Panasonic

LUMIX GH4

P r o d u c t   P r e s e n t a t i o n

Driftwood

Embargo: Feb 7, 2014

Pro Photographers

■ Specializing in **FIELD WORK**, where the DMC-GH4 advantages of compactness and lightweight can be maximized.

■ Dominating the field of **NATURE DOCUMENTARIES** by overcoming image quality weakness and enhancing mobility.

Pro Video Creators

■ Specialize in **FILM & VIDEO PRODUCTION** backed by the large sensor, interchangeable lens, and 4K video features.

■ Encourage use in **ACTUAL PRODUCTION SITES** by maintaining the highest performance and fulfilling professional demands.

Pro Hybrid Photo Creators

■ Attracting **HYBRID PHOTO CREATORS** who want to expand their creativity with new expressions combining photos and videos.

■ Dominating the hybrid photo market with the **CREATIVE HYBRID GH4,** which achieves seamless expression between photos and videos.

Sub-Targets – Volume Zone

Amateurs with High Knowledge

■ **PHOTO LOVERS** who want to use professional level cameras with high image quality and high performance.
■ **VIDEO CREATORS** who want to shoot creative images as a hobby.
■ **HYBRID PHOTO CREATORS** who want to create images combining photos and videos as a hobby.

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4K

MICRO FourThirds™

Kit
DMC-GH4: Body
DMC-GH4H: Body + LUMIX G VARIO 14-140mm/F3.5-5.6 ASPH./POWER O.I.S.
DMC-GH4A: Body + LUMIX G X VARIO 12-35mm/F2.8 ASPH./POWER O.I.S.

| **16.05** Megapixels | **LVF** 2359 K-dot OLED | **3.0"** 1036 K-dot OLED Touch | **DFD** | **12** fps Burst Shooting | **200000** Shutter Life | SPLASH/DUST PROOF | **Wi-Fi** CERTIFIED | N |

Pursuing Intuition and Mobility to Match the Enthusiasm of All Photographers & Video Creators

1 **High Picture Quality – Far Exceeding APS-C**
16.05M Live MOS, Venus Engine, Moirè Suppression, Max. ISO25600

2 **The Highest Level of Video Shooting Performance**
4K 30p/25p/24p, 1080 60p/50p/24p, High Bitrate, 4:2:2 10-bit Output, VFR

3 **Superb Mobility & Intuitive Response**
Compact & Lightweight, Controllable, DFD Technology, 12fps Burst, Shutter 1/8000 sec

4 **Durability to Meet Professional Needs**
Magnesium Alloy Body, Splash/Dustproof, Max. 200,000 Shutter Life

5 **Expandability That Sparks Creativity**
Various Input/Output Terminals, External Accessories, Wi-Fi® with NFC

Other Features

Luminance Level Adjustment (Videos) / Time Lapse Shot & Stop Motion Animation /
Focus Peaking / Zebra Pattern / Highlight Shadow / RAW Processing /
Silent Mode / Touch Pad AF / 500-Shot Battery Life

