

# LUMIX G85 4K Mirrorless Interchangeable Lens Camera Kit with 12-60mm Lens DMC-G85MK

# • MORE DETAILS

- o Image Stabilization System Image sensor shift type (5-axis / 5-stop), Dual I.S. (Dual I.S. 2 compatible)
- TIME LAPSE SHOT Yes
- STOP MOTION ANIMATION Yes
- SILENT MODE Yes
- NOTE \* About motion picture recording / 4K PHOTO recording
- o Use a card with SD Speed Class with "Class 4" or higher when recording motion pictures.
- - 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 [4K PHOTO].
- o (SD speed class is the speed standard regarding continuous writing.)
- - MP4 motion pictures with [MP4] in [4K]:
- - When using 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 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/play
  back separately.
- - MP4 motion pictures with [MP4] in [FHD] [HD]:
- - You can continue recording without interruption even if the file size exceeds 4 GB or 30 minutes in length 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.

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\*\* For [4K] video output, use an HDMI cable that has the HDMI logo on it, and that is described as "4K compatible".

#### TYPE

- o Type Digital Single Lens Mirrorless camera
- 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)

- Image sensor size 17.3 x 13.0 mm (in 4:3 aspect ratio)
- o Lens mount Micro Four Thirds mount

#### IMAGE SENSOR

- Type Live MOS Sensor
- o Total pixels 16.84 megapixels
- o Camera effective pixels 16.00 megapixels
- o Color filter Primary color filter
- 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 Image quality MPO+Fine / MPO+Standard (with 3D lens in Micro Four Thirds system standard)
- o Color Space sRGB, AdobeRGB
- Continuous recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 120 min with H-FS12060
- Continuous recordable time (Motion picture) MP4 [4K/30p]: Approx. 90 min with H-FS12060
- Actual recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 60 min with H-FS12060
- o Actual recordable time (Motion picture) MP4 [4K/30p]: Approx. 45 min with H-FS12060
- o Recording file format
- o Still image JPEG (DCF, Exif 2.3), RAW, MPO (When attaching 3D lens in Micro Four Thirds system stand
- o Motion picture AVCHD (Audio format: Dolby Digital 2ch), MP4 (Audio format: AAC 2ch)
- File size(Pixels)
- Still Image [4:3] 4592x3448(L) / 3232x2424(M) / 2272x1704(S) / 1824x1368 (When attaching 3D lens in Mic Four Third system standard)
- Still Image [3:2] 4592x3064(L) / 3232x2160(M) / 2272x1520(S) / 1824x1216 (When attaching 3D lens in MicFour Third system standard)
- Still Image [16:9] 4592x2584(L) / 3840x2160(M) / 1920x1080(S) / 1824x1024 (When attaching 3D lens in M Four Third system standard)
- Still Image [1:1] 3424x3424(L) / 2416x2416(M) / 1712x1712(S) / 1712x1712 (When attaching 3D lens in MicFour Third system standard)
- o Motion picture\*
- o MP4 N/A
- o AVCHD N/A
- o MP4\* [4K] 3840x2160:4K/30p 100Mbps, 4K/24p 100Mbps
- MP4\* [Full HD] 1920x1080:FHD/60p 28Mbps, FHD/30p 20Mbps
- MP4\* [HD] 1280x720:HD/30p 10Mbps
- o AVCHD\* [Full HD] 1920x1080 FHD/60p: 28Mbps, 60p recording

- o AVCHD\* [Full HD] 1920x1080 FHD/60i: 17Mbps, 60i recording
- o AVCHD\* [Full HD] 1920x1080 FHD/30p: 24Mbps, 60i recording (sensor output is 30fps)
- o AVCHD\* [Full HD] 1920x1080 FHD/24p: 24Mbps, 24p recording

## WiFi FUNCTION

- o WiFi IEEE 802.11b/g/n, 2412 MHz 2462 MHz (1-11 ch), Wi-Fi / WPA / WPA2, Infrastructure mode
- o NFC No
- o QR Code Connection Yes
- Password-less connection Yes (ON / OFF selectable)

#### VIEWFINDER

- Type OLED Live View Finder (2,360k dots)
- Field of view Approx. 100%
- o Magnification Approx. 1.48x / 0.74x (35mm camera equivalent) with 50 mm lens at infinity; -1.0 m-1
- Eye point Approx. 20 mm from eyepiece lens
- o Diopter adjustment -4.0 +4.0 (dpt)
- o Eye sensor Yes
- Eye sensor adjustment High / Low

