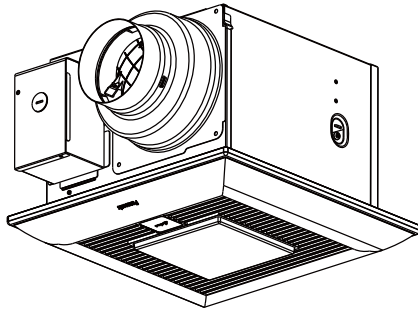
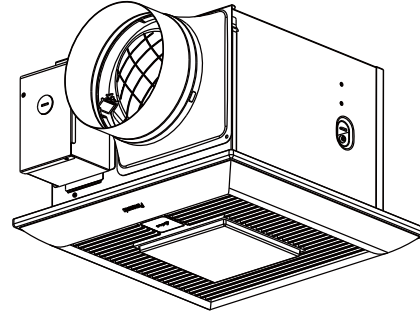


Service Manual

Ventilating Fan (North America Market)



FV-05-11VKL1



FV-11-15VKL1



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.

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, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacture. We suggest to handle such parts after the static electricity prevention. It is forbidden to touch the PCB parts by bare hands during the repairing process.

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Panasonic®

1.Specifications

■ Specifications for Base Model fans

Model No.	Air direction	Voltage (V)	Frequency (Hz)	Duct diameter (inches)	Air volume at 0.1"WG (CFM)	Noise (sones)	Speed (rpm)	Power (W)		Weight lb.(kg)
								Fan	Lighting unit	
FV-05-11VKL1	Exhaust	120	60	4 or 6	50	<0.3	750	3.6	14	11.5(5.2)
					80	<0.3	825	6.0		
					110	0.4	965	11.0		
FV-11-15VKL1	Exhaust	120	60	6	110	<0.3	650	8.5	14	11.7(5.3)
					130	<0.3	680	12.0		
					150	0.6	730	16.5		

HVI Certified performance based on HVI Procedures 915,916,and 920.

■ Specifications for Multi Speed fans

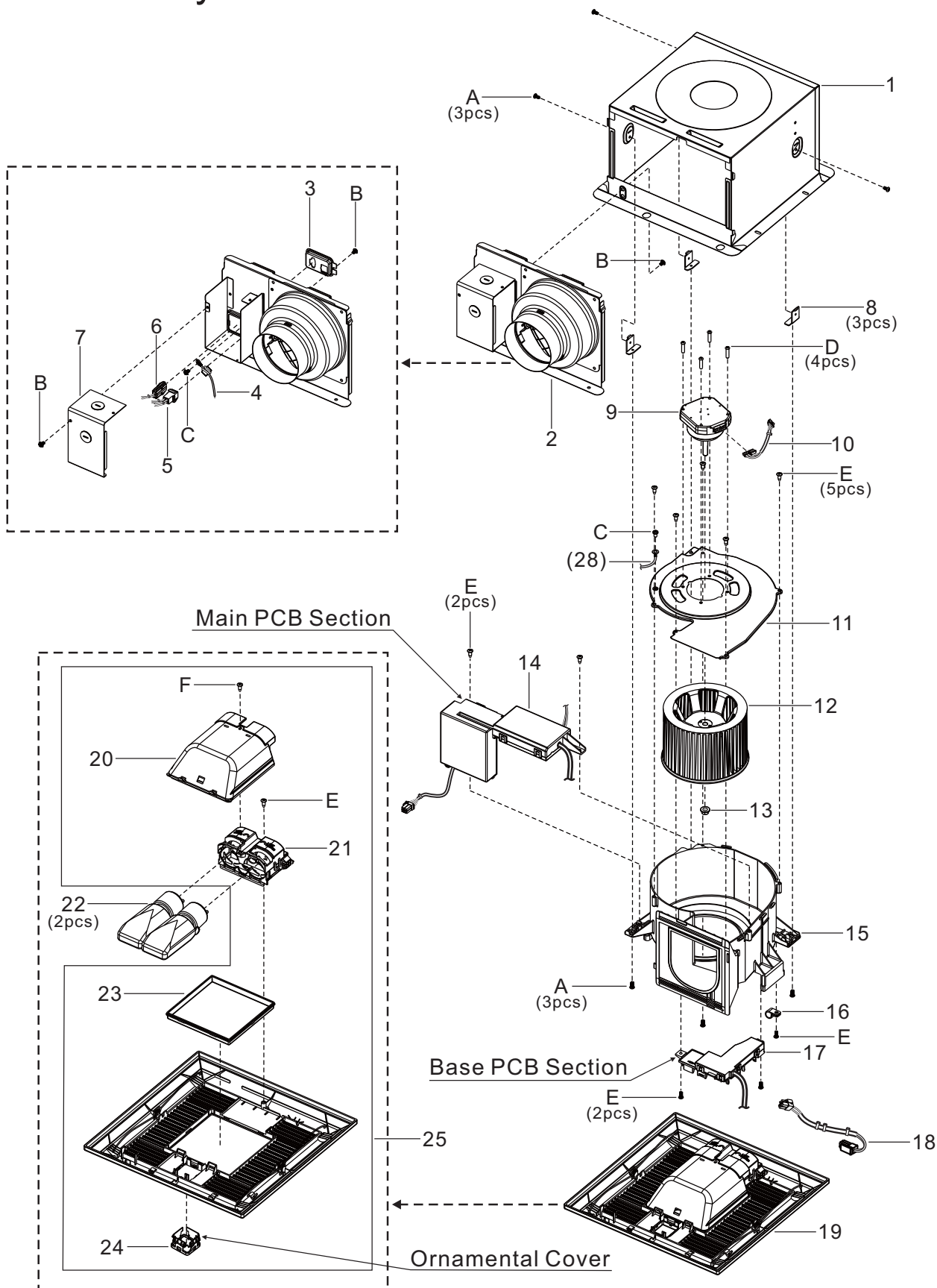
Model No.	Air direction	Voltage (V)	Frequency (Hz)	Duct diameter (inches)	Air volume at 0.1"WG (CFM)	Noise (sones)	Speed (rpm)	Power (W)		Weight lb.(kg)
								Fan	Lighting unit	
FV-05-11VKL1 (Plug-in FV-VS15VK1)	Exhaust	120	60	4 or 6	100	<0.3	915	8.7	14	11.5(5.2)
					90	<0.3	865	7.0		
					80	<0.3	825	6.0		
					70	<0.3	795	4.7		
					60	<0.3	770	3.9		
					50	<0.3	750	3.6		
					40	<0.3	730	2.8		
					30	<0.3	725	2.5		
					0	—	—	0.5 (*)		
FV-11-15VKL1 (Plug-in FV-VS15VK1)	Exhaust	120	60	6	120	<0.3	665	9.5	14	11.7(5.3)
					110	<0.3	650	8.5		
					100	<0.3	645	6.9		
					90	<0.3	640	5.7		
					80	<0.3	635	5.0		
					70	<0.3	630	4.3		
					60	<0.3	625	4.0		
					50	<0.3	620	3.2		
					0	—	—	0.5 (*)		

