LUMIX G7 4K Mirrorless Interchangeable Lens Camera Kit with 14-140 mm Lens DMC-G7HK

TYPE

- o Type Digital Single Lens Mirrorless camera
- Recording media SD Memory Card, SDHC Memory Card, SDXC Memory Card (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

- o Type Live MOS Sensor
- o Total pixels 16.84 Megapixels
- Camera effective pixels 16.00 Megapixels
- o Color filter Primary color filter
- o Dust reduction system Supersonic wave filter

RECORDING SYSTEM

- Aspect ratio 4:3, 3:2, 16:9, 1:1
- o Image quality RAW, RAW+Fine, RAW+Standard, Fine, Standard
- 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. 130 min (rear monitor), 140 mi (LVF) with H-FS1442A
- Continuous recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 130 min (rear monitor), 130 mi (LVF) with H-FS14140
- Continuous recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 130 min (rear monitor), 140 mi (LVF) with H-FS45150
- Continuous recordable time (Motion picture) MP4 [4K/30p]: Approx. 100 min (rear monitor), 100 min (L' with H-FS1442A
- Continuous recordable time (Motion picture) MP4 [4K/30p]: Approx. 100 min (rear monitor), 100 min (L' with H-FS14140
- Continuous recordable time (Motion picture) MP4 [4K/30p]: Approx. 100 min (rear monitor), 110 min (L^N with H-FS45150
- Actual recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 65 min (rear monitor), 70 min (LVF H-FS1442A
- Actual recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 65 min (rear monitor), 65 min (LVF H-FS14140
- Actual recordable time (Motion picture) AVCHD [FHD/60i]: Approx. 65 min (rear monitor), 70 min (LVF H-FS45150
- Actual recordable time (Motion picture) MP4 [4K/30p]: Approx. 50 min (rear monitor), 50 min (LVF) wit FS1442A
- Actual recordable time (Motion picture) MP4 [4K/30p]: Approx. 50 min (rear monitor), 50 min (LVF) with FS14140

- Actual recordable time (Motion picture) MP4 [4K/30p]: Approx. 50 min (rear monitor), 55 min (LVF) with FS45150
- 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 MicFour Third system standard)
- Still Image [3:2] 4592x3064(L) / 3232x2160(M) / 2272x1520(S) / 1824x1216 (When attaching 3D lens in Mir Four 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 Mir Four Third system standard)
- o Motion picture*1
- o MP4*2:NTSC area N/A
- o MP4*2:PAL area N/A
- o AVCHD*3:NTSC area N/A
- o AVCHD*3:PAL area N/A
- Motion picture*
- o MP4*:NTSC area [4K] 3840x2160:4K/30p 100Mbps, 4K/24p 100Mbps
- MP4*:NTSC area [Full HD] 1920x1080:FHD/60p 28Mbps, FHD/30p: 20Mbps
- MP4*:NTSC area [HD] 1280x720:HD/30p 10Mbps
- o MP4*:NTSC area [VGA] 640x480:VGA/30p 4Mbps
- o MP4*:PAL area N/A
- o AVCHD*:NTSC area [Full HD] 1920x1080:FHD/60p 28Mbps, 60p recording
- o AVCHD*:NTSC area [Full HD] 1920x1080:FHD/60i 17Mbps, 60i recording
- o AVCHD*:NTSC area [Full HD] 1920x1080:FHD/30p 24Mbps, 60i recording (sensor output is 30fps)
- o AVCHD*:NTSC area [Full HD] 1920x1080:FHD/24p 24Mbps
- AVCHD*:PAL area N/A
- 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
- QR Code Connection Yes
- Password-less connection Yes (ON / OFF selectable)
- VIEWFINDER
- Type OLED Live View Finder (2,360k dots)
- Tilting N/A

- o Field of view Approx. 100%
- o Magnification Approx. 1.4x / 0.7x (35mm camera equivalent) with 50 mm lens at infinity; -1.0 m-1
- Eye point Approx. 17.5 mm from eyepiece lens
- o Diopter adjustment -4.0 +4.0 (dpt)
- Eye sensor Yes
- o Eye sensor adjustment High / Low