#### FOCUS

- o Type Contrast AF system
- o DFD technology Yes
- o Post Focus Yes
- o Focus Stacking Yes
- o Focus mode AFS (Single) / AFF (Flexible) / AFC (Continuous) / MF
- o AF mode Face/Eye Detection / Tracking / 49-Area / Custom Multi / 1-Area / Pinpoint
- AF mode (Full area touch is available)
- o AF detective range EV -4 18 (ISO100 equivalent)
- o Starlight AF Yes
- AF assist lamp Yes
- AF lock Yes (AF/AE LOCK button)
- Others One Shot AF, Shutter AF, Half Press Release, Quick AF, AF Sensitivity, Continuous AF (during me picture recording), Eye Sensor AF, AF+MF, MF Assist, Touch MF Assist, Focus Peaking, Touch AF/AE Function, Touch Pad AF, Touch Shutter

### EXPOSURE CONTROL

- o Light metering system 1728-zone multi-pattern sensing system
- o Light metering mode Multiple / Center Weighted / Spot
- o Metering range EV 0 18 (F2.0 lens, ISO100 equivalent)
- Exposure mode Program AE, Aperture Priority AE, Shutter Priority AE, Manual

• ISO sensitivity (Standard Output Sensitivity) (Up to ISO6400 in motion picture recording) (ISO Auto in M mode) • Exposure compensation 1/3 EV step ±5EV (±3EV for motion picture) • AE lock Yes (AF/AE LOCK button) AE bracket N/A WHITE BALANCE • White balance Auto / Daylight / Cloudy / Shade / Incandescent / Flash / White Set 1, 2, 3, 4 / Color temper: o White balance adjustment Blue/Amber bias, Magenta/Green bias Color temperature setting 2500 - 10000K in 100K White balance bracket N/A SHUTTER Type Focal-plane shutter • Shutter speed Still image: Bulb (Max. 2 minutes), 1/4,000 - 60 • Shutter speed Motion picture: 1/16,000 - 1/30 • Shutter speed Electronic shutter: 1/16,000 - 1 • Shutter speed Electronic first curtain shutter: 1/2,000 - 60 o Self timer 10sec, 3 images / 2sec / 10sec • Remote control Remote control with Bulb function by DMW-RSL1 (Optional) SCENE GUIDE Still image N/A Motion picture N/A o AE bracket 3, 5, 7 images in 1/3, 2/3 or 1 EV step, max. ±3 EV, single/burst BRACKET • Aperture Bracket 3, 5 or all positions in 1 EV step • Focus Bracket 1 to 999 images, focus steps can be set in 5 levels • White balance bracket 3 exposures in blue/amber axis or in magenta/green axis PANORAMA SHOT • Panorama shot Yes (Standard / Wide) **BURST SHOOTING** 

3200 / 6400 / 12800 / 25600 (Changeable to 1/3 EV step)

• Burst speed [Mechanical shutter] AFS: H: 9 frames/sec, M: 6 frames/sec (with Live View), L: 2 frames/sec Live View)

o ISO sensitivity (Standard Output Sensitivity) Auto / Intelligent ISO / 100 (Extended) / 200 / 400 / 800 / 160

- Burst speed [Mechanical shutter] AFC: H: 6 frames/sec, M: 6 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Burst speed [Electronic shutter] SH: 40 frames/sec
- Burst speed [Electronic shutter] AFS: H: 10 frames/sec, M: 6 frames/sec (with Live View), L: 2 frames/sec Live View)

- Burst speed [Electronic shutter] AFC: H: 6 frames/sec, M: 6 frames/sec (with Live View), L: 2 frames/sec (Live View)
- o Number of recordable images More than 45 images (when there are RAW files with the particular speed)
- o Number of recordable images More than 300 images (when there are no RAW files)
- Number of recordable images (Depending on memory card type, aspect, picture size and compression)

#### 4K PHOTO MODE

- o 4K Photo mode\* 4K Burst: 30 frames/sec
- o 4K Photo mode\* 4K Burst (S/S): 30 frames/sec
- o 4K Photo mode\* 4K Pre-Burst: 30 frames/sec, approx. 2 seconds
- 4K Photo mode\* (Depending on memory card size and battery power)
- Exif information Yes
- Selectable aspect ratio N/A
- Exposure mode N/A
- Marking function Yes (in 4K Burst (S/S) mode)
- Loop rec function Yes (in 4K Burst (S/S) mode)