Reference performance based on HVI Procedures 915, 916,and 920. [(*) Standby wattage.]

2.Parts Identification

FV-05-11VKL1

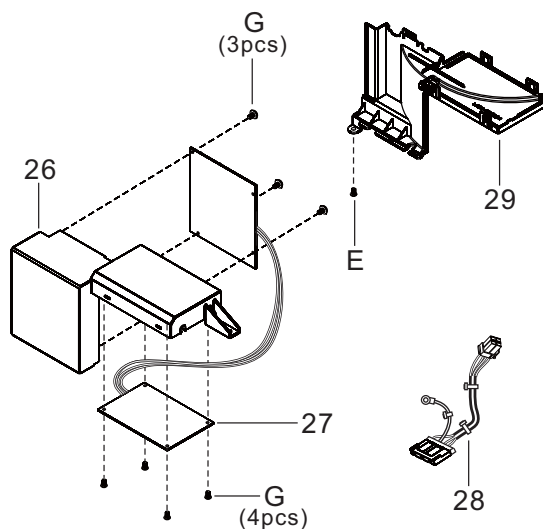
Main Body Section



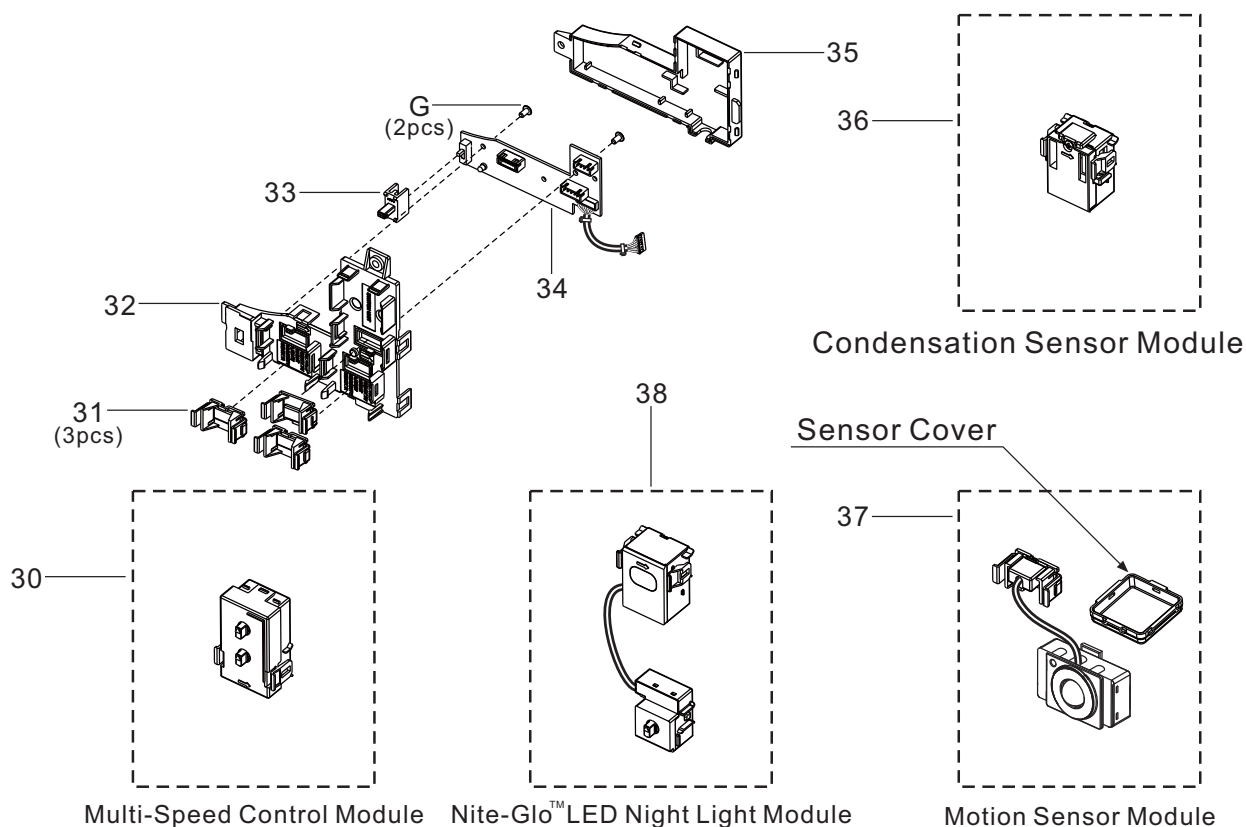
2.Parts Identification

FV-05-11VKL1

Main PCB Section



