Panasonic
ideas for life

1/2 inch CCD Day/Night Camera
WV-CL930 Series

NTSC **WV-CL930** (120 V AC)
WV-CL934 (24 V AC or 12 V DC)

PAL **WV-CL930** (220 ~ 240 V AC)
WV-CL934 (24 V AC or 12 V DC)
WV-CLR930 (220 ~ 240 V AC, with RS-485 control IF only)
WV-CLR934 (24 V AC or 12 V DC, with RS-485 control IF only)

Lens: optional

Ultra high sensitivity Day/Night Camera with ABF (Auto Back Focus) for 24 hours a day surveillance

Key Features

- 1/2 inch CCD delivers high sensitivity high quality picture.
- High resolution: 540 TV lines typical / 520 TV lines minimum (Color HIGH mode), 480 TV lines minimum (Color NORMAL mode), 570 TV lines minimum (B/W mode)
- Ultra high sensitivity with Day/Night function: 0.09 lux (Color), 0.008 lux (B/W) at F1.4. IR cut filter switches on/off to enhance the sensitivity in B/W mode.
- ABF (Auto Back Focus) ensures easy installation and stable focus in both color and B/W modes.
- Adaptive Digital Noise Reduction: Integration of 2D-DNR and 3D-DNR ensures noise reduction in various conditions.
- Peak mode enables appropriate light control to represent sharp bright object.
- BLC (Back Light Compensation): Preset/Manual (Mask 8 x 6) with Peak mode and level control
- Electronic sensitivity enhancement: Auto (Up to 32x) / Manual (Up to 128x)
- Electronic shutter from 1/100 (NTSC), 1/120 (PAL) to 1/10,000 sec.
- VMD (Video Motion Detector) with Mask 8 x 6 areas
- Scene Change Detection alarms when lens is covered, spray painted, removed or defocused.
- Day/Night input and alarm output terminals
- Auto Image Stabilizer for applications where vibration or wind is a concern.
- Function command: Various functions such as shutter speed, sensitivity enhancement level can be controlled precisely by function number with Panasonic controller.

- Internal / Line-lock / Gen-Lock (VBS/VS) / Multiplexed Vertical Drive (VD2) synchronization
- Over the coaxial cable communication (WV-CL930 Series only)
- RS-485 data communication (WV-CLR930 Series only)
- 16 alphanumerics camera title display
- Multi language: English, French, Italian, Spanish, German, Russian, Japanese

Standard Accessories

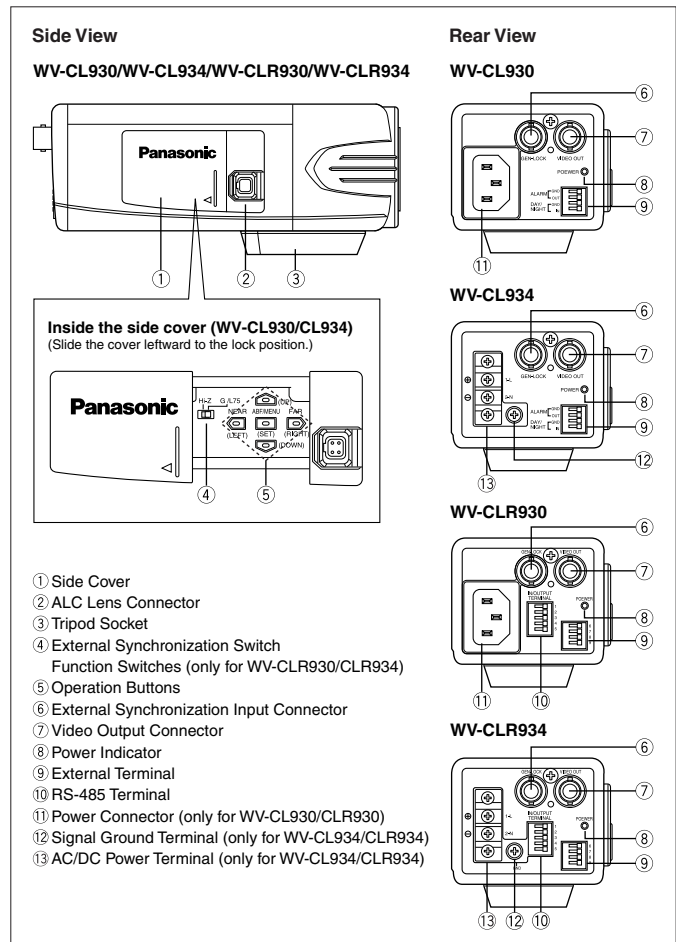|	
• Operating Instructions .... 1 pc.	• AC Power Cord
• ALC Lens Connector	(for WV-CL930/WV-CLR930) .... 1 pc.
(YFE4191J100) .... 1 pc.	• C-mount adapter (NTSC only) ..... 1 pc.

