

LUMIX Digital Single Lens Mirrorless Camera DC-S1



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| TYPE | | Type | Digital Single Lens Mirrorless camera |
| | | Recording media | XQD Memory Card, SD Memory Card / SDHC Memory Card* / SDXC Memory Card*, CFexpress Card (CFexpress Ver2.0 Type B) ***** *Compatible with UHS-I/UHS-II UHS Speed Class 3 standard SDHC/SDXC Memory Cards and UHS-II Video Speed Class 90 standard SDXC Memory Cards. |
| | | Lens mount | L-Mount |
| IMAGE SENSOR | | Type | 35mm full-frame (35.6mm x 23.8mm) CMOS sensor |
| | | Camera effective pixels / Total pixels | 24.20 megapixels / 25.28 megapixels |
| | | Aspect ratio / Color filter | 3:2 / Primary color filter |
| | | Dust reduction system | Supersonic wave filter |
| LATITUDE | | LATITUDE | 14+ stops (V-Log)***** |
| STILL IMAGE | Recording file format | Still image | JPEG (DCF, Exif 2.31), RAW, HLG Photo (CTA-2072) |
| | | 6K PHOTO** / 4K PHOTO** | 6K PHOTO: MP4 (H.265/HEVC, Audio format: AAC (2ch)) |
| | | 6K PHOTO** / 4K PHOTO** | 4K PHOTO: MP4 (H.264/MPEG-4 AVC, Audio format: AAC (2ch)) |
| | | 6K PHOTO** / 4K PHOTO** | Extracted still images: JPEG (DCF, Exif 2.31) |
| | Aspect ratio | | 4:3 / 3:2 / 16:9 / 1:1 / 65:24 / 2:1 |
| | File size(Pixels) | When using full-frame lenses / 3:2 | 6000x4000(L) / 4272x2848(M) / 3024x2016(S) / 12000x8000(XL)* *High Resolution Mode. RAW file. |
| | | When using full-frame lenses / 3:2 | 5184x3456(6K PHOTO) / 3504x2336(4K PHOTO) / 5984x4000(HLG PHOTO, Full-Res.) / 3232x2160(HLG PHOTO, 4K-Res.) |
| | | When using full-frame lenses / 4:3 | 5328x4000(L) / 3792x2848(M) / 2688x2016(S) / 10656x8000(XL)* *High Resolution Mode. RAW file. |
| When using full-frame lenses / 4:3 | | 4992x3744(6K PHOTO) / 3328x2496(4K PHOTO) / 5312x3984(HLG PHOTO, Full-Res.) / 2880x2160(HLG PHOTO, 4K-Res.) | |

