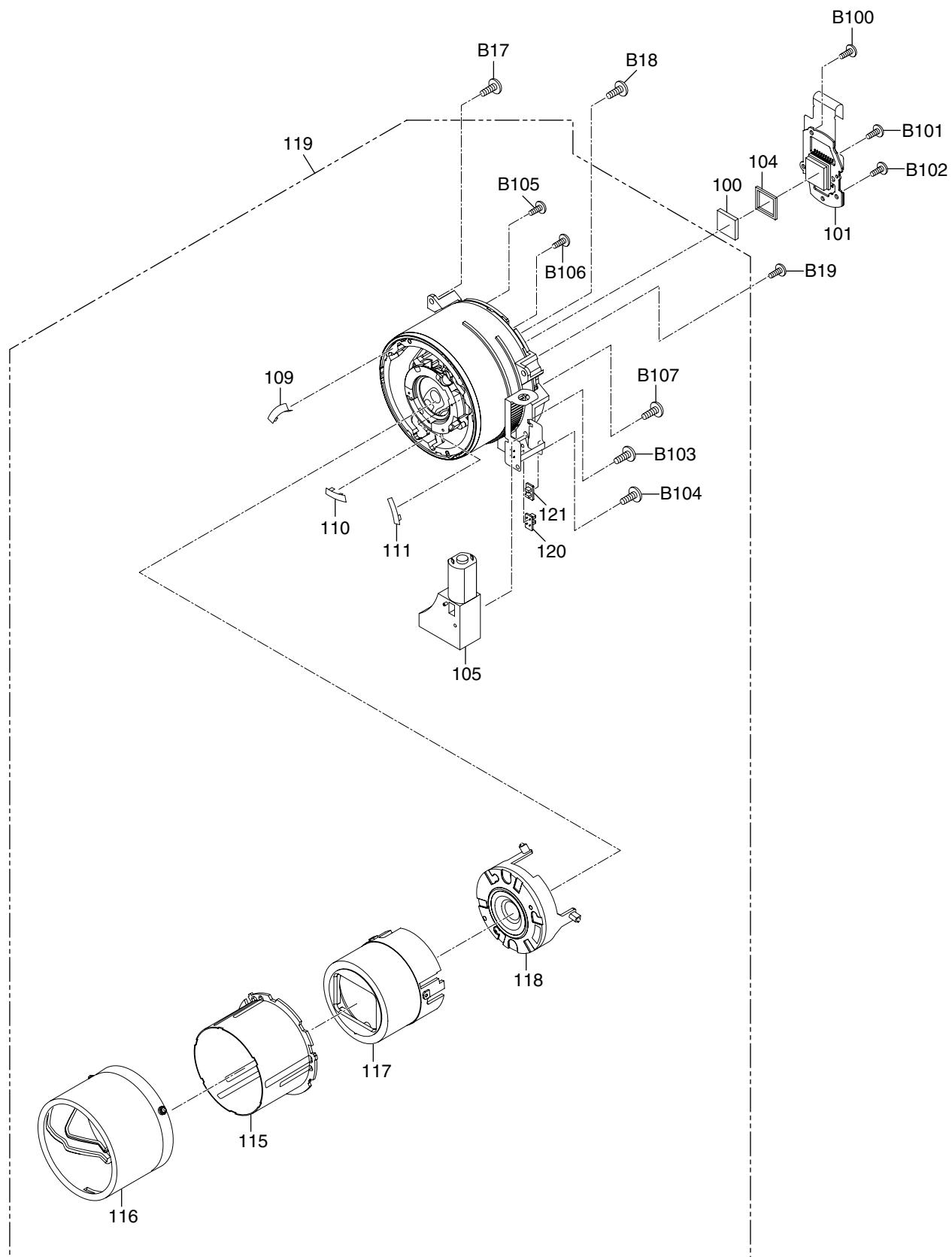
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
200	VPF1221	CAMERA BAG	1	[PAVC-CSG]	▲ 211	VQT1F46	INSTRUCTION BOOK	1	EE [PAVC-CSG]
202	K1HA08CD0013	USB CABLE	1	[PAVC-CSG]			(UKRAINIAN)		
203	K1HA08CD0014	AV CABLE	1	[PAVC-CSG]	▲ 211	VQT1C55	INSTRUCTION BOOK	1	GC [PAVC-CSG]
204	VFC4090	HAND STRAP	1	[PAVC-CSG]			(ENGLISH)		
205	VFF0361-S	CD-ROM	1	(EXCEPT P/PC)	▲ 211	VQT1C56	INSTRUCTION BOOK	1	GC [PAVC-CSG]
				[PAVC-CSG] See "Notes"			(CHINESE(TRADITIONAL))		
205	VFF0360-S	CD-ROM	1	PC	▲ 211	VQT1C57	INSTRUCTION BOOK	1	GC [PAVC-CSG]
				[PAVC-CSG] See "Notes"			(ARABIC)		
206	VPK3239	PACKING CASE	1	EB-S,EF-S,EGM-S,EG-S,	▲ 211	VQT1C94	INSTRUCTION BOOK	1	GC [PAVC-CSG]
				PL-S,EE-S,GC-S,GN-S			(PERSIAN)		
206	VPK3283	PACKING CASE	1	EF-K,EGM-K,EG-K,EE-K	▲ 211	VQT1C60	INSTRUCTION BOOK	1	GN [PAVC-CSG]
				[PAVC-CSG]			(ENGLISH)		
206	VPK3240	PACKING CASE	1	GK-S	▲ 211	VQT1C59	INSTRUCTION BOOK	1	GK [PAVC-CSG]
				[PAVC-CSG]			(CHINESE(SIMPLIFIED))		
206	VPK3238	PACKING CASE	1	PC-S,P-S	▲ 211	VQT1C39	INSTRUCTION BOOK	1	PC,P [PAVC-CSG]
				[PAVC-CSG]			(ENGLISH(SPANISH))		
206	VPK3282	PACKING CASE	1	PC-K,P-K	▲ 211	VQT1C40	INSTRUCTION BOOK	1	PC [PAVC-CSG]
				[PAVC-CSG]			(CANADIAN FRENCH)		
207	VPN6544	PAD	1	[PAVC-CSG]	▲ 211	VQT1E26	INSTRUCTION BOOK	1	P [PAVC-CSG]
209	VPF1100	BAG, POLYETHYLENE	1	EB,EF,EE,GN,GK,PC,P			(SPANISH)		
				[PAVC-CSG]	212	VQT1D89	O/I SOFTWARE	1	EB,GN [PAVC-CSG]
209	VPF1132	BAG, POLYETHYLENE	1	EGM,EG,PL,GC			(ENGLISH)		
				[PAVC-CSG]	212	VQT1D88	O/I SOFTWARE	1	EF [PAVC-CSG]
210	VQT1D49	O/I PC CONNECTION	1	EB,GN [PAVC-CSG]			(FRENCH)		
				(ENGLISH)	212	VQT1D87	O/I SOFTWARE	1	EGM [PAVC-CSG]
210	VQT1D48	O/I PC CONNECTION	1	EF [PAVC-CSG]			(SPANISH/PORTUGUESE/		
				(FRENCH)			SWEDISH/DANISH)		
210	VQT1D47	O/I PC CONNECTION	1	EGM [PAVC-CSG]	212	VQT1D86	O/I SOFTWARE	1	EG [PAVC-CSG]
				(SPANISH/PORTUGUESE/			(GERMAN/FRENCH/		
				SWEDISH/DANISH)			(ITALIAN/DUTCH)		
