

# LUMIX GX850 4K Mirrorless ILC Camera, 12-32mm Mega O.I.S. lens kit, 16 Megapixels, 4K 30p Video, 4K PHOTO, Wi-Fi - DMC-GX850KS - SILVER DC-GX850KS

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- **TYPE**
    - Type Digital Single Lens Mirrorless camera
    - Recording media microSD Memory Card, microSDHC Memory Card, microSDXC Memory Card (Compatible with UHS-I standard SDHC / SDXC Memory Cards)
    - Image sensor size 17.3 x 13.0 mm (in 4:3 aspect ratio)
    - Lens mount Micro Four Thirds mount
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- **IMAGE SENSOR**
    - Type Live MOS Sensor
    - Total pixels 16.84 megapixels
    - Camera effective pixels 16.00 megapixels
    - Color filter Primary color filter
    - Dust reduction system Supersonic wave filter
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- **RECORDING SYSTEM**
  - Aspect ratio 4:3, 3:2, 16:9, 1:1
  - Image quality RAW, RAW+Fine, RAW+Standard, Fine, Standard
  - Image quality MPO+Fine / MPO+Standard (with 3D lens in Micro Four Thirds system standard)
  - Color Space sRGB, AdobeRGB
  - Continuous recordable time (Motion picture) AVCHD [FHD/60p]: Approx. 60 min with H-FS12032 / H-PS14042
  - Continuous recordable time (Motion picture) MP4 [4K/30p]: Approx. 40 min with H-FS12032 / H-PS14042
  - Actual recordable time (Motion picture) AVCHD [FHD/60p]: Approx. 30 min with H-FS12032 / H-PS14042
  - Actual recordable time (Motion picture) MP4 [4K/30p]: Approx. 20 min with H-FS12032 / H-PS14042
  - *Recording file format*
  - Still image JPEG (DCF, Exif 2.3), RAW, MPO (When attaching 3D lens in Micro Four Thirds system standard)
  - Motion picture AVCHD (Audio format: Dolby Audio 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 Micro Four Third system standard)
  - Still Image [3:2] 4592x3064(L) / 3232x2160(M) / 2272x1520(S) / 1824x1216 (When attaching 3D lens in Micro Four Third system standard)
  - Still Image [16:9] 4592x2584(L) / 3840x2160(M) / 1920x1080(S) / 1824x1024 (When attaching 3D lens in Micro Four Third system standard)
  - Still Image [1:1] 3424x3424(L) / 2416x2416(M) / 1712x1712(S) / 1712x1712 (When attaching 3D lens in Micro Four Third system standard)
  - *Motion picture\**
  - MP4 N/A

- AVCHD N/A
  - MP4\* [4K] 3840x2160: 4K/30p: 100Mbps
  - MP4\* [4K] 3840x2160: 4K/24p: 100Mbps
  - MP4\* [Full HD] 1920x1080: FHD/60p: 28Mbps
  - MP4\* [Full HD] 1920x1080: FHD/30p: 20Mbps
  - MP4\* [HD] 1280x720: HD/30p: 10Mbps
  - AVCHD\* [Full HD] 1920x1080: FHD/60p: 28Mbps, 60p recording
  - AVCHD\* [Full HD] 1920x1080: FHD/60i: 17Mbps, 60i recording
  - AVCHD\* [Full HD] 1920x1080: FHD/30p: 24Mbps, 60i recording (sensor output is 30fps)
  - AVCHD\* [Full HD] 1920x1080: FHD/24p: 24Mbps, 24p recording
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## • **WiFi FUNCTION**

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

- Type N/A
  - Field of view N/A
  - Magnification N/A
  - Eye point N/A
  - Diopter adjustment N/A
  - Eye sensor N/A
  - Eye sensor adjustment N/A
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## • **FOCUS**

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

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- **EXPOSURE CONTROL**

- Light metering system 1728-zone multi-pattern sensing system
- 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 / 1600 / 3200 / 6400 / 12800 / 25600 (Changeable to 1/3 EV step)
- ISO sensitivity (Standard Output Sensitivity) (Up to ISO3200 in motion picture recording)
- Exposure compensation 1/3 EV step  $\pm 5$ EV ( $\pm 3$ EV for motion picture)
- AE lock Set the Fn button in custom menu to AE lock
- AE bracket N/A

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- **WHITE BALANCE**

- White balance Auto / Daylight / Cloudy / Shade / Incandescent / Flash / White Set 1, 2, 3, 4 / Color temperature setting
- White balance adjustment Blue/Amber bias, Magenta/Green bias
- Color temperature setting 2500 - 10000K in 100K
- White balance bracket N/A