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| | When using full-frame lenses / 16:9 | 6000x3368(L) / 4272x2400(M) / 3024x1704(S) / 12000x6736(XL)* *High Resolution Mode. RAW file. |
| | When using full-frame lenses / 16:9 | 3840x2160(4K PHOTO) / 5888x3312(HLG PHOTO, Full-Res.) / 3840x2160(HLG PHOTO, 4K-Res.) |
| | When using full-frame lenses / 1:1 | 4000x4000(L) / 2848x2848(M) / 2016x2016(S) / 8000x8000(XL)* *High Resolution Mode. RAW file. |
| | When using full-frame lenses / 1:1 | 2880x2880(4K PHOTO) / 4000x4000(HLG PHOTO, Full-Res.) / 2144x2144(HLG PHOTO, 4K-Res.) |
| | When using full-frame lenses / 65:24 | 6000x2208(L) |
| | When using full-frame lenses / 2:1 | 6000x3000(L) |
| | When using APS-C lenses / 3:2 | 3984x2656(L) / 2880x1920(M) / 2064x1376(S) |
| | When using APS-C lenses / 4:3 | 3536x2656(L) / 2560x1920(M) / 1840x1376(S) |
| | When using APS-C lenses / 16:9 | 3984x2240(L) / 2880x1624(M) / 1920x1080(S) |
| | When using APS-C lenses / 1:1 | 2656x2656(L) / 1920x1920(M) / 1376x1376(S) |
| | Image quality | RAW / RAW+Fine / RAW+Standard / Fine / Standard |
| | Color Space | sRGB, AdobeRGB |
| MOTION PICTURE | Recording file format | MOV: H.264/MPEG-4 AVC (Audio format: LPCM (2ch 48kHz/16-bit, 48kHz/24-bit*, 96kHz/24-bit*))***** *When attaching DMW-XLR1 (sold separately). MP4: H.264/MPEG-4 AVC (Audio format: LPCM (2ch 48kHz/16-bit), AAC (2ch)), MP4 HEVC: H.265/HEVC (Audio format: AAC (2ch)) AVCHD Progressive (Audio format: Dolby Audio (2ch)), AVCHD (Audio format: Dolby Audio (2ch)) |
| | MOV**/***** [4K] 3840x2160 | 59.94p, 150Mbps (4:2:0 8-bit LongGOP) (LPCM)***** 50.00p, 150Mbps (4:2:0 8-bit LongGOP) (LPCM)***** 29.97p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM)***** *HLG is selectable. 25.00p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM)***** *HLG is selectable. 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (LPCM)***** *HLG is selectable. |
| | MOV**/***** [FHD] 1920x1080 | 59.94p, 100Mbps (4:2:2 10-bit LongGOP) (LPCM)***** *HLG is selectable. 50.00p, 100Mbps (4:2:2 10-bit LongGOP) (LPCM)***** *HLG is selectable. 29.97p, 100Mbps (4:2:2 10-bit LongGOP) (LPCM)***** *HLG is selectable. 25.00p, 100Mbps (4:2:2 10-bit LongGOP) (LPCM)***** *HLG is selectable. |

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| MP4** [4K] 3840x2160 | 59.94p, 150Mbps (4:2:0 8-bit LongGOP) (LPCM) |
| MP4** [4K] 3840x2160 | 50.00p, 150Mbps (4:2:0 8-bit LongGOP) (LPCM) |
| MP4** [4K] 3840x2160 | 29.97p, 100Mbps (4:2:0 8-bit LongGOP) (AAC) |
| MP4** [4K] 3840x2160 | 25.00p, 100Mbps (4:2:0 8-bit LongGOP) (AAC) |
| MP4** [4K] 3840x2160 | 23.98p, 100Mbps (4:2:0 8-bit LongGOP) (AAC) |
| MP4** [FHD] 1920x1080 | 59.94p, 28Mbps (4:2:0 8-bit LongGOP) (AAC) |
| MP4** [FHD] 1920x1080 | 50.00p, 28Mbps (4:2:0 8-bit LongGOP) (AAC) |
| MP4** [FHD] 1920x1080 | 29.97p, 20Mbps (4:2:0 8-bit LongGOP) (AAC) |
| MP4** [FHD] 1920x1080 | 25.00p, 20Mbps (4:2:0 8-bit LongGOP) (AAC) |
| MP4 HEVC** [4K] 3840x2160 | 29.97p, 72Mbps (4:2:0 10-bit LongGOP) (AAC) (HEVC, HLG recording) |
| MP4 HEVC** [4K] 3840x2160 | 25.00p, 72Mbps (4:2:0 10-bit LongGOP) (AAC) (HEVC, HLG recording) |
| MP4 HEVC** [4K] 3840x2160 | 23.98p, 72Mbps (4:2:0 10-bit LongGOP) (AAC) (HEVC, HLG recording) |
| AVCHD Progressive** AVCHD** [FHD] 1920x1080 | 50.00p, 28Mbps (4:2:0 8-bit LongGOP) (Dolby Audio) |
| AVCHD Progressive** AVCHD** [FHD] 1920x1080 | 50.00i, 24Mbps (4:2:0 8-bit LongGOP) (Dolby Audio) (Sensor output is 25.00fps) |
| AVCHD Progressive** AVCHD** [FHD] 1920x1080 | 50.00i, 17Mbps (4:2:0 8-bit LongGOP) (Dolby Audio) (Sensor output is 50.00fps) |
| AVCHD Progressive** AVCHD** [FHD] 1920x1080 | 23.98p, 24Mbps (4:2:0 8-bit LongGOP) (Dolby Audio) |

