

# LUMIX G9 Mirrorless Camera Body, 20.3 Megapixels plus 80 Megapixel High-Resolution Mode, Dual I.S. 2.0 - DC-G9KBODY DC-G9KBODY

#### • TYPE

- o Type Digital Single Lens Mirrorless camera
- o Recording media SD Memory Card, SDHC Memory Card, SDXC Memory Card
- Recording media (Compatible with UHS-I / UHS-II UHS Speed Class 3 standard SDHC / SDXC Memory Cards)
- o Image sensor size 17.3 x 13.0 mm (in 4:3 aspect ratio)
- o Lens mount Micro Four Thirds mount

# • IMAGE SENSOR

- o Type Live MOS Sensor
- o Total pixels 21.77 Megapixels
- o Camera effective pixels 20.33 Megapixels
- o Color filter Primary color filter
- o Dust reduction system Supersonic wave filter

# RECORDING SYSTEM

- o Aspect ratio 4:3, 3:2, 16:9, 1:1
- o Image quality RAW, RAW+Fine, RAW+Standard, Fine, Standard
- o Color Space sRGB, AdobeRGB
- Continuous recordable time (Motion picture) AVCHD [FHD/60p]: Approx. 130 min (rear monitor), 120 m (LVF) with H-FS12060, Approx. 120 min (rear monitor), 110 min (LVF) with H-ES12060
- Continuous recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 130 min (rear monitor), 120 min (LVF) with H-FS12060, Approx. 120 min (rear monitor), 120 min (LVF) with H-ES12060
- Continuous recordable time (Motion picture) MP4 [4K/60p]: Approx. 120 min (rear monitor), 110 min (LV with H-FS12060, Approx. 110 min (rear monitor), 110 min (LVF) with H-ES12060
- Continuous recordable time (Motion picture) MP4 [4K/30p]: Approx. 130 min (rear monitor), 120 min (LV) with H-FS12060, Approx. 130 min (rear monitor), 120 min (LVF) with H-ES12060
- Actual recordable time (Motion picture) AVCHD [FHD/60p]: Approx. 65 min (rear monitor), 60 min (LVF with H-FS12060, Approx. 60 min (rear monitor), 55 min (LVF) with H-ES12060

- Actual recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 65 min (rear monitor), 60 min (LVF)
   H-FS12060, Approx. 60 min (rear monitor), 60 min (LVF) with H-ES12060
- Actual recordable time (Motion picture) MP4 [4K/60p]: Approx. 60 min (rear monitor), 55 min (LVF) witl FS12060, Approx. 55 min (rear monitor), 55 min (LVF) with H-ES12060
- Actual recordable time (Motion picture) MP4 [4K/30p]: Approx. 65 min (rear monitor), 60 min (LVF) witl FS12060, Approx. 65 min (rear monitor), 60 min (LVF) with H-ES12060
- o Recording file format
- o Still image JPEG (DCF, Exif 2.31), RAW
- 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))
- Motion picture MP4: H.264/MPEG-4 AVC (Audio format: LPCM (2ch 48kHz/16-bit), AAC (2ch))
- o Motion picture AVCHD Progressive, AVCHD (Audio format: Dolby Audio 2ch)
- o File size(Pixels) -Still Image
- 4:3 5184x3888(L) / 3712x2784(M) / 2624x1968(S) / 10368x7776(XL)\* / 7296x5472(LL)\* / 4992x3744(6K PHOTO) / 3328x2496(4K PHOTO) \*High Resolution Mode.
- 3:2 5184x3456(L) / 3712x2480(M) / 2624x1752(S) / 10368x6912(XL)\* / 7296x4864(LL)\* / 5184x3456(6K PHOTO) / 3504x2336(4K PHOTO) \*High Resolution Mode.
- 16:9 5184x2920(L) / 3840x2160(M) / 1920x1080(S) / 10368x5832(XL)\* / 7296x4104(LL)\* / 3840x2160(4K PHOTO) \*High Resolution Mode.
- 1:1 3888x3888(L) / 2784x2784(M) / 1968x1968(S) / 7776x7776(XL)\* / 5472x5472(LL)\* / 2880x2880(4K PHC \*High Resolution Mode.
- o File size (Pixels) -Motion picture\*\*
- o MP4\*\*[4K] 3840x2160 59.94p, 150Mbps (4:2:0 8-bit LongGOP) (LPCM)
- MP4\*\*[4K] 3840x2160 29.97p, 100Mbps (4:2:0 8-bit LongGOP) (AAC)
- o MP4\*\*[4K] 3840x2160 23.98p, 100Mbps (4:2:0 8-bit LongGOP) (AAC)
- o MP4\*\*[Full HD] 1920x1080 59.94p, 28Mbps (4:2:0 8-bit LongGOP) (AAC)
- o MP4\*\*[Full HD] 1920x1080 29.97p, 20Mbps (4:2:0 8-bit LongGOP) (AAC)
- o AVCHD\*\*[Full HD] 1920x1080 59.94p, 28Mbps (LongGOP) (Dolby)
- AVCHD\*\*[Full HD] 1920x1080 59.94i, 24Mbps (LongGOP) (Dolby) (Sensor output is 29.97fps)
- AVCHD\*\*[Full HD] 1920x1080 59.94i, 17Mbps (LongGOP) (Dolby) (Sensor output is 59.94fps)
- AVCHD\*\*[Full HD] 1920x1080 23.98p, 24Mbps (LongGOP) (Dolby)
- o High speed video \*When Creative Video Mode is selected.
- o MP4\*\*[4K] 3840x2160 30p, 100Mbps (Sensor output is 60fps / 48fps)
- MP4\*\*[Full HD] 1920x1080 30p, 20Mbps (Sensor output is 180fps)