FOCUS

- Type Contrast AF system
- o DFD technology Yes
- 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
- o AF assist lamp Yes
- AF lock Yes (AF/AE LOCK button)
- Others One Shot AF, Shutter AF, Half Press Release, Quick AF, Continuous AF (during motion 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

- Light metering system 1728-zone multi-pattern sensing system
- o Light metering mode Multiple / Center Weighted / Spot
- 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) Auto / Intelligent ISO / 100 (Extended) / 200 / 400 / 800 / 160
 3200 / 6400 / 12800 / 25600 (Changeable to 1/3 EV step)
- 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 3, 5, 7 frames in 1/3, 2/3 or 1 EV Step, Max. ±3 EV, single/burst

• WHITE BALANCE

- White balance Auto / Daylight / Cloudy / Shade / incandescent / Flash / White Set 1, 2, 3, 4 / Color tempera setting
- o White balance adjustment Blue/Amber bias, Magenta/Green bias
- Color temperature setting 2500-10000K in 100K
- White balance bracket 3 exposures in blue/amber axis or in magenta/green axis

SHUTTER

- o Type Focal-plane shutter
- Shutter speed Still image: Bulb (Max. 2 minutes), 1/4,000 60
- Shutter speed Motion picture: 1/16,000 1/25
- Shutter speed Electronic shutter: 1/16,000 1
- Self timer 10sec, 3 images / 2sec / 10sec
- Remote control Remote control with Bulb function by DMW-RSL1 (Optional)

SCENE GUIDE

- Still image Clear Portrait / Silky Skin / Backlit Softness / Clear in Backlight / Relaxing Tone / Sweet Child Face / Distinct Scenery / Bright Blue Sky / Romantic Sunset Glow / Vivid Sunset Glow / Glistening Water / Clear Nightscape / Cool Night Sky / Warm Glowing Nightscape / Artistic Nightscape / Glittering Illuminat Handheld Night Shot / Clear Night Portrait / Soft Image of a Flower / Appetizing Food / Cute Dessert / Franche Motion / Clear Sports Shot / Monochrome
- Motion picture Clear Portrait / Silky Skin / Backlit Softness / Clear in Backlight / Relaxing Tone / Sweet C Face / Distinct Scenery / Bright Blue Sky / Romantic Sunset Glow / Vivid Sunset Glow / Clear Nightscape / Night Sky / Warm Glowing Nightscape / Artistic Nightscape / Handheld Night Shot / Clear Night Portrait Appetizing Food / Cute Dessert / Freeze Animal Motion / Clear Sports Shot / Monochrome

PANORAMA SHOT

o Panorama shot Yes (Standard / Wide)

BURST SHOOTING

- Burst speed Mechanical shutter: H: 8 frames/sec (with AFS), 6 frames/sec (with AFC), M: 6 frames/sec (w
 Live View), L: 2 frames/sec (with Live View)
- Burst speed Electronic shutter: SH: 40 frames/sec, H: 10 frames/sec, M: 6 frames/sec (with Live View), L: frames/sec (with Live View)
- Number of recordable images More than 13 images (when there are RAW files with the particular speed)
- Number of recordable images More than 100 images (when there are no RAW files)
- o Number of recordable images (depending on memory card type, aspect, picture size and compression)

4K PHOTO MODE

- o 4K Photo mode* 4K Pre-Burst: 30 frames/sec, approx. 2 seconds
- o 4K Photo mode* 4K Burst: 30 frames/sec, max. 29 minutes 59 seconds
- o 4K Photo mode* 4K Burst (S/S): 30 frames/sec, max. 29 minutes 59 seconds
- o 4K Photo mode* (depending on memory card size and battery power)
- Exif information Yes
- Selectable aspect ratio Yes (4:3 / 3:2 / 16:9 / 1:1 are selectable)
- o Exposure mode Program AE/ Aperture-Priority / Sutter-Priority / Manual Exposure
- Marking function Yes (in 4K Burst (S/S) mode)
- Loop rec function N/A

FLASH

- Built in flash type TTL Built-in-Flash, GN9.3 equivalent (ISO200 · m) / GN6.6 equivalent (ISO100 · m), in Pop-up (Reference)
- Flash type N/A

- 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

REAR MONITOR

- Type TFT LCD monitor with static touch control
- o Monitor size Free-angle 3.0-inch / 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