Base PCB Section

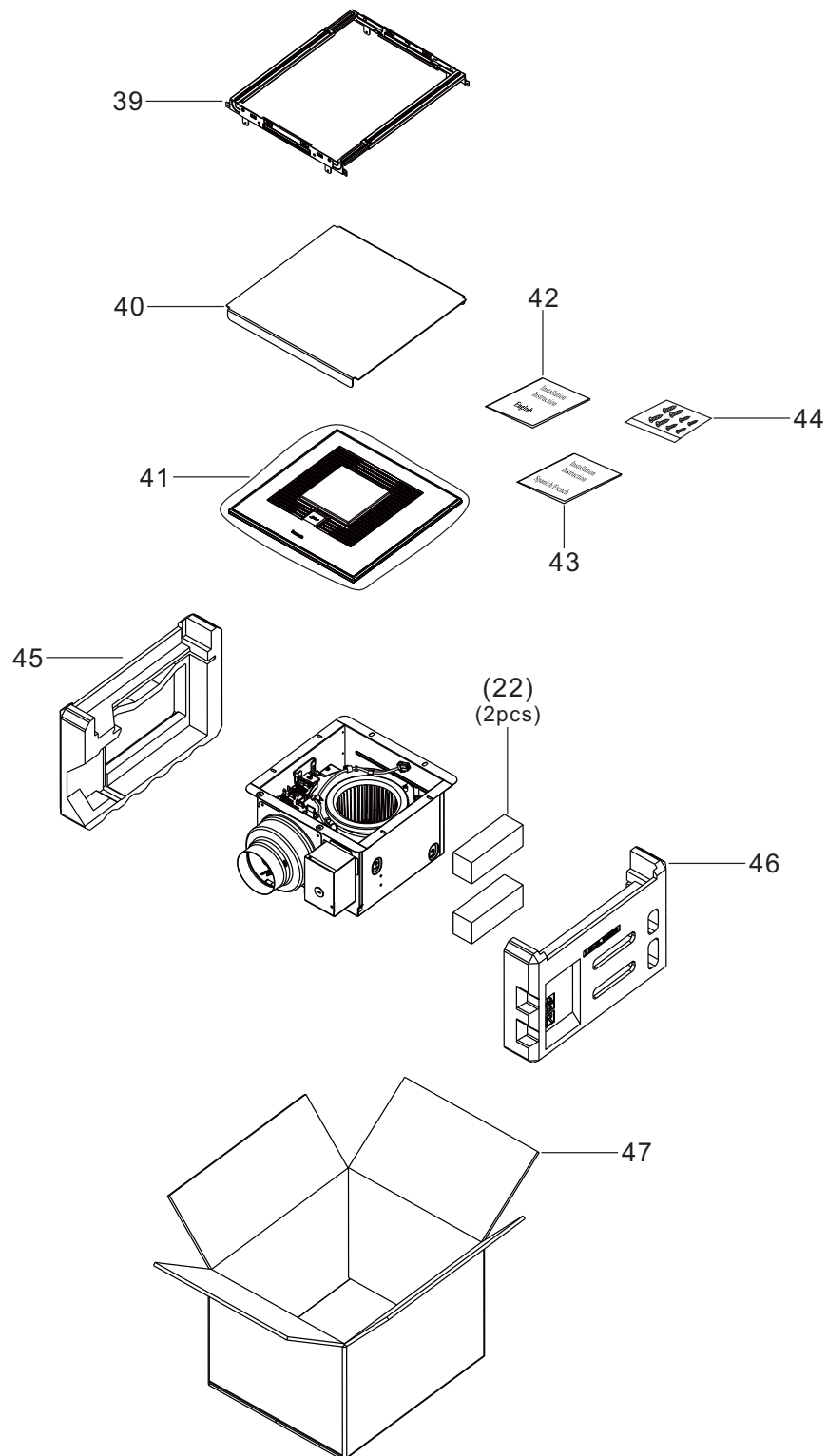


- 1, Please note that above parts with (No. 30, 36, 37, 38) are the optional parts based on different customer's request.
- 2, If install the motion sensor control, please remove the ornamental cover and replace the sensor cover.