# WIRELESS

- o WiFi Wi-Fi2.4GHz (STA/AP) (IEEE802.11b/g/n)
- WiFi Wi-Fi5GHz (STA) (IEEE 802.11a/n/ac) \*5GHz Wi-Fi is not available in some countries.
- WiFi 1-11, 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 149, 153, 1: 161, 165 ch
- Bluetooth Bluetooth® v4.2 (Bluetooth Low Energy (BLE))
- o QR code connection / Password-less connection Yes / Yes (ON / OFF selectable)

# VIEWFINDER

- Type OLED Live View Finder (3,680k dots)
- o Field of view Approx. 100%
- o Magnification Approx. 1.66x / 0.83x (35mm camera equivalent) with 50 mm lens at infinity; -1.0 m-1
- o Eye point Approx. 21 mm from eyepiece lens
- o Diopter adjustment -4.0 +3.0 (dpt)
- o Eye sensor Yes
- o Display speed 120fps / 60fps

#### FOCUS

- Type Contrast AF system
- o DFD technology Yes
- Post Focus Yes
- Focus Stacking Yes
- o Focus mode AFS (Single) / AFF (Flexible) / AFC (Continuous) / MF
- o AF mode Face/Eye Detection / Tracking / 225-Area / Custom Multi / 1-Area / Pinpoint
- o AF mode (Full area touch is available) (Scalable AF frame size and flexible AF position)
- o AF detective range EV -4 18 (ISO100 equivalent)
- o AF assist lamp Yes
- AF lock Yes (AF/AE LOCK button)
- o AF custom setting AF Sensitivity, AF Area Switching Sensitivity, Moving Object Prediction
- Others One Shot AF, Shutter AF, Half Press Release, Quick AF, Continuous AF (during motion picture recording), Eye Sensor AF, AF-Point Scope Setting, AF+MF, MF Assist, Touch MF Assist, Focus Peaking, Touch AF/AE Function, Touch Pad AF, Touch Shutter

# EXPOSURE CONTROL

- o Light metering system 1,728-zone multi-pattern sensing system
- o Light metering mode Multiple / Center Weighted / Spot
- o Metering range EV 0 18 (F2.0 lens, ISO100 equivalent)
- o Exposure mode Program AE, Aperture Priority AE, Shutter Priority AE, Manual
- ISO sensitivity (Standard Output Sensitivity) Still image: Auto / Intelligent ISO / 100 (Extended) / 200 / 40 800 / 1600 / 3200 / 6400 / 12800 / 25600 (Changeable to 1/3 EV step)
- ISO sensitivity (Standard Output Sensitivity) Creative Video Mode: Auto / 100 (Extended) / 200 / 400 / 800 1600 / 3200 / 6400 / 12800 (Changeable to 1/3 EV step)
- Exposure compensation 1/3 EV step ±5EV (±3EV for motion picture)
- o AE lock Yes (AF/AE LOCK button)

#### • WHITE BALANCE

- White balance AWB / AWBc / 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

- o Type Focal-plane shutter
- o Shutter speed Still image: Bulb (Max. 30 minutes), 1/8,000 60
- Shutter speed Electronic first curtain shutter: Bulb (Max. 30 minutes), 1/2,000 60
- o Shutter speed Electronic shutter: 1/32,000 1
- Shutter speed Motion picture: 1/16,000 1/25
- o Shutter life Approx. 200,000 images
- o Self timer 10sec, 3 images / 2sec / 10sec
- o Remote control Remote control with Bulb function by DMW-RSL1 (sold separately)