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| | MP4** High speed video *When Creative Video Mode is selected. [4K] 3840x2160 | 29.97p (Sensor output is 60fps) |
| | MP4** High speed video *When Creative Video Mode is selected. [4K] 3840x2160 | 25.00p (Sensor output is 50fps) |
| | MP4** High speed video *When Creative Video Mode is selected. [4K] 3840x2160 | 23.98p (Sensor output is 48fps) |
| | MP4** High speed video *When Creative Video Mode is selected. [FHD] 1920x1080 | 29.97p (Sensor output is 180fps / 150fps) |
| | MP4** High speed video *When Creative Video Mode is selected. [FHD] 1920x1080 | 25.00p (Sensor output is 150fps / 125fps) |
| | Continuous recordable time (Motion picture)** | Approx. 150 min (rear monitor), 140 min (LVF) in [AVCHD/FHD/60p] *When using S-R24105 and SD Memory Card. |
| | Actual recordable time (Motion picture)** | Approx. 75 min (rear monitor), 70 min (LVF) in [AVCHD/FHD/60p] *When using S-R24105 and SD Memory Card. |
| VIEWFINDER | Type | OLED Live View Finder |
| | Pixels | Approx. 5,760k dots |
| | Field of view / Magnification | Approx. 100% / Approx. 0.78x with 50 mm lens at infinity; -1.0 m-1, when the aspect ratio is set to 3:2 |
| | Eye point / Diopter adjustment | Approx. 21 mm at infinity; -1.0 m-1 / -4.0 - +2.0 (dpt) |
| | Eye sensor | Yes |
| | Display speed | 120fps / 60fps |
| | Display time lag | Approx. 0.005sec |
| REAR MONITOR | Type | TFT LCD monitor with static touch control |

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| | Monitor size | Triaxial tilt, 3.2-inch (8.0cm), 3:2 aspect |
| | Pixels | Approx. 2,100k dots |
| | Field of view | Approx. 100% |
| STATUS LCD | | Yes |
| FOCUS | Type | Contrast AF system |
| | DFD technology | Yes |
| | Focus mode | AFS (Single) / AFC (Continuous) / MF |
| | AF mode | Auto Detection (Face, Eye, Body, Animal) / Tracking / 225-Area / Zone (Vertical/Horizontal) / Zone (Square) / Zone (Oval) / 1-Area+ / 1-Area / Pinpoint / Custom 1, 2, 3 (Full area touch is available) (Scalable AF frame size and flexible AF position) |
| | AF detective range | EV -6 - 18 (F1.4, ISO100 equivalent, AFS) |
| | AF custom setting | AF Sensitivity, AF Area Switching Sensitivity, Moving Object Prediction |
| | AF assist lamp | Yes |
| | AF lock | Set the Fn button in custom menu to AF lock |
| | Post Focus / Focus Stacking | Yes / Yes |
| | Others | AF-ON, Shutter AF, Half Press Release, Focus/Shutter Priority, Quick AF, Continuous AF (during motion picture recording), Eye Sensor AF, AF-Point Scope Setting, AF+MF, MF Guide, MF Assist, Touch MF Assist, Focus Peaking, Touch AF/AE Function, Touch Pad AF, Touch Shutter, Focus Switching for Vert/Hor, Focus Ring Lock, Show/Hide AF Mode |
| EXPOSURE CONTROL | Light metering system | 1,728-zone multi-pattern sensing system |
| | Light metering mode | Multiple / Center Weighted / Spot / Highlight Weighted |
| | Metering range | EV0-18 (F2.0 lens, ISO100 equivalent) |
| | Exposure mode | Program AE / Aperture Priority AE / Shutter Priority AE / Manual Exposure |
| | ISO sensitivity (Standard Output Sensitivity) | Auto / 50* / 100 / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600 / 51200 / 102400* / 204800* (Changeable to 1/3 EV step) *Extended ISO |
| | Exposure compensation | 1/3 EV step ± 5 EV (± 3 EV for motion picture) |
| | AE lock | Set the Fn button in custom menu to AE lock |