2.Parts Identification

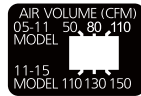
FV-05-11VKL1

Packing Section



FV-05-11VKL1

48—



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—52



-50



—53



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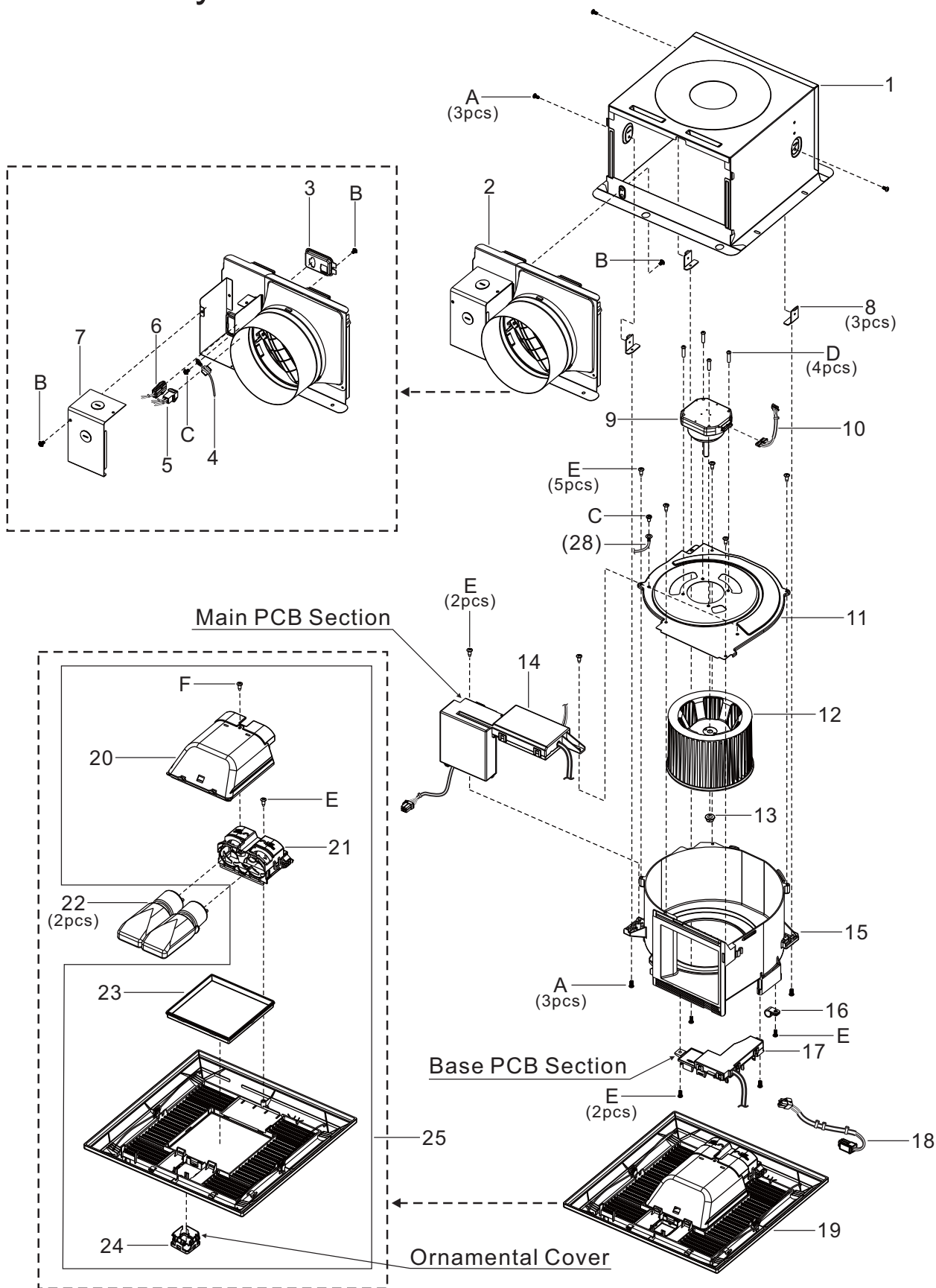