- o Digital zoom 2x, 4x
- o Extra Tele Conversion Still image: Max. 2x
- Extra Tele Conversion Motion picture: 2.4x (FHD), 3.6x (HD), 4.8x (VGA)
- Other functions Level Gauge, Real-time Histogram, Guide Lines (3 patterns), Center Marker, Highlight d (Still image / motion picture), Zebra pattern (Still image / motion picture)

DIRECTION DETECTION FUNCTION

- Direction Detection Function Yes
- SELF SHOT
- o Self Shot Mode N/A
- Shutter N/A
- o Effect N/A

FUNCTION BUTTON

- o Fn1, Fn2, Fn3, Fn4, Fn5, Fn6 N/A
- Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8, Fn9, Fn10, Fn11 Exposure Comp. / Wi-Fi / Q.MENU / LVF/Moni Switch / AF/AE LOCK / AF-ON / Preview / One Push AE / Touch AE / Level Gauge / Focus Area Set / Zoc Control / Cursor Button Lock / Dial Operation Switch / Photo Style / Filter Select / Aspect Ratio / Picture Quality / AFS/AFF / Metering Mode / Burst Rate / 4K PHOTO / Auto Bracket / Self Timer / Highlight Shi i. Dynamic / i. Resolution / HDR / Electronic Shutter / Flash Mode / Flash Adjust. / Ex. Tele Conv. / Digital Zoom / Stabilizer / Snap Movie / Motion Pic. Set / Picture Mode / Mic. Directivity Adjust / Silent Mode / Peaking / Histogram / Guide Line / Zebra Pattern / Monochrome Live View / Rec Area / Step Zoom / Zooi Speed / Touch Screen / Sensitivity / White Balance / AF Mode/MF / Restore to Default
- o Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8, Fn9, Fn10, Fn11, Fn12, Fn13 N/A

• PHOTO STYLE

 Still image and motion picture Standard / Vivid / Natural / Monochrome / Scenery / Portrait / Custom / Ci D* / Cinelike V* *When Creative Video Mode is selected.

CREATIVE CONTROL

- Still image Expressive / Retro / Old Days / High Key / Low Key / Sepia / Monochrome / Dynamic Monochrome 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 / 3D / Category Selection / Favorite, duration & e is selectable), Playback Mode (Normal / Picture / Video / 4K PHOTO / 3D Play / Category / Favorite), Loc Logging, RAW Processing, 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 Recogi Edit, Picture Sort, Creating Still Pictures from a Motion Picture

IMAGE PROTECTION / ERASE

- o Protection Single / Multi
- o Erase Single / Multi / All / Except Favorite

PRINT

Direct Print PictBridge compatible

INTERFACE

- o USB USB 2.0 High Speed Multi
- HDMI** microHDMI TypeD / VIERA Link
- o HDMI** Video: Auto / 4K / 1080p / 1080i / 720p / 480p
- HDMI** Audio: Stereo
- o HDMI N/A
- o Audio video output Monaural Type, NTSC
- Audio video output *Check the website of the Panasonic sales company in your country or region for deta the products that are available in your market.
- 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).
- Microphone Stereo, Wind-cut: OFF / Low / Standard / High / AUTO
- Speaker Monaural

LANGUAGE

o OSD language Japanese, English, German, French, Italian, Spanish, Portuguese, Chinese (Traditional)