Optional Accessories

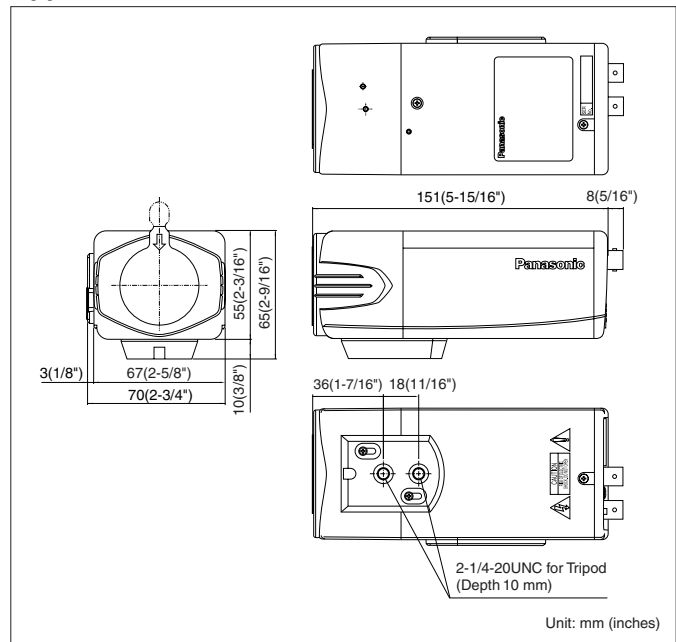| 1/2 inch 6x Motorized Zoom Lens **WV-LZ81/6A** (NTSC) **WV-LZ81/6** (PAL) (8.5 ~ 51 mm) F1.2	1/2 inch 10x Motorized Zoom Lens **WV-LZ81/10** (8 ~ 80 mm) F1.4	1/2 inch 2x Varifocal Lens **WV-LZ80/2** (6 ~ 12 mm) F1.4