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2.Parts Identification

FV-11-15VKL1

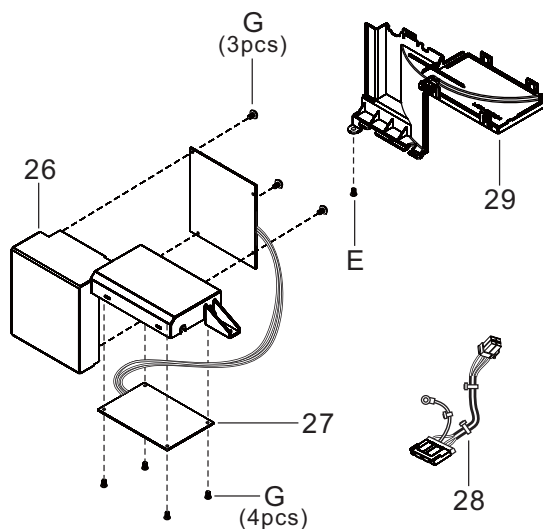
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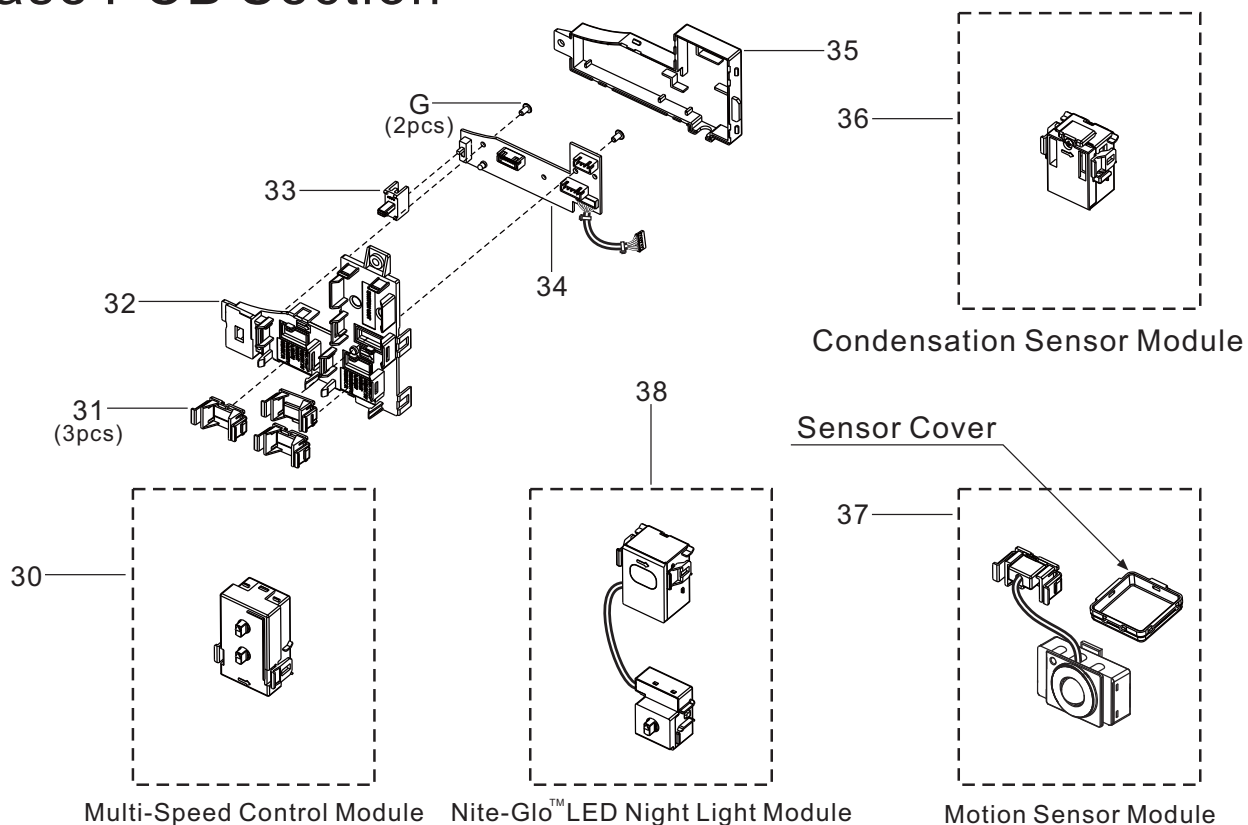
2.Parts Identification