210	VQT1D46	O/I PC CONNECTION	1	EG [PAVC-CSG]	212	VQT1D85	O/I SOFTWARE	1	PL [PAVC-CSG]
				(GERMAN/FRENCH/			(ENGLISH/SPANISH/		
				ITALIAN/DUTCH)			(PORTUGUESE)		
210	VQT1D45	O/I PC CONNECTION	1	PL [PAVC-CSG]	212	VQT1D90	O/I SOFTWARE	1	EE [PAVC-CSG]
				(ENGLISH/SPANISH/			(RUSSIAN/UKRAINIAN)		
				PORTUGUESE)	212	VQT1D91	O/I SOFTWARE	1	GC [PAVC-CSG]
210	VQT1D50	O/I PC CONNECTION	1	EE [PAVC-CSG]			(ENGLISH/ARABIC/PERSIAN/		
				(RUSSIAN/UKRAINIAN)			(CHINESE(TRADITIONAL))		
210	VQT1D51	O/I PC CONNECTION	1	GC [PAVC-CSG]	212	VQT1D92	O/I SOFTWARE	1	GK [PAVC-CSG]
				(ENGLISH/ARABIC/PERSIAN/			(CHINESE(SIMPLIFIED))		
				CHINESE(TRADITIONAL))	212	VQT1D84	O/I SOFTWARE	1	PC,P [PAVC-CSG]
210	VQT1D53	O/I PC CONNECTION	1	GK [PAVC-CSG]			(ENGLISH)		
				(CHINESE(SIMPLIFIED))					
210	VQT1D44	O/I PC CONNECTION	1	PC,P [PAVC-CSG]					
				(ENGLISH)					
210	VQT1E39	O/I PC CONNECTION	1	PC [PAVC-CSG]					
				(CANADIAN FRENCH)					
▲ 211	VQT1C52	INSTRUCTION BOOK	1	EB [PAVC-CSG]					
				(ENGLISH)					
▲ 211	VQT1C45	INSTRUCTION BOOK	1	EF,EG [PAVC-CSG]					
				(FRENCH)					
▲ 211	VQT1C48	INSTRUCTION BOOK	1	EGM [PAVC-CSG]					
				(SPANISH)					
▲ 211	VQT1C49	INSTRUCTION BOOK	1	EGM [PAVC-CSG]					
				(PORTUGUESE)					
▲ 211	VQT1C50	INSTRUCTION BOOK	1	EGM [PAVC-CSG]					
				(SWEDISH)					
▲ 211	VQT1C51	INSTRUCTION BOOK	1	EGM [PAVC-CSG]					
				(DANISH)					
▲ 211	VQT1C44	INSTRUCTION BOOK	1	EG [PAVC-CSG]					
				(GERMAN)					
▲ 211	VQT1C46	INSTRUCTION BOOK	1	EG [PAVC-CSG]					
				(ITALIAN)					
▲ 211	VQT1C47	INSTRUCTION BOOK	1	EG [PAVC-CSG]					
				(DUTCH)					
▲ 211	VQT1C41	INSTRUCTION BOOK	1	PL [PAVC-CSG]					
				(ENGLISH)					
▲ 211	VQT1C42	INSTRUCTION BOOK	1	PL [PAVC-CSG]					
				(SPANISH)					
▲ 211	VQT1C43	INSTRUCTION BOOK	1	PL [PAVC-CSG]					
				(PORTUGUESE)					
▲ 211	VQT1F45	INSTRUCTION BOOK	1	EE [PAVC-CSG]					
				(RUSSIAN)					

S7. Exploded View

S7.1. Frame and Casing Section (1)



S7.2. Frame and Casing Section (2)



S7.3. Packing Parts and Accessories Section