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| IMAGE STABILIZATION SYSTEM | | Image sensor shift type (5-axis / 5.5-stop*) *Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=50mm when S-X50 is used.] |
| IMAGE STABILIZATION SYSTEM | | Dual I.S. (6.0-stop* Dual I.S. 2 compatible) *Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=200mm when S-R70200 is used.] |
| WHITE BALANCE | White balance | AWB / AWBc / AWBw / Daylight / Cloudy / Shade / Incandescent / Flash / White Set 1, 2, 3, 4 / Color temperature setting 1, 2, 3, 4 |
| | White balance adjustment | Blue/Amber bias, Magenta/Green bias |
| | Color temperature setting | 2500-10000K in 100K |
| SHUTTER | Type | Focal-plane shutter |
| | Shutter speed | Still image: Bulb (Max. 30 minutes), 1/8,000 - 60 |
| | Shutter speed | Electronic front curtain shutter: Bulb (Max. 30 minutes), 1/2,000 - 60 |
| | Shutter speed | Electronic shutter: Bulb (Max. 60 sec), 1/8,000 - 60 |
| | Shutter speed | Motion picture: 1/16,000 - 1/25 |
| | Shutter life | Approx. 400,000 images |
| | Self timer | 10sec, 3 images / 2sec / 10sec |
| | Remote control | Remote control by DMW-RS2 (sold separately) |
| | Silent mode / Shutter type | Yes / Yes (Auto / Mechanical / Electronic front curtain / Electronic / Electronic+NR) |
| BRACKET | AE bracket | 3, 5, 7 images in 1/3, 2/3 or 1 EV step, max. ±3 EV, single/burst |
| | Aperture Bracket | 3, 5 or all positions in 1 EV step |
| | Focus Bracket | 1 to 999 images, focus steps can be set in 10 levels |
| | White balance bracket | 3 images in blue/amber axis or in magenta/green axis, color temperature setting |
| BURST SHOOTING | Burst speed -Mechanical shutter / Electronic front curtain shutter | AFS/MF: H: 9 frames/sec, M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View) |
| | Burst speed -Mechanical shutter / Electronic front curtain shutter | AFC: H: 6 frames/sec (with Live View), M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View) |

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| | Burst speed -Electronic shutter | AFS/MF: H: 9 frames/sec, M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View) |
| | Burst speed -Electronic shutter | AFC: H: 5 frames/sec (with Live View), M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View) |
| | Number of recordable images | RAW: More than 90 images |
| | Number of recordable images | RAW+JPEG: More than 70 images |
| | Number of recordable images | JPEG: More than 999 images |
| | Number of recordable images | *Using a Sony Corporation XQD G Series Memory Card. Until the burst shooting speed slows. When recording is performed under the test conditions specified by Panasonic. |
| 6K PHOTO** / 4K PHOTO** | Burst speed | 6K PHOTO: 30 frames/sec |
| | Burst speed | 4K PHOTO: 60 frames/sec, 30 frames/sec |
| | Exif information | Yes (Each JPEG image cropped out of the 6K/4K burst file complies with EXIF.) |
| FLASH | Flash type | TTL External Flash (sold separately) |
| | Flash Mode | Auto* / Auto/Red-eye Reduction* / Forced On / Forced On/Red-eye Reduction / Slow Sync. / Slow Sync./Red-eye Reduction / Forced Off *For iA only. |
| | Flash synchronization | 1st Curtain Sync, 2nd Curtain Sync. |
| | Flash output adjustment | 1/3EV step \pm 3EV |
| | Synchronization speed | Less than 1/320 second *The guide number decreases at 1/320 second. Only when set to M mode or S mode. |
| | Wireless control | Yes (When using DMW-FL200L / FL360L / FL580L (sold separately)), Wireless Channel: 1ch/2ch/3ch/4ch |
| | Flash sync socket | Yes |
| EXTRA TELE CONVERSION | | 2.0x (EX S), 1.4x (EX M) *Only for still image recording. |
| PHOTO STYLE | Photo Style | Standard / Vivid / Natural / Flat / Landscape / Portrait / Monochrome / L. Monochrome / L. Monochrome D / Cinelike D / Cinelike V / Like709 / V-Log***** / Standard (HLG) / Monochrome (HLG) / Like2100 / My Photo Style 1-10 |
| | Picture adjustment | Contrast / Highlight / Shadow / Saturation / Color Tone / Hue / Filter Effect / Grain Effect / Sharpness / Noise Reduction / ISO / WB *Adjustable settings vary depending on the Photo Style mode. |