#### • FLASH

- Flash type TTL Built-in-Flash, GN9.0 equivalent (ISO200 m) / GN6.2 equivalent (ISO100 m), Built-in up (Reference)
- 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.
- o Synchronization speed Less than 1/160 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 (Optional))

# REAR MONITOR

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

# LIVE VIEW

- Digital zoom 2x, 4x
- Extra Tele Conversion Still image: Max. 2x
- Extra Tele Conversion Motion picture: 2.4x (FHD), 3.6x (HD)
- Other functions Level Gauge, Real-time Histogram, Guide Lines (3 patterns), Highlight display (Still image motion picture), Zebra Pattern (Still image / motion picture)

# DIRECTION DETECTION FUNCTION

O Direction Detection Function Yes
 SELF SHOT
 Self Shot Mode N/A
 Shutter N/A

Effect N/A

- FUNCTION BUTTON
- o Fn1, Fn2, Fn3, Fn4, Fn5, Fn6 N/A
- o Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8, Fn9 N/A
- Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8, Fn9, Fn10 Exposure Comp. / Wi-Fi / Q.MENU / LVF/Monitor Sw LVF/Monitor Disp. Style / AF/AE LOCK / AF-ON / Preview / One Push AE / Touch AE / Level Gauge / Fc Area Set / Zoom Control / Cursor Button Lock / Dial Operation Switch / Photo Style / Filter Select / Aspec Ratio / Picture Size / Quality / AFS/AFF / Metering Mode / Burst Rate / 4K Photo / Self Timer / Bracket / Highlight Shadow / i. Dynamic / i. Resolution / HDR / Shutter Type / Flash Mode / Flash Adjust. / Wireless Setup (Flash) / Ex. Tele Conv. / Digital Zoom / Stabilizer Sensitivity / White Balance / AF Mode / 4K Live Conap Movie / Motion Pic. Set / Picture Mode / Mic. Directivity Adjust / Silent Mode / Peaking / Histogram Guide Line / Zebra Pattern / Monochrome Live View / Rec Area / Step Zoom / Zoom Speed / Touch Screen Restore to Default
- PHOTO STYLE
- Still image and motion picture Standard / Vivid / Natural / Monochrome / L. Monochrome / Scenery / Por Custom / Cinelike D\* / Cinelike V\* \*When Creative Video Mode is selected.
- CREATIVE CONTROL
  - Still image Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dynamic Monochr Rough Monochrome / Silky Monochrome / Impressive Art / High Dynamic / Cross Process / Toy Effect / T Pop / Bleach Bypass / Miniature Effect / Soft Focus / Fantasy / Star Filter / One Point Color / Sunshine
  - Motion picture Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dynamic Monochrome / Impressive Art / High Dynamic / Cross Process / Toy Effect / Toy Pop / Bleach Bypass / Miniature Effect / Fantasy / One Point Color
- CREATIVE VIDEO MODE
  - Exposure mode Program AE / Aperture-Priority / Sutter-Priority / Manual Exposure
- MOTION PICTURE FUNCTION
  - o Cinelike gamma Cinelike D / Cinelike V
  - Flicker reduction [1/50] / [1/60] / [1/100] / [1/120] / OFF
- PLAYBACK
- Playback function 30-thumbnail display, 12-thumbnail display, Calendar display, Zoomed playback (Max Slideshow (All / Picture Only / Video Only / 4K PHOTO / Post Focus / 3D / Category Selection / Favorite, duration & effect is selectable), Playback Mode (Normal / Picture Only / Video Only / 4K PHOTO / Post F 3D Play / Category / Favorite), Location Logging, RAW Processing, 4K PHOTO Bulk Saving, Light Composition, Clear Retouch, Title Edit, Text Stamp, Video Divide, Time Lapse Video, Stop Motion Video, Resize, Cropping, Rotate, Rotation Display, Favorite, DPOF Print Set, Protect, Face Recognition Edit, Pic Sort, Creating Still Pictures from a Motion Picture
- IMAGE PROTECTION / ERASE
  - o Protection Single / Multi