FV-11-15VKL1

Main PCB Section



Base PCB Section

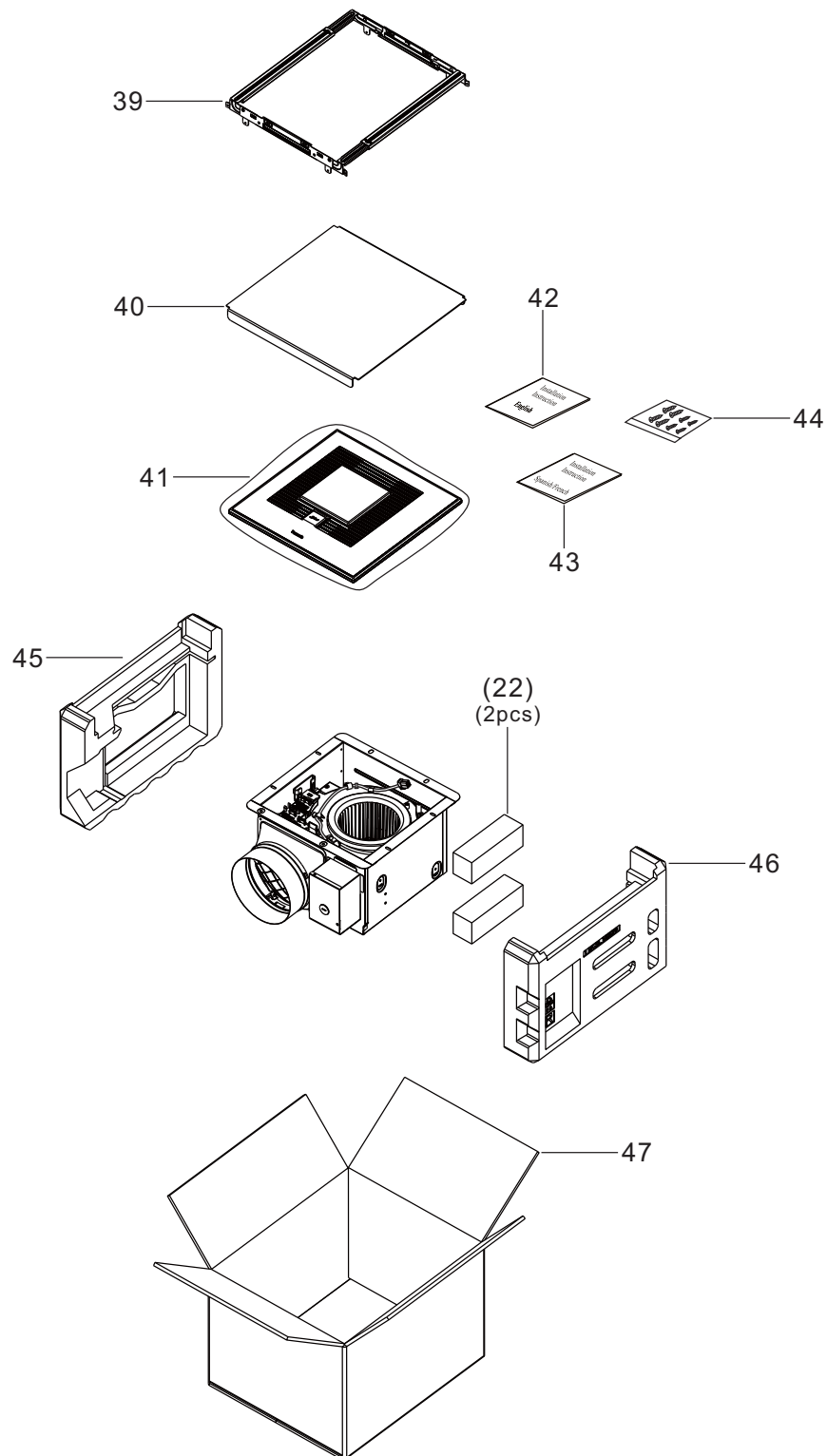


- 1, Please note that above parts with (No. 30, 36, 37, 38) are the optional parts based on different customer's request.
- 2, If install the motion sensor control, please remove the ornamental cover and replace the sensor cover.

2.Parts Identification

FV-11-15VKL1

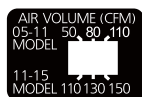
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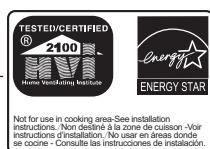
2.Parts Identification