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- **SHUTTER**

- Type Single curtain focal plane shutter / Electronic shutter
- Shutter speed Still image: Time (Max. 60 second), 1/16,000 - 60 (Shutter type Auto)
- Shutter speed Motion picture: 1/16,000 - 1/25
- Self timer 10sec, 3 images / 2sec / 10sec
- Remote control N/A

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- **SCENE GUIDE**

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

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- **BRACKET**

- AE bracket 3, 5, 7 images in 1/3, 2/3 or 1 EV step, max.  $\pm 3$  EV, single/burst
- Aperture Bracket N/A
- Focus Bracket N/A
- White balance bracket 3 exposures in blue/amber axis or in magenta/green axis

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- **PANORAMA SHOT**

- Panorama shot Yes (Standard / Wide / Self Shot Mode)

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- **BURST SHOOTING**

- Burst speed [Mechanical shutter] AFS: H: 5.8 frames/sec, M: 4 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Burst speed [Mechanical shutter] AFC: H: 5 frames/sec (in 1-area-focusing AF mode), M: 5 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Burst speed [Electronic shutter] AFS: H: 10 frames/sec, M: 4 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Burst speed [Electronic shutter] AFC: H: 6 frames/sec, M: 6 frames/sec (with Live View), L: 2 frames/sec (with Live View)
- Number of recordable images More than 15 images (when there are RAW files with the particular speed)
- Number of recordable images More than 100 images (when there are no RAW files)
- Number of recordable images (Depending on memory card type, aspect, picture size and compression)

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- **4K PHOTO MODE**

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

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- **FLASH**

- Flash type TTL Built-in-Flash, GN5.6 equivalent (ISO200 · m) / GN4.0 equivalent (ISO100 · m), Built-in (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.
- Synchronization speed Less than 1/50 second
- Flash output adjustment 1/3EV step ±2EV
- Flash synchronization 1st Curtain Sync., 2nd Curtain Sync.
- Synchronization for flash dimming and exposure compensation N/A
- Wireless control N/A

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- **REAR MONITOR**

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

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- **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), Center Marker, Highlight d (Still image / motion picture), Zebra Pattern (Still image / motion picture)

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## • DIRECTION DETECTION FUNCTION

- Direction Detection Function Yes

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## • SELF SHOT

- Self Shot Mode Yes (Single, Self timer: 1, 2, 3 or 4 images, 4K PHOTO, Panorama)
- Shutter Shutter Button, Touch, Face Shutter, Buddy Shutter
- Effect Soft Skin: 10 levels, Filter Select: Expressive / Retro / High Key / Monochrome / Toy Effect, Backgr Control: Defocus / Clear, Sliming Mode: 10 levels

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## • FUNCTION BUTTON

- Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8 4K Photo Mode / Post Focus / Wi-Fi / Q.MENU / AF/AE LOCK / ON / Preview / One Push AE / Touch AE / Level Gauge / Zoom Control / Cursor Button Lock / Photo Style Filter Select / Aspect Ratio / Picture Size / Quality / Sensitivity / Metering Mode / Bracket / Focus Mode / i Dynamic / i. Resolution / HDR / Shutter Type / Flash Mode / Flash Adjust. / Ex. Tele Conv. / Digital Zoom Stabilizer / Snap Movie / Motion Pic. Set / Picture Mode / Silent Mode / Peaking / Histogram / Guide Line Zebra Pattern / Monochrome Live View / Rec Area / Step Zoom / Zoom Speed / Touch Screen / Restore to Default
- Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8, Fn9 N/A
- Fn1, Fn2, Fn3, Fn4, Fn5, Fn6, Fn7, Fn8, Fn9, Fn10 N/A

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## • PHOTO STYLE

- Still image and motion picture Standard / Vivid / Natural / Monochrome / L. Monochrome / Scenery / Portrait Custom

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## • 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 / Toy 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

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## • CREATIVE VIDEO MODE

- Exposure mode N/A

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## • MOTION PICTURE FUNCTION

- Cinelike gamma N/A
- Flicker reduction [1/50] / [1/60] / [1/100] / [1/120] / OFF

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## • PLAYBACK

- Playback function 30-thumbnail display, 12-thumbnail display, Calendar display, Zoomed playback (Max. Slideshow (All / Picture Only / Video Only, duration & effect is selectable), Playback Mode (Normal / Picture Only / Video Only), Location Logging, Beauty Retouch (Aesthetic Retouch / Foundation / Make Up Retouch)

Smile)\*\*\*, 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, Picture Sort, Creating Still Pictures from a Motion Picture

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- **IMAGE PROTECTION / ERASE**

- Protection Single / Multi
  - Erase Single / Multi / All / Except Favorite
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- **PRINT**