GENERAL

- o POWER
- Battery Li-ion Battery Pack (7.2V, 1200mAh, 8.7Wh) (Included)
- Battery Battery Charger
- o Battery life (CIPA standard) Approx. 360 images with H-FS1442A
- o Battery life (CIPA standard) Approx. 350 images with H-FS14140
- Battery life (CIPA standard) Approx. 350 images with H-FS45150
- DIMENSIONS / WEIGHT
- o Dimensions (W x H x D) 124.9 x 86.2 x 77.4 mm / 4.92 x 3.39 x 3.05 inch (excluding protrusions)
- o Weight Approx. 410g / 0.90 lb (SD card, Battery, Body)
- Weight Approx. 360g / 0.79 lb (Body only)
- Weight Approx. 520g / 1.15 lb (SD card, Battery, H-FS1442A lens included)
- Weight Approx. 675g / 1.49 lb (SD card, Battery, H-FS14140 lens included)
- Weight Approx. 610g / 1.34 lb (SD card, Battery, H-FS45150 lens included)
- o Weight Approx. 720g / 1.59 lb (SD card, Battery, H-FS1442A + H-FS45150 lenses included)
- OPERATING ENVIRONMENT
- Operating temperature 0°C to 40°C (32°F to 104°F)
- o Operating humidity 10%RH to 80%RH
- STANDARD ACCESSORIES
- Software PHOTOfunSTUDIO 9.7 PE
- o Software (Windows Vista / Windows 7 / Windows 8 / Windows 8.1)
- Software SILKYPIX® Developer Studio 4.3 SE
- Software (Windows Vista / Windows 7 / Windows 8 / Windows 8.1, Mac OS X v10.5 v10.10)
- Software LoiLoScope (Trial version)
- Software (Windows Vista / Windows 7 / Windows 8 / Windows 8.1)
- Standard accessories DMC-G7H Kit
- Standard accessories Hot Shoe Cover, Body Cap, Battery Pack, Battery Charger, USB Connection Cable, Shoulder Strap, DVD, AC Cable*, Lens Hood, Lens Cap, Lens Rear Cap
- $\circ~$ Standard accessories * Depends on the country or region.

• INTERCHANGEABLE LENS-1

- o Lens Name LUMIX G VARIO 14-140mm / F3.5-5.6 ASPH. / POWER O.I.S.
- Lens Construction 14 elements in 12 groups (3 aspherical lenses, 2 ED lens)
- o Nano Surface Coating -
- Mount Micro Four Thirds mount
- Optical Image Stabilizer Yes (POWER O.I.S.)

- Focal Length f=14-140mm (35mm camera equivalent 28-280mm)
- o Aperture Type 7 diaphragm blades / Circular aperture diaphragm
- Aperture range F3.5(Wide) F5.6(TELE)
- Aperture N/A
- o Maximum Aperture N/A
- Minimum Aperture F22
- o Closest Focusing Distance 0.30m/0.98ft (at focal length 14-21mm) / 0.50m/1.64ft (at focal length 22-140mm
- o Maximum magnification Approx. 0.25x / 0.50x (35mm camera equivalent)
- Diagonal Angle of View 75°(Wide) to 8.8°(TELE)
- o General
- o Filter Size φ58mm / 2.28in
- o Max. Diameter φ67mm / 2.64in
- o Overall Length Approx. 75mm / 2.95in (from the tip of the lens to the base side of the lens mount)
- Weight [g] Approx. 265g (excluding lens cap, lens rear cap, and lens hood)
- Weight [oz] Approx. 9.35oz (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
- Mount N/A
- o Optical Image Stabilizer N/A
- o Focal Length N/A
- Aperture Type N/A
- o Aperture range N/A
- o Aperture N/A
- o 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
- 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

NOTES

- Image Stabilization System N/A
- TIME LAPSE SHOT Yes
- STOP MOTION ANIMATION Yes
- SILENT MODE Yes
- NOTE "* About motion picture recording / 4K Photo recording
- NOTE Use a card with SD Speed Class with ""Class 4"" or higher when recording motion pictures.
- NOTE Use a card with SD Speed Class with ""UHS-I UHS Speed Class 3 (U3)"" when recording motion pictures with [MP4] in [4K] or [4K PHOTO].
- NOTE (SD speed class is the speed standard regarding continuous writing.)
- NOTE Maximum time to record motion pictures continuously with [MP4] in [4K] is 29 minutes 59 secon
- NOTE You can continuously record a motion picture with its size set to [4K] in [MP4] or [4K PHOTO] without a pause even if the motion picture exceeds 4GB. However, the recorded content has to be played b multiple files.
- NOTE Maximum time to record motion pictures continuously with [MP4] in [FHD] [HD] [VGA] is 29 m 59 seconds or up to 4 GB.
- NOTE Maximum time to record motion pictures continuously with [AVCHD] is 29 minutes 59 seconds in Europe.
- NOTE ** For [4K] video output, use an HDMI cable that has the HDMI logo on it, and that is described a compatible".

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