FV-11-15VKL1

Main Label

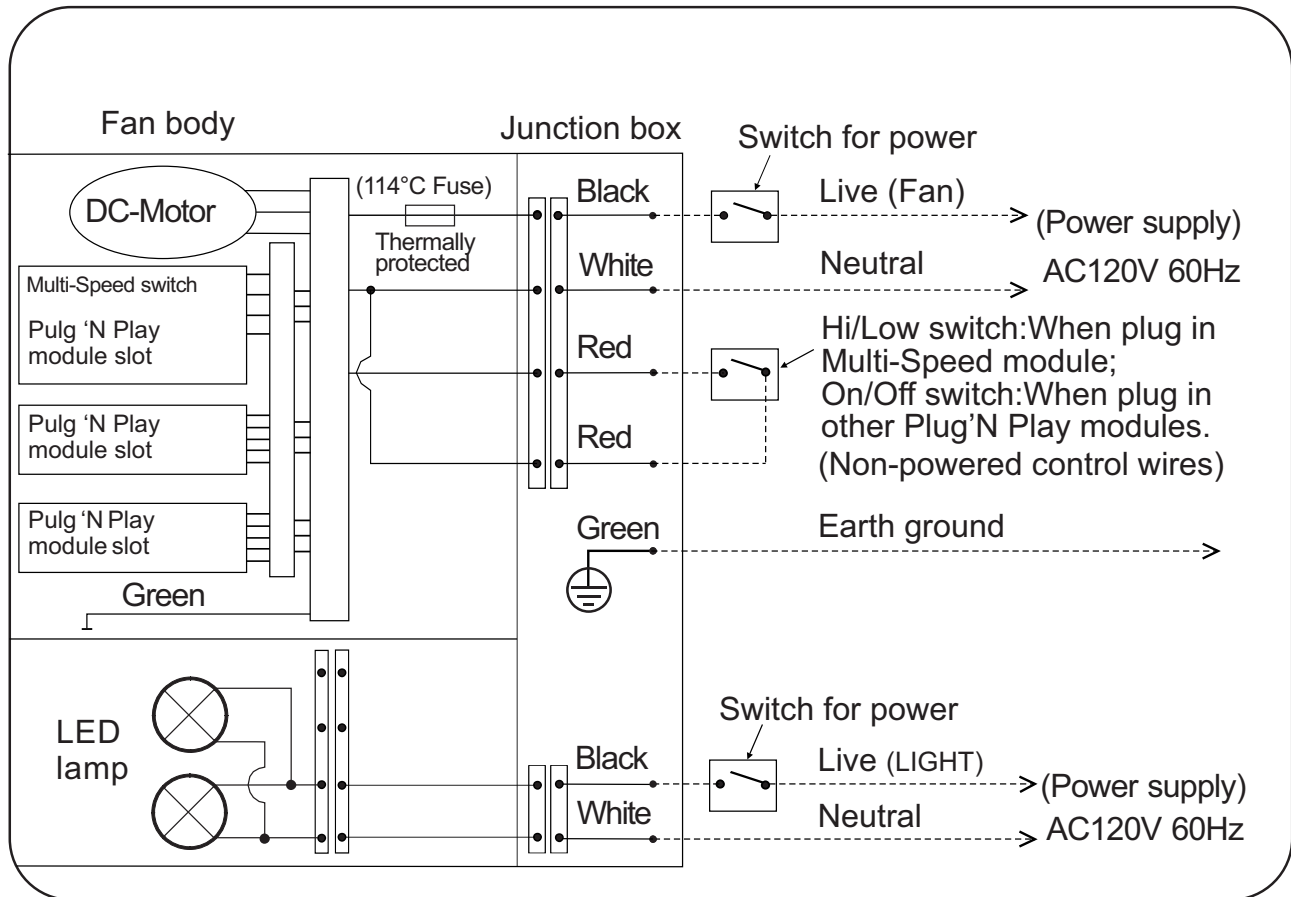


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3.Wiring Diagram

FV-05-11VKL1
FV-11-15VKL1



4.Parts List

FFV-05-11VKL1

Main Body Section

No.	Part No.	Part Name	Q'ty	Remark
1	FFV1600138S	Frame Assembly	1	
2	FFV0000145S	Adapter Assembly	1	⚠
3	FFV0900062S	Connector Plate	1	
4	FFV1340008S	Earth Lead Wire Assembly	1	⚠
5	FFV0900051S	Connector Assembly	1	⚠
6	FFV0900067S	Connector Assembly(L)	1	⚠
7	FFV2800021S	Junction Cover	1	
8	FFV0800001S	Casing Support	3	
9	FFV3702255S	Motor Assembly	1	⚠
10	FFV4620109S	Motor Lead Wire Assembly	1	⚠
11	FFV3702256S	Motor Support	1	
12	FFV0400114S	Blade	1	
13	FFV7020021S	Nut	1	For Fixing Blade
14	FFV3740030S	Main PCB Section	1	⚠
15	FFV0790108S	Casing	1	Include 4pcs Sponge
16	FFV0960001S	Nylon Clamp	1	For Fixing Cord Assembly
17	FFV0410004S	Base PCB Section	1	Not Include Multi-Speed Module ⚠
18	FFV0730037S	Cord Assembly	1	⚠
19	FFV3402165S	Louver Section	1	⚠
20	FFV3420066S	Light Kit Cover Assembly	1	
21	FFV3420079S	Light Kit Section	1	⚠
22	FFV3410042S	LED Lamp	2	120V/60Hz,7Wattage ⚠
23	FFV3420029S	Lamp Cover	1	
24	FFV2220074S	Ornamental Cover	1	
25	FFV3402166S	Louver Assembly	1	Include Lamp Cover&Ornamental Cover ⚠
A	FFV7000065S	Bind Screw	6	
B	FFV7000108S	Truss Tap Screw	3	
C	FFV7000203S	Earth Lead Wire Screw	2	For Fixing Earth Lead Wire ⚠
D	FFV7000109S	Stainless Steel Screw	4	For Fixing Motor Assembly
E	FFV7000089S	Truss Tap Screw	11	
F	FFV7000191S	Bind Screw	1	For Fixing Light Kit Cover Assembly

Main PCB Section

No.	Part No.	Part Name	Q'ty	Remark
26	FFV3740027S	Main PCB Box	1	
27	FFV3740028S	Main PCB Assembly	1	⚠
28	FFV4620110S	Power Lead Wire	1	⚠
29	FFV3740014S	Main PCB Cover	1	
E	FFV7000089S	Truss Tap Screw	1	For Fixing Main PCB Cover
G	FFV7000145S	Truss Tap Screw	7	For Fixing Main PCB Assembly

4.Parts List

FV-05-11VKL1

Base PCB Section

No.	Part No.	Part Name	Q'ty	Remark
30	FFV5530071S	Multi-Speed Module	1	⚠
31	FFV0900063S	Connector Cover	3	
32	FFV0410001S	Base PCB Cover	1	
33	FFV5530072S	Variable Speed Switch	1	
34	FFV0410002S	Base PCB Assembly	1	⚠
35	FFV0410003S	Base PCB Box	1	
36	FFV0010237S	Condensation Sensor Module	1	⚠
37	FFV3740029S	Motion Sensor Module	1	Include Sensor Cover ⚠
38	FFV3420080S	Nite-Glo™ LED Night Light Module	1	⚠
G	FFV7000145S	Truss Tap Screw	2	For Fixing Base PCB Assembly

Packing Section

No.	Part No.	Part Name	Q'ty	Remark
39	FFV2230024S	Hanger Assembly	1	
40	FFV4710381S	Louver Case Assembly	1	
41	FFV4650016S	Poly Cover	1	
42	FFV2540175S	Installation Instructions	1	English,For USA/CA Market
43	FFV2540176S	Installation Instructions	1	Spanish,For USA Market
(43)	FFV2540177S	Installation Instructions	1	French,For CA Market
44	FFV0010238S	Accessory A	1	
45	FFV4710382S	Left Pad	1	
46	FFV4710383S	Right Pad	1	
47	FFV9001111S	Packing Case Assembly	1	