#### BRACKET

- o 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
- o Focus Bracket 1 to 999 images, focus steps can be set in 10 levels
- White balance bracket 3 exposures in blue/amber axis or in magenta/green axis, color temperature setting

#### BURST SHOOTING

- Burst speed [Mechanical shutter / Electronic first curtain shutter]AFS/MF: H: 12 frames/sec, M: 7 frames (with Live View), L: 2 frames/sec (with Live View) \*When H-ES12060 is used.
- Burst speed [Mechanical shutter / Electronic first curtain shutter]AFF/AFC: H: 9 frames/sec (with Live Vi M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View) \*When H-ES12060 is used.
- Burst speed [Electronic shutter]AFS/MF: SH: 60 frames/sec, H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Burst speed [Electronic shutter]AFF/AFC: SH: 20 frames/sec, H: 9 frames/sec (with Live View), M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Number of recordable images [H/M/L] More than approx. 60 images (when there are RAW files with the particular speed.)
- Number of recordable images [H/M/L] More than approx. 600 images (when there are no RAW files and u card with SD Speed Class with ""UHS-II UHS Speed Class 3 (U3)"".)
- Number of recordable images (depending on memory card size, battery power, picture size, and compressi
- Number of recordable images [SH] More than approx. 50 images
- Number of recordable images (depending on memory card size, battery power, picture size, and compressi

#### 6K PHOTO\*\* / 4K PHOTO\*\*

- o 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.)
- Marking function Yes (in 6K/4K Burst (S/S) mode)

#### TIME LAPSE SHOT

Time Lapse Shot Yes

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, iA+ only.
- Synchronization speed Less than 1/250 second
- Flash output adjustment 1/3EV step ±3EV
- Flash synchronization 1st Curtain Sync., 2nd Curtain Sync.
- Synchronization for flash dimming and exposure compensation Yes
- Wireless control Yes (When using DMW-FL200L / FL360L / FL580L (sold separately)), Wireless Channel: 1ch/2ch/3ch/4ch
- o Flash sync socket Yes

## REAR MONITOR

- Type TFT LCD monitor with static touch control
- o Monitor size Free-angle 3.0-inch (7.5cm) / 3:2 aspect
- o Pixels Approx. 1,040k dots
- Filed of view Approx. 100%
- o Monitor adjustment Brightness, Contrast, Saturation, Red-Green, Blue-Yellow

## LIVE VIEW

- o Digital zoom 2x, 4x
- o Extra Tele Conversion Still image: Max. 2x
- Extra Tele Conversion 4K PHOTO: 1.6x (4:3), 1.5x (3:2), 1.4x (16:9, 1:1)
- Extra Tele Conversion Motion picture: 2.7x (FHD), 1.4x (4K)
- Other functions Level Gauge, Real-time Histogram, Guide Lines (3 patterns), Center Marker, Highlight di (Still image / motion picture), Zebra pattern (Still image / motion picture)

#### FUNCTION BUTTON

- REC Wi-Fi / Q.MENU / Video Record / LVF/Monitor Switch / LVF/Monitor Disp. Style / AF-Point Scope / AF/AE LOCK / AF-ON / Preview / One Push AE / Touch AE / Level Gauge / Focus Area Set / Zoom Conts Shot RAW+JPG / 1 Shot Spot Metering / 1 Shot 6K/4K PHOTO / Operation Lock / Dial Operation Switch Destination Slot / Photo Style / Filter Select / Aspect Ratio / Picture Size / Quality / AFS/AFF / Metering M Burst Shot Setting / 6K/4K PHOTO / Self Timer / High Resolution Mode / Bracket / Highlight Shadow / i. Dynamic / i. Resolution / Min. Shtr Speed / Post Focus / HDR / Shutter Type / Flash Mode / Flash Adjust. / Wireless Flash Setup / Ex. Tele Conv. / Digital Zoom / Stabilizer / I.S. Lock (Video) / 4K Live Cropping / M Pic. Set / Picture Mode in Rec. / Mic Level Adj. / Mic. Directivity Adjust / Silent Mode / Peaking / Histogra Guide Line / Zebra Pattern / Monochrome Live View / Constant Preview / Rec Area / Step Zoom / Zoom S Night Mode / ON/OFF of each item in White Balance / ON/OFF of each item in Photo Style / AF Mode/MI Rec/Playback Switch / Off / Restore to Default
- PLAY Wi-Fi / LVF/Monitor Switch / Rec/Playback Switch / Slot Change / 6K/4K Photo Play / Delete Single Protect / Rating 1, 2, 3, 4, 5 / RAW Processing / 6K/4K PHOTO Bulk Saving / Copy / Night Mode / Off / Reto Default