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| FILTER | | Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dynamic Monochrome / Rough Monochrome* / Silky Monochrome* / Impressive Art / High Dynamic / Cross Process / Toy Effect / Toy Pop / Bleach Bypass / Miniature Effect / Soft Focus* / Fantasy / Star Filter* / One Point Color / Sunshine* *For photos only. |
| MOTION PICTURE FUNCTION | Luminance level | 8-bit: 0-255 / 16-235***** / 16-255 10-bit*****: 0-1023 / 64-940 / 64-1023 |
| | Wave form monitor | Yes***** |
| | LUT display***** | LUT View Assist (Monitor)***** / LUT View Assist (HDMI)***** |
| FUNCTION BUTTON | REC | Exposure Comp. / Sensitivity / White Balance / Photo Style / Metering Mode / Aspect Ratio / Picture Quality / Picture Size / HLG Photo / High Resolution Mode / 1 Shot Spot Metering / Long Exposure NR / Min. Shutter Speed / 1 Shot RAW+JPG / i.Dynamic Range / Filter Effect / One Push AE / Touch AE / Exposure Mode / AF Mode/MF / AF Custom Setting(Photo) / AF Custom Setting(Video) / Focus Peaking / Focus Peaking Sensitivity / 1-Area AF Moving Speed / Focus Ring Lock / AE LOCK / AF LOCK / AF/AE LOCK / AF-ON / AF-ON: Near Shift***** / AF-ON: Far Shift***** / AF-Point Scope / Focus Area Set / Flash Mode / Flash Adjust. / Wireless Flash Setup / Drive Mode / 1 Shot 6K/4K PHOTO" / Bracketing / Silent Mode / Image Stabilizer / Shutter Type / Ex. Tele Conv. / Flicker Decrease (Photo) / Post-Focus / Motion Pic. Rec Format / Motion Pic. Rec Quality / Sound Rec Level Disp. / Sound Rec Level Adj. / Mic. Directivity Adjust / Image Stabilizer / E-Stabilization (Video) / Boost I.S. (Video) / Q.MENU / Rec / Playback Switch / Video Record / LVF/Monitor Switch / LVF Magnification / Dial Operation Switch / Preview / Preview Aperture Effect***** / Constant Preview / Level Gauge / Histogram / Photo Grid Line / Live View Boost / Monochrome Live View / Night Mode / LVF/Monitor Disp. Style / Photo/Video Preview / Zebra Pattern / LUT View Assist (Monitor)***** / LUT View Assist (HDMI)***** / HLG View Assist(Monitor) / HLG View Assist (HDMI) / Sheer Overlay / I.S. Status Scope / WFM***** / Focus Ring Control/ Zoom Control / Destination Card Slot / Wi-Fi / No Setting / Off (Disable Press and Hold)***** / Restore to Default |
| | PLAY | Magnify from AF Point / HLG View Assist(Monitor) / RAW Processing / 6K/4K PHOTO Bulk Saving / Delete Single / Protect / Rating 1, 2, 3, 4, 5 / Copy / Rec/Playback Switch / LVF/Monitor Switch / Video Record / Night Mode / Card Slot Change / Wi-Fi / Send Image (Smartphone) / HLG View Assist (HDMI) / LUT View Assist (HDMI)***** / HLG View Assist (HDMI)***** / 6K/4K Photo Play / No Setting / Restore to Default |
| Fn LEVER | | AF Mode / Photo Style / Picture Quality / Long Exposure NR / Focus Peaking / Bracketing / Silent Mode / Image Stabilizer / Shutter Type / 6K/4K PHOTO (Pre-Burst) / Focus Ring Lock / Touch Screen / Touch Pad AF / Auto Review (Photo) / Live View Boost / Night Mode / Sheer Overlay / Front/Rear/Control Dial Lock / No Setting / Restore to Default |
| LEVEL GAUGE | | Yes |
| OSD LANGUAGE | | Japanese, English, German, French, Italian, Spanish, Chinese (Traditional), Chinese (Simplified) |
| PRINT | | PictBridge compatible |