Main Label

No.	Part No.	Part Name	Q'ty	Remark
48	FFV4730001S	T24 Mark Label	1	Stuck On Louver Assembly
49	FFV5530074S	Speed Switch Label	1	Stuck On Base PCB Box
50	FFV4020819S	Name Plate	1	Stuck On Frame Assembly
51	FFV0810011S	Caution Label 1	1	Stuck On Frame Assembly
52	FFV0810010S	Caution Label	1	Stuck On Frame Assembly
53	FFV6730045S	Warning Label	1	Stuck On Frame Assembly
54	FFV2260003S	UL Mark	1	Stuck On Frame Assembly

4.Parts List

FV-11-15VKL1

Main Body Section

No.	Part No.	Part Name	Q'ty	Remark
1	FFV1600138S	Frame Assembly	1	
2	FFV0000146S	Adapter Assembly	1	⚠
3	FFV0900062S	Connector Plate	1	
4	FFV1340008S	Earth Lead Wire Assembly	1	⚠
5	FFV0900051S	Connector Assembly	1	⚠
6	FFV0900067S	Connector Assembly(L)	1	⚠
7	FFV2800021S	Junction Cover	1	
8	FFV0800001S	Casing Support	3	
9	FFV3702255S	Motor Assembly	1	⚠
10	FFV4620109S	Motor Lead Wire Assembly	1	⚠
11	FFV3702257S	Motor Support	1	
12	FFV0400115S	Blade	1	
13	FFV7020021S	Nut	1	For Fixing Blade
14	FFV3740030S	Main PCB Section	1	⚠
15	FFV0790109S	Casing	1	Include 4pcs Sponge
16	FFV0960001S	Nylon Clamp	1	For Fixing Cord Assembly
17	FFV0410004S	Base PCB Section	1	Not Include Multi-Speed Module ⚠
18	FFV0730037S	Cord Assembly	1	⚠
19	FFV3402165S	Louver Section	1	⚠
20	FFV3420066S	Light Kit Cover Assembly	1	
21	FFV3420079S	Light Kit Section	1	⚠
22	FFV3410042S	LED Lamp	2	120V/60Hz,7Wattage ⚠
23	FFV3420029S	Lamp Cover	1	
24	FFV2220074S	Ornamental Cover	1	
25	FFV3402166S	Louver Assembly	1	Include Lamp Cover&Ornamental Cover ⚠
A	FFV7000065S	Bind Screw	6	
B	FFV7000108S	Truss Tap Screw	3	
C	FFV7000203S	Earth Lead Wire Screw	2	For Fixing Earth Lead Wire ⚠
D	FFV7000109S	Stainless Steel Screw	4	For Fixing Motor Assembly
E	FFV7000089S	Truss Tap Screw	11	
F	FFV7000191S	Bind Screw	1	For Fixing Light Kit Cover Assembly

Main PCB Section

No.	Part No.	Part Name	Q'ty	Remark
26	FFV3740027S	Main PCB Box	1	
27	FFV3740028S	Main PCB Assembly	1	⚠
28	FFV4620110S	Power Lead Wire	1	⚠
29	FFV3740014S	Main PCB Cover	1	
E	FFV7000089S	Truss Tap Screw	1	For Fixing Main PCB Cover
G	FFV7000145S	Truss Tap Screw	7	For Fixing Main PCB Assembly

4.Parts List

FV-11-15VKL1

Base PCB Section

No.	Part No.	Part Name	Q'ty	Remark
30	FFV5530071S	Multi-Speed Module	1	⚠
31	FFV0900063S	Connector Cover	3	
32	FFV0410001S	Base PCB Cover	1	
33	FFV5530072S	Variable Speed Switch	1	
34	FFV0410002S	Base PCB Assembly	1	⚠
35	FFV0410003S	Base PCB Box	1	
36	FFV0010237S	Condensation Sensor Module	1	⚠
37	FFV3740029S	Motion Sensor Module	1	Include Sensor Cover ⚠
38	FFV3420080S	Nite-Glo™ LED Night Light Module	1	⚠
G	FFV7000145S	Truss Tap Screw	2	For Fixing Base PCB Assembly

Packing Section

No.	Part No.	Part Name	Q'ty	Remark
39	FFV2230024S	Hanger Assembly	1	
40	FFV4710381S	Louver Case Assembly	1	
41	FFV4650016S	Poly Cover	1	
42	FFV2540175S	Installation Instructions	1	English,For USA/CA Market
43	FFV2540176S	Installation Instructions	1	Spanish,For USA Market
(43)	FFV2540177S	Installation Instructions	1	French,For CA Market
44	FFV0010238S	Accessory A	1	
45	FFV4710382S	Left Pad	1	
46	FFV4710383S	Right Pad	1	
47	FFV9001112S	Packing Case Assembly	1	

Main Label

No.	Part No.	Part Name	Q'ty	Remark
48	FFV4730001S	T24 Mark Label	1	Stuck On Louver Assembly
49	FFV5530074S	Speed Switch Label	1	Stuck On Base PCB Box
50	FFV4020820S	Name Plate	1	Stuck On Frame Assembly
51	FFV0810011S	Caution Label 1	1	Stuck On Frame Assembly
52	FFV0810010S	Caution Label	1	Stuck On Frame Assembly
53	FFV6730045S	Warning Label	1	Stuck On Frame Assembly
54	FFV2260003S	UL Mark	1	Stuck On Frame Assembly