# PLAYBACK

Playback mode 30-thumbnail display, 12-thumbnail display, Calendar display, Zoomed playback (Max. 16 Slideshow (All / Picture Only / Video Only, duration & effect is selectable), Playback Mode (Normal / Picture Only / Video Only), Protect, Rating, Title Edit, Face Recognition Edit, RAW Processing, 6K/4K PHOTO B Saving, 6K/4K PHOTO Noise Reduction, Light Composition, Clear Retouch, Text Stamp, Copy, Resize, Cropping, Rotate, Video Divide, Time Lapse Video, Stop Motion Video, Rotation Display, Picture Sort, De Confirmation, Creating Still Pictures from a Motion Picture

#### IMAGE PROTECTION / ERASE

o Protection Single / Multi or Cancel

o Erase Single / Multi / All / Except Rating

PRINT

- Direct Print PictBridge compatible
- INTERFACE
- o USB USB 3.0 Micro-B, SuperSpeed USB 3.0 Gen 1
- HDMI\*\*\* HDMI TypeA / VIERA Link
- o HDMI\*\*\* Video: Auto / 4K/60p / 4K/30p / 1080p / 1080i / 720p / 480p
- o HDMI\*\*\* Audio: Stereo
- HDMI\*\*\* Monitor-through: 4:2:2 8bit (Except for [4K/60p]) / 4:2:0 8bit
- o Audio video output No
- Remote input \$\phi 2.5mm for remote
- External microphone input \$\phi 3.5mm for external microphone
- External microphone input Stereo/Lens Auto/Shotgun/Super Shotgun/Manual is selectable when attaching DMW-MS2 (sold separately).
- Headphone output \$\phi 3.5mm for headphone
- Microphone Stereo, Wind Noise Canceller: OFF / Low\* / Standard / High \*When attaching DMW-MS2 (s separately).
- o Speaker Monaural
- o SD card slot Slot 1, Slot 2

# LANGUAGE

- o OSD language Japanese, English, German, French, Italian, Spanish, Portuguese, Chinese (Traditional)
- GENERAL
- o POWER
- o Battery Li-ion Battery Pack (7.2V, 1860mAh, 14Wh) (included)
- o Battery USB power supply, USB power charging
- Battery life (CIPA standard) Approx. 400 images (rear monitor), 380 images (LVF), 920 images (Power Sa LVF mode\*) with H-FS12060
- Battery life (CIPA standard) Approx. 380 images (rear monitor), 360 images (LVF), 890 images (Power Sa LVF mode\*) with H-ES12060
- Battery life (CIPA standard) \*Under the test conditions specified by Panasonic based on CIPA standard. V
  the time to get in the sleep mode is set to 1 sec.
- Battery grip DMW-BGG9 (sold separately)
- o DIMENSIONS / WEIGHT
- o Dimensions (W x H x D) 136.9 x 97.3 x 91.6 mm / 5.39 x 3.83 x 3.61 inch (excluding protrusions)
- Weight Approx. 658g / 1.45 lb (SD card x 1, Battery, Body)
- Weight Approx. 586g / 1.30 lb (Body only)
- o Weight Approx. 978g / 2.16 lb (SD card x 1, Battery, H-ES12060 lens included)
- OPERATING ENVIRONMENT
- o Operating temperature\*\*\*\* -10oC to 40oC (14oF to 104oF)
- o Operating humidity 10%RH to 80%RH

- STANDARD ACCESSORIES
- Software The software to edit and playback images on computer is not bundled with this camera. To do PHOTOfunSTUDIO 10.0PE is available for download at Panasonic website using computer connected to t Internet.
- Software http://panasonic.jp/support/global/cs/soft/download/d\_pfs99pe.html (For Windows)
- Software 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 completenested to the Internet.
- Software http://www.isl.co.jp/SILKYPIX/english/p/ (For Windows / Mac)
- o Standard accessories DC-G9Kit:
- Standard accessories Battery Charger (AC Adaptor, USB connection Cable included), Battery Pack, Body Hot Shoe Cover, Eye Cup, Flash Syncro Socket Cap, Cover for the Battery Grip Connector, USB Connecti Cable, Shoulder Strap
- Standard accessories The DC-G9 Operating Instructions for advanced features is available for download
   Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.