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| INTERFACE | USB | SuperSpeed USB 3.1 Gen1 Type-C |
| | HDMI*** Monitor-through | MP4: 4:2:2 8bit (Except for [4K/60p]/[4K/50p]) / 4:2:0 8bit MOV: 4:2:2 10bit***** (When [4K/60p]/[4K/50p] mode is selected in [Rec Quality], it is not possible to record motion picture or still picture on the memory card in the camera unit.) |
| | HDMI*** Playback | HDMI TypeA / VIERA Link |
| | HDMI*** Playback | Video: Auto / 4K/50p / 4K/25p / 1080p / 1080i / 720p / 576p |
| | HDMI*** Playback | Audio: Stereo |
| | Audio video output | No |
| | Remote input | φ2.5mm |
| | External microphone / external audio device input | φ3.5mm for external microphone / external audio device |
| | External microphone / external audio device input | MIC (Plug-in Power) / MIC / LINE is selectable. |
| | External microphone / external audio device input | Stereo/Lens Auto/Shotgun/Super Shotgun/Manual is selectable when attaching DMW-MS2 (sold separately). |
| | Headphone output | φ3.5mm |
| | Microphone | Stereo, Wind Noise Canceller: OFF / Low* / Standard / High *When attaching DMW-MS2 (sold separately). |
| | Speaker | Monaural |
| | Card slot | Slot 1: XQD Memory Card, CFexpress Card***** Slot 2: SD Memory Card, SDHC Memory Card*, SDXC Memory Card* *Compatible with UHS-I/UHS-II UHS Speed Class 3 standard SDHC/SDXC Memory Cards and UHS-II Video Speed Class 90 standard SDXC Memory Cards. |
| WIRELESS | Wi-Fi | 2.4GHz (STA/AP) (IEEE802.11b/g/n) |
| | Wi-Fi | 5GHz (STA) (IEEE 802.11a/n/ac) *5GHz Wi-Fi is not available in some countries. |

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| | Wi-Fi | 1-13, 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140, 149, 153, 157, 161, 165 ch |
| | Bluetooth | Bluetooth® v4.2 (Bluetooth Low Energy (BLE)) |
| DUST AND SPLASH RESISTANT* | | Yes. |
| DUST AND SPLASH RESISTANT* | | *Dust and Splash Resistant does not guarantee that damage will not occur if this camera is subjected to direct contact with dust and water. |
| POWER | Battery | Li-ion Battery Pack (7.4V, 3050mAh, 23Wh) (bundled) |
| | Battery | USB power supply, USB power charging |
| | Battery life (CIPA standard)/ When using XQD memory card | Approx. 380 images (rear monitor), 360 images (LVF), 1,100 images (Power Save LVF mode*) with S-R24105 |
| | Battery life (CIPA standard)/ When using XQD memory card | *Under the test conditions specified by Panasonic based on CIPA standard. When the time to get in the sleep mode is set to 1 sec. |
| | Battery life (CIPA standard)/ When using SD memory card | Approx. 400 images (rear monitor), 380 images (LVF), 1,150 images (Power Save LVF mode*) with S-R24105 |
| | Battery life (CIPA standard)/ When using SD memory card | *Under the test conditions specified by Panasonic based on CIPA standard. When the time to get in the sleep mode is set to 1 sec. |
| | Battery grip | DMW-BGS1 (sold separately) |
| DIMENSIONS / WEIGHT | Dimensions (W x H x D) | Approx. 148.9 x 110.0 x 96.7 mm / 5.86 x 4.33 x 3.81 inch (excluding protrusions) |
| | Weight | Approx. 1,021g / 2.25 lb (XQD Memory Card x 1, Battery, Body) |
| | Weight | Approx. 1,017g / 2.24 lb (SD Memory Card x 1, Battery, Body) |
| | Weight | Approx. 899g / 1.98 lb (Body only) |
| OPERATING ENVIRONMENT | Operating temperature**** | -10oC to 40oC (14oF to 104oF) |
| | Operating humidity | 10%RH to 80%RH |
| STANDARD ACCESSORIES | Software-Recording | LUMIX Tether |