Specifications

TV System	NTSC	PAL
Camera Image Sensor	1/2 inch interline transfer CCD	
Effective Pixels	768 (H) x 494 (V)	752 (H) x 582 (V)
Scanning Mode	2:1 interlace scan	
Scanning Area	6.4 (H) x 4.8 (V) mm	
Scanning Frequency	Horizontal: 15.734 kHz Vertical: 59.94 Hz	Horizontal: 15.625 kHz Vertical: 50.00 Hz
Scanning Line	525 lines	625 lines
Horizontal Resolution	540 TV lines typical at color high mode, 480 TV lines at color normal mode, 570 TV lines at B/W mode	
Minimum Illumination	Color (30 IRE): 0.09 lux (SENS UP: OFF), 　　　　　　　　 0.003 lux* (SENS UP: 32x) at F1.4 B/W (10 IRE): 0.008 lux (SENS UP: OFF), 　　　　　　　 0.0003 lux* (SENS UP: 32x) at F1.4	
Signal-to-Noise Ratio	50 dB (AGC Off, Weight On)	
White Balance	ATW1, ATW2, or AWC	
Light Control	ALC / ALC + (Integration of ALC and ELC) / ELC with Peak mode	
AGC	ON (adjustable), or OFF	
Back Light Compensation	Preset/Manual (Mask 8 x 6) with Peak mode and level control	
Electronic Shutter	OFF (1/60), 1/100, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 s	OFF (1/50), 1/120, 1/250, 1/500, 1/1,000, 1/2,000, 1/4,000, 1/10,000 s
Electronic Sensitivity UP	OFF / AUTO (2x, 4x, 6x, 10x, 16x, 32x) / FIX (2x, 4x, 6x, 10x, 16x, 32x, 64x, 128x)	
Digital Noise Reduction	High / Mid / Low	
Resolution Mode	Normal / High	
Black and White Mode	Mode: AUTO1 / AUTO2 / ON / OFF, Level: High / Low, with external control	
Video Motion Detection	OFF / Mode1 (VMD) / Mode2 (Scene change), Mask 8 x 6 areas	
Scene Change Detection	Yes, Included in VMD Mode2	
Privacy Zone	ON (Gray/Mosaic) or OFF	
Auto Image Stabilizer	ON / OFF	
Mirror	ON / OFF	
Camera Title	Up to 16 characters	
Lens Mount	CS-mount	
Lens ALC Drive	DC / Video	
Back Focus Adjustment	ABF, MANUAL, AUTO / PRESET / FIX	
Synchronization	Internal (INT), Multiplexed Vertical Drive (VD2), Line-Lock (LL), External (VBS/VS)	
Input/ Output Video Output	1.0 V [p-p] / NTSC composite 75 Ω / BNC Connector Multiplexed VD2 and control data capable (CL model only)	1.0 V [p-p] / PAL composite 75 Ω / BNC Connector Multiplexed VD2 and control data capable (CL model only)
External Sync Input	Gen-Lock input	
RS-485 Control IF	CLR model only	
External I/O Terminals	Alarm output, Day/Night input	
General Setup Method	OSD setup menu	
Language	English, Russian (For setup menu and camera title), German, French, Italian, Spanish (For setup menu), Japanese (Only for camera title. Setup menu will be English.)	
Safety/EMC Standard	UL (UL60065), FCC (Part15 ClassA), C-UL (CAN/CSA C22.2 No.60065), DOC (ICES003 ClassA)	CE (EN60065, EN55022 ClassB, EN55024), GOST (GOST R 51558)
Power Source and Power Consumption	WV-CL930: 120 V AC 60 Hz: 4.6 W WV-CL934: 24 V AC 60 Hz: 4.0 W 12 V DC 350 mA	WV-CL930 / (WV-CLR930): 220 ~ 240 V AC 50 Hz: 4.7 W (5.1 W) WV-CL934 / (WV-CLR934): 24 V AC 50 Hz: 4.0 W (4.5 W) 12 V DC 340 mA (410 mA)
Ambient Operating Temperature	−10 °C ~ +50 °C (14 °F ~ 122 °F)	
Ambient Operating Humidity	90 % or less (without condensation)	
Dimensions	70 mm (W) x 65 mm (H) x 151 mm (D) (2-3/4" (W) x 2-9/16" (H) x 5-15/16" (D))	
Weight (approx.)	WV-CL930: 570 g (1.25 lbs.) (without power cord) WV-CL934: 560 g (1.23 lbs.) WV-CLR930: 580 g (1.28 lbs.) (without power cord) WV-CLR934: 570 g (1.25 lbs.)	

* Estimated figure

Part Names and Functions

Side View

WV-CL930/WV-CL934/WV-CLR930/WV-CLR934

Inside the side cover (WV-CL930/CL934)
(Slide the cover leftward to the lock position.)

Rear View

WV-CL930

WV-CL934

WV-CLR930

WV-CLR934

① Side Cover
② ALC Lens Connector
③ Tripod Socket
④ External Synchronization Switch
　 Function Switches (only for WV-CLR930/CLR934)
⑤ Operation Buttons
⑥ External Synchronization Input Connector
⑦ Video Output Connector
⑧ Power Indicator
⑨ External Terminal
⑩ RS-485 Terminal
⑪ Power Connector (only for WV-CL930/CLR930)
⑫ Signal Ground Terminal (only for WV-CL934/CLR934)
⑬ AC/DC Power Terminal (only for WV-CL934/CLR934)

Appearance

151(5-15/16")　　8(5/16")

55(2-3/16")
65(2-9/16")

3(1/8")　67(2-5/8")
10(3/8")　70(2-3/4")

36(1-7/16")　18(11/16")

2-1/4-20UNC for Tripod
(Depth 10 mm)

Unit: mm (inches)

• All TV pictures are simulated.
• Weights and dimensions are approximate.
• Specifications are subject to change without notice.
• These products may be subject to export control regulations.
• All product pictures are NTSC models.

Important
– Safety Precaution: carefully read the operating instructions and installation manual before using this product.

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