- Direct Print PictBridge compatible
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- **INTERFACE**

- USB USB 2.0 Micro-B
  - HDMI N/A
  - HDMI\*\* microHDMI TypeD / VIERA Link
  - HDMI\*\* Video: Auto / 4K / 1080p / 1080i / 720p / 480p
  - HDMI\*\* Audio: Stereo
  - Audio video output No
  - Remote input N/A
  - External microphone input N/A
  - Microphone Stereo, Wind Noise Canceller: OFF / Standard / High
  - Speaker Monaural
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- **LANGUAGE**

- OSD language Japanese, English, German, French, Italian, Spanish, Portuguese, Chinese (Traditional)
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- **GENERAL**

- *POWER*
- Battery Li-ion Battery Pack (7.2V, 680mAh, 4.9Wh) (included)
- Battery USB power charging
- Battery life (CIPA standard) Approx. 210 images with H-FS12032
- Battery life (CIPA standard) Approx. 200 images with H-PS14042
- Battery grip N/A
- *DIMENSIONS / WEIGHT*
- Dimensions (W x H x D) 106.5 x 64.6 x 33.3 mm / 4.2 x 2.55 x 1.32 inch (excluding protrusions)
- Weight Approx. 269g / 0.60 lb (microSD card, Battery, Body)
- Weight Approx. 239g / 0.53 lb (Body only)
- Weight Approx. 336g / 0.75 lb (microSD card, Battery, H-FS12032 lens included)
- Weight Approx. 364g / 0.81 lb (microSD card, Battery, H-PS14042 lens included)
- *OPERATING ENVIRONMENT*
- Operating temperature 0°C to 40°C (32°F to 104°F)

- 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 this, PHOTOfunSTUDIO is available for download at Panasonic website using computer connected to the Internet.
  - [http://panasonic.jp/support/global/cs/soft/download/d\\_pfs99pe.html](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 this camera. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using computer connected to the Internet.
  - <http://www.isl.co.jp/SILKYPIX/english/p/> (For Windows / Mac)
  - Standard accessories GX850K Kit
  - Standard accessories Battery Pack, AC Adaptor, AC Cable, USB Connection Cable, Shoulder Strap, Lens
  - Standard accessories • The DC-GX850 Operating Instructions for advanced features is available for download at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.
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## • INTERCHANGEABLE LENS-1

- Lens Name LUMIX G VARIO 12-32mm / F3.5-5.6 ASPH. / MEGA O.I.S.
- Lens Construction 8 elements in 7 groups (3 aspherical lenses, 1 ED lens)
- Nano Surface Coating -
- Mount Micro Four Thirds mount
- Optical Image Stabilizer Yes (MEGA O.I.S.)
- Focal Length f=12-32mm (35mm camera equivalent 24-64mm)
- Aperture Type 7 diaphragm blades / Circular aperture diaphragm
- Aperture range N/A
- Aperture N/A
- Maximum Aperture F3.5(Wide) - F5.6(Tele)
- Minimum Aperture F22
- Closest Focusing Distance 0.20m/0.66ft (at focal lengths 12-20mm) / 0.30m/0.98ft (at focal lengths 21-32mm)
- Maximum magnification Approx. 0.13x / 0.26x (35mm camera equivalent)
- Diagonal Angle of View 84°(Wide) to 37°(TELE)
- *General*
- Filter Size 37mm / 1.5in
- Max. Diameter  $\phi$ 55.5mm / 2.2in
- Overall Length Approx. 24mm / 0.94in (from the tip of the lens to the base side of the lens mount)
- Weight [g] Approx. 70g (excluding lens cap, lens rear cap )
- Weight [oz] Approx. 2.47oz (excluding lens cap, lens rear cap )
- Others N/A

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- **INTERCHANGEABLE LENS-2**

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

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- **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**
- **- 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 Speed Class 3 (U3)" when recording motion pictures [MP4] in [4K] or [4K PHOTO].**
- **(SD speed class is the speed standard regarding continuous writing.)**
- **- Recording stops when the continuous recording time exceeds 20 minutes in [FHD/60p] [FHD/60i].**
- **- Recording stops when the continuous recording time exceeds 5 minutes with [MP4] in [4K].**
- **- MP4 motion pictures with [MP4] in [4K]:**



- - When using a microSDHC memory card: You can continue recording without interruption even if the file exceeds 4 GB, but the motion picture file will be divided and recorded/played back separately.
  - - When using a microSDXC memory card: You can record a motion picture in a single file.
  - - 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, 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.
  - \*\* For [4K] video output, use an HDMI cable that has the HDMI logo on it, and that is described as "4K compatible".
  - \*\*\* Firmware must be updated to the latest version 1.1.
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