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| Software-Recording | <ul style="list-style-type: none"> This software is used to control a Panasonic digital camera from a PC. It allows you to change various settings of the camera, perform remote recording, |
| Software-Recording | and save remotely recorded images to the PC. Check the site below to download and install the software. |
| Software-Recording | http://panasonic.jp/support/global/cs/soft/download/d_lumixtether.html (For Windows / Mac) |
| Software-Playback / Editing | <ul style="list-style-type: none"> The software to edit and playback images on computer is not bundled with this camera. To do this, PHOTOfunSTUDIO 10.1PE is available for download at Panasonic website using computer connected to the Internet. |
| Software-Playback / Editing | https://panasonic.jp/support/global/cs/soft/download/d_pfs1001pe.html (For Windows) |
| Software-Playback / Editing | <ul style="list-style-type: none"> The software to process RAW file on computer is not bundled with this camera. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using computer connected to the Internet. |
| Software-Playback / Editing | http://www.isl.co.jp/SILKYPIX/english/p/ (For Windows / Mac) |
| Standard accessories | DC-S1 Kit |
| Standard accessories | Body Cap, Hot Shoe Cover, Eye Cup, Flash Synchro Socket Cap, Cover for the Battery Grip Connector, Shoulder Strap, Battery Pack, Battery Charger, AC Adaptor, AC Mains Lead, USB Connection Cable (C-C), USB Connection Cable (A-C), Cable Holder |
| Standard accessories | <ul style="list-style-type: none"> The DC-S1 Operating Instructions for advanced features is available for downloaded at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet. |
| NOTE | <p>** About motion picture recording / 6K PHOTO/4K PHOTO recording</p> <ul style="list-style-type: none"> - 6K PHOTO is a high speed burst shooting function that cuts a still image out of a 4:3 or 3:2 video footage with approx. 18-megapixel (approx. 6000 x 3000 effective pixel count) that the 6K image manages. - Use an SD memory card with SD Speed Class with "Class 4" or higher when recording motion pictures in [AVCHD]. - Use an XQD or SD memory card with SD Speed Class with "Class 4" or higher when recording motion pictures in [MP4(under 28Mbps)]. - Use an XQD or SD memory card with SD Speed Class with "UHS-I / UHS-II UHS Speed Class 3 (U3)" when recording motion pictures with [MP4] in [4K] [High Speed Video], [MOV] or [6K PHOTO/4K PHOTO]. (SD speed class is the speed standard regarding continuous writing.) - Recording stops when the continuous recording time exceeds 10 minutes with [MP4] in [6K PHOTO]. - Recording stops when the continuous recording time exceeds 15 minutes with [MP4] in [High Speed Video] [4K PHOTO]. - Recording stops when the continuous recording time exceeds 29 minutes and 59 seconds with [MP4] in [4K/60p] [4K/50p]. - MP4 motion pictures with [MP4] in [4K]: - When using an XQD memory card of 32 GB or less, or an SDHC memory card: You can continue recording without interruption even if the file size exceeds 4 GB, but the motion picture file will be divided and recorded/played back |

separately.

- When using an XQD memory card over 32 GB, or an SDXC memory card: You can continue recording without interruption even if the file size exceeds 96 GB or 3 hours 4 minutes in length, but the motion picture file will be divided and recorded/played back separately.

- MP4 motion pictures with [MP4] in [FHD]:

- You can continue recording without interruption even if the file size exceeds 4 GB or 30 minutes in length, but the motion picture file will be divided and recorded/played back separately.

- When the ambient temperature is high or continuous recording is performed, the camera may stop the recording to protect itself. Wait until the camera cools down.

- XQD is a registered trademark of Sony Corporation.

*** For [4K/60p] [4K/50p] video output, use an HDMI2.0 cable that has the HDMI logo on it, and that is described as "4K compatible".

**** The camera may stop recording when used in lower or higher than recommended operating temperature: -10 to 40 degrees.

***** Firmware must be updated to version 1.2 or later. Upgrade Software Key (DMW-SFU2) is required.

***** Firmware must be updated to version 1.2 or later.

***** Firmware must be updated to version 1.3 or later.

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