• Erase Single / Multi / All / Except Favorite o Direct Print PictBridge compatible PRINT o USB USB 2.0 Micro-B **INTERFACE** o HDMI N/A • HDMI\*\* microHDMI TypeD / VIERA Link • HDMI\*\* Video: Auto / 4K / 1080p / 1080i / 720p / 480p o HDMI\*\* Audio: Stereo o HDMI\*\* Monitor-through: 4:2:2/8-bit (While recording motion picture on the SD memory card in the car unit.) o Audio video output No • Remote input φ2.5mm for remote • External microphone input φ3.5mm for external microphone External microphone input Stereo/Lens Auto/Shotgun/Super Shotgun/Manual is selectable when attaching DMW-MS2 (optional). o Microphone Stereo, Wind-cut: OFF / Standard / High Speaker Monaural LANGUAGE o OSD language Japanese, English, German, French, Italian, Spanish, Portuguese, Chinese (Traditional) GENERAL o POWER o Battery Li-ion Battery Pack (7.2V, 1200mAh, 8.7Wh) (included) o Battery life (CIPA standard) Approx. 330 images (rear monitor), 320 images (LVF) with H-FS12060 Battery life (CIPA standard) Power Save LVF Shooting mode: Approx. 800 images\* with H-FS12060 o Battery life (CIPA standard) \* Under the test conditions specified by Panasonic based on CIPA standard. the time to get in the sleep mode is set to 3 sec. • Battery grip DMW-BGG1 (optional) • DIMENSIONS / WEIGHT o Dimensions (W x H x D) 128.4 x 89 x 74.3 mm / 5.06 x 3.50 x 2.93 inch (excluding protrusions) Weight Approx. 505g / 1.11 lb (SD card, Battery, Body) Weight Approx. 453g / 1.00 lb (Body only)

• Weight Approx. 715g / 1.58 lb (SD card, Battery, H-FS12060 lens included)

**OPERATING ENVIRONMENT** 

• STANDARD ACCESSORIES

o Operating humidity 10%RH to 80%RH

• Operating temperature 0oC to 40oC (32oF to 104oF)

- Software The software to edit and playback images on computer is not bundled with DMC-G85. To do PHOTOfunSTUDIO is available for download at Panasonic website using computer connected to the Intel
- http://panasonic.jp/support/global/cs/soft/download/d pfs99pe.html (For Windows)

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- The software to process RAW file on computer is not bundled with DMC-G85. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using computer connect the Internet.
- http://www.isl.co.jp/SILKYPIX/english/p/ (For Windows / Mac)
- Standard accessories DMC-G85 Kit
- Standard accessories Hot Shoe Cover, Body Cap, Battery Pack, Battery Charger, AC Cable, USB Connect Cable, Shoulder Strap
- Standard accessories The DMC-G85 Operating Instructions for advanced features is available for downloaded at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.

#### INTERCHANGEABLE LENS-1

- Lens Name LUMIX G VARIO 12-60mm / F3.5-5.6 ASPH. / POWER O.I.S.
- Lens Construction 11 elements in 9 groups (3 aspherical lenses, 1 ED lens)
- o Nano Surface Coating -
- o Mount Micro Four Thirds mount
- Optical Image Stabilizer Yes (POWER O.I.S.)
- Focal Length f=12-60mm (35mm camera equivalent 24-120mm)
- o Aperture Type 7 diaphragm blades / Circular aperture diaphragm
- Aperture range N/A
- o Aperture N/A
- Maximum Aperture F3.5 (Wide) F5.6 (Tele)
- Minimum Aperture F22
- Closest Focusing Distance 0.20m / 0.66ft (Wide), 0.25m / 0.82ft (Tele)
- Maximum magnification Approx. 0.27x / 0.54x (35mm camera equivalent)
- o Diagonal Angle of View 84.05°(Wide) to 20.44°(Tele)
- General
- Filter Size φ58mm / 2.3inch
- o Max. Diameter φ66.0mm / 2.6inch
- o Overall Length Approx. 71mm / 2.80inch (from the tip of the lens to the base side of the lens mount)
- Weight [g] Approx. 210g (excluding lens cap, lens rear cap and lens hood)
- Weight [oz] Approx. 7.41oz (excluding lens cap, lens rear cap and lens hood)
- o Others N/A

• INTERCHANGEABLE LENS-2 o Lens Name N/A • 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 • Maximum Aperture N/A o Minimum Aperture N/A • Closest Focusing Distance N/A o Maximum magnification N/A o Diagonal Angle of View N/A o General • Filter Size N/A o Max. Diameter N/A o Overall Length N/A o Weight [g] N/A • Weight [oz] N/A o Others N/A • UPC885170294646