#### INTERCHANGEABLE LENS-1

- o Lens Name N/A
- o Lens Construction N/A
- o Nano Surface Coating N/A
- o Mount N/A
- o Optical Image Stabilizer N/A
- Focal Length N/A
- Aperture Type N/A
- Aperture range N/A
- o Aperture N/A
- o Maximum Aperture N/A
- o Minimum Aperture N/A
- o Closest Focusing Distance N/A
- o Maximum magnification N/A
- Diagonal Angle of View N/A
- Weatherproof N/A
- General
- o Filter Size N/A
- o Max. Diameter N/A
- o Overall Length N/A
- Weight [g] N/A
- Weight [oz] N/A
- o Others N/A

#### INTERCHANGEABLE LENS-2

- o Lens Name N/A
- o Lens Construction N/A
- o Nano Surface Coating N/A
- o Mount N/A
- o Optical Image Stabilizer N/A
- o Focal Length N/A
- Aperture Type N/A
- o Aperture range N/A
- Aperture N/A
- o Maximum Aperture N/A
- o Minimum Aperture N/A
- o Closest Focusing Distance N/A
- o Maximum magnification N/A
- o Diagonal Angle of View N/A
- Weatherproof N/A
- o General
- o Filter Size N/A
- o Max. Diameter N/A
- Overall Length N/A
- o Weight [g] N/A
- o Weight [oz] N/A
- o Others N/A

# NOTES

- IMAGE STABILIZATION SYSTEM Image sensor shift type (5-axis / 6.5-stop\*), Dual I.S. (Dual I.S. 2 compatible)
- IMAGE STABILIZATION SYSTEM \*Based on the CIPA standard [Yaw/Pitch direction: focusing distanc f=60mm (35mm camera equivalent f=120mm), when H-ES12060 is used.
- STOP MOTION ANIMATION Yes
- SILENT MODE Yes
- STATUS LCD Yes
- DIRECTION DETECTION FUNCTION Yes
- Fn LEVER AF Mode / Quality / Photo Style / Long Shtr NR / Stabilizer / 6K/4K PHOTO (Pre-Burst) / Sel
   Timer / Silent Mode / Shutter Type / Bracket / Touch Screen / Touch Pad AF / Auto Review (Photo) / Peaki
   Night Mode / Front/Rear/Control Dial Lock / Off / Restore to Default
- PHOTO STYLE Standard / Vivid / Natural / Monochrome / L. Monochrome / Scenery / Portrait / Custom 3, 4 / Cinelike D / Cinelike V
- CREATIVE CONTROL Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dyna Monochrome / Rough Monochrome\* / Silky Monochrome\* / Impressive Art / High Dynamic / Cross Proce Toy Effect / Toy Pop / Bleach Bypass / Miniature Effect / Soft Focus\* / Fantasy / Star Filter\* / One Point C Sunshine\*

- CREATIVE CONTROL \*For photos only.
- o NOTE \*\* About motion picture recording / 6K PHOTO/4K PHOTO recording
- NOTE 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.
- NOTE Use a card with SD Speed Class with "Class 4" or higher when recording motion pictures in [AVC or [MP4(under 28Mbps)].
- NOTE Use a card with SD Speed Class with "UHS-I / UHS-II UHS Speed Class 3 (U3)" when recording motion pictures with [MP4] in [4K] or [6K PHOTO/4K PHOTO].
- NOTE (SD speed class is the speed standard regarding continuous writing.)
- NOTE Recording stops when the continuous recording time exceeds 10 minutes with [MP4] in [4K/60p]
   [4K/High Speed Video].
- NOTE Recording stops when the continuous recording time exceeds 29 minutes and 59 seconds with [AV in [FHD] and [MP4] in [4K/30p] [4K/24p] [FHD].
- NOTE MP4 motion pictures with [MP4] in [4K]:
- NOTE When using an SDHC memory card: You can continue recording without interruption even if the size exceeds 4 GB, but the motion picture file will be divided and recorded/played back separately.
- o NOTE When using an SDXC memory card: You can record a motion picture in a single file.
- NOTE MP4 motion pictures with [MP4] in [FHD]:
- NOTE 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.
- NOTE When the ambient temperature is high or continuous recording is performed, the camera may sto recording to protect itself. Wait until the camera cools down.
- NOTE \*\*\* For [4K/60p] video output, use an HDMI2.0 cable that has the HDMI logo on it, and that is described as "4K compatible".
- NOTE \*\*\*\* The camera may stop recording when used in lower or higher than recommended operating temperature: -10 to 40 degrees.
- UPC885170328679