LUMIX G

		DMC-GH4	DMC-GH3
Sensor		New 16.05-megapixel Digital Live MOS Sensor	16.05-megapixel Digital Live MOS Sensor
ISO Sensitivity		ISO200-25600 (Extended ISO100)	ISO200-12800 (Extended ISO125, ISO12800-25600)
LVF		2359K-dot OLED, Eye Sensor	1744K-dot OLED, Eye Sensor
Monitor		3.0" 1036K-dot OLED Free-angle, Static Touch Control	3.0" 610K-dot OLED Free-angle, Static Touch Control
AF	DFD Technology	Yes	-
	AF Speed (CIPA)	0.07 sec	0.09 sec
	AF Mode	Face/Eye Detection / Tracking / 49-area / Custom Multi / 1-area / Pinpoint	Face Detection / AF Tracking / 23-area / 1-area / Pinpoint
	Low Light AF	Yes	-
	Peaking	Yes (Magnification 3 - 10x in 0.1x step)	-
Burst Shooting	Burst Speed	12 fps / 7 fps with AF Tracking (in full resolution)	6 fps / 4 fps with AF Tracking (in full resolution)
	Recordable Images	40 images (RAW+JPEG), 100 images (JPEG)	18 images (RAW+JPEG)
Shutter	Shutter Speed	1/8,000 - 60 and Bulb (60 minutes) 1/250 sync speed	1/4,000 - 60 and Bulb 1/160 sync speed
	Shutter Life	200,000 times	100,000 times
Video Format	Format	MOV, MP4, AVCHD Progressive	MOV, MP4, AVCHD Progressive
	Recordable Size	4K 30p/25p/24p (IPB) 1080 60p/50p/30p/25p/24p (IPB, All-Intra)	- 1080 60p(50p)/30p(25p)/24p (IPB, All-Intra)
	Variable Frame	Up to 96 fps	Up to 60 fps
	Time Code / Output	Yes / 4:2:2 8/10bit	Yes / YUV 4:2:0 8bit
Flash		GN12.0 equivalent (ISO100 · m), GN17.0 (ISO200 · m), Lighting Angle: 24mm	GN12.0 equivalent (ISO100 · m), GN17.0 (ISO200 · m), Lighting Angle: 24mm
Wi-Fi / NFC		Yes / Yes	Yes / -
Durability		Magnesium Alloy Body, Splash / Dustproof	Magnesium Alloy Body, Splash / Dustproof
Battery Life		Approx. 500 pictures (with H-FS14140, H-HS12035)	Approx. 540 pictures (with H-HS12035)
Expandability		Battery Grip (DMW-BGGH3), Stereo / Gun / Zoom Mic (DMW-MS2), Interface Unit (XLR, SDI) (DMW-YAGH* / AG-YAGHG) * For US / Europe.	Battery Grip (DMW-BGGH3), Stereo / Gun Mic (DMW-MS2)

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LUMIX **G**

Newly Developed

Digital Live MOS Sensor

16.05-megapixel Digital Live MOS Sensor achieves high quality, high sensitivity image recording with quick response.

High Speed Readout

- High-speed readout: Twice the speed of the DMC-GH3

DMC-GH3 **100 ms**

DMC-GH4 **Less than 50 ms**

- Achieves High-Speed Burst Shooting even in RAW setting
- Prevents Rolling-Shutter when using electronic shutter & shooting videos
- Shutter speed of 60 minutes in Bulb mode

High Picture Quality

- Gradation range is expanded by max.1/3 step at low ISO end with fine tuning control by the Venus Engine
- Optimizing the combination design of sensor, engine and low-pass filter enhances the limit resolution by more than 5% while suppressing moire

Newly Developed

Venus Engine   Venus Engine 7FHD ⇒ 9AHD

"Natural Texture Expression" is achieved by dramatically improving sensitivity / resolution / color reproduction / gradation.

Sensitivity

- Advanced MNR: Effective NR + Edge Processing according to each component frequency
- Random Filter: Granulation chromatic noise to be blended into the image more natural
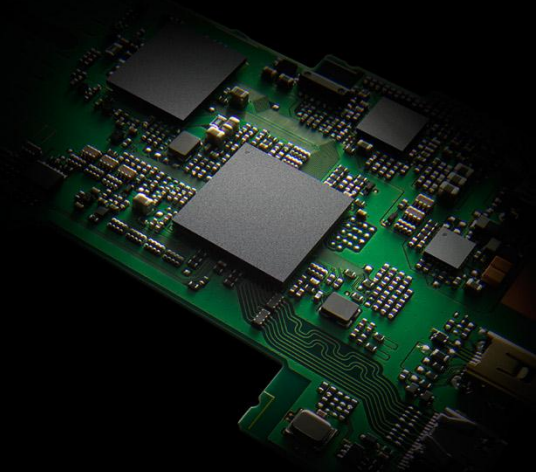
Resolution

- New aperture filter: Natural edge processing to render the subtle beauty of the hair

Color Reproduction

- 16-axis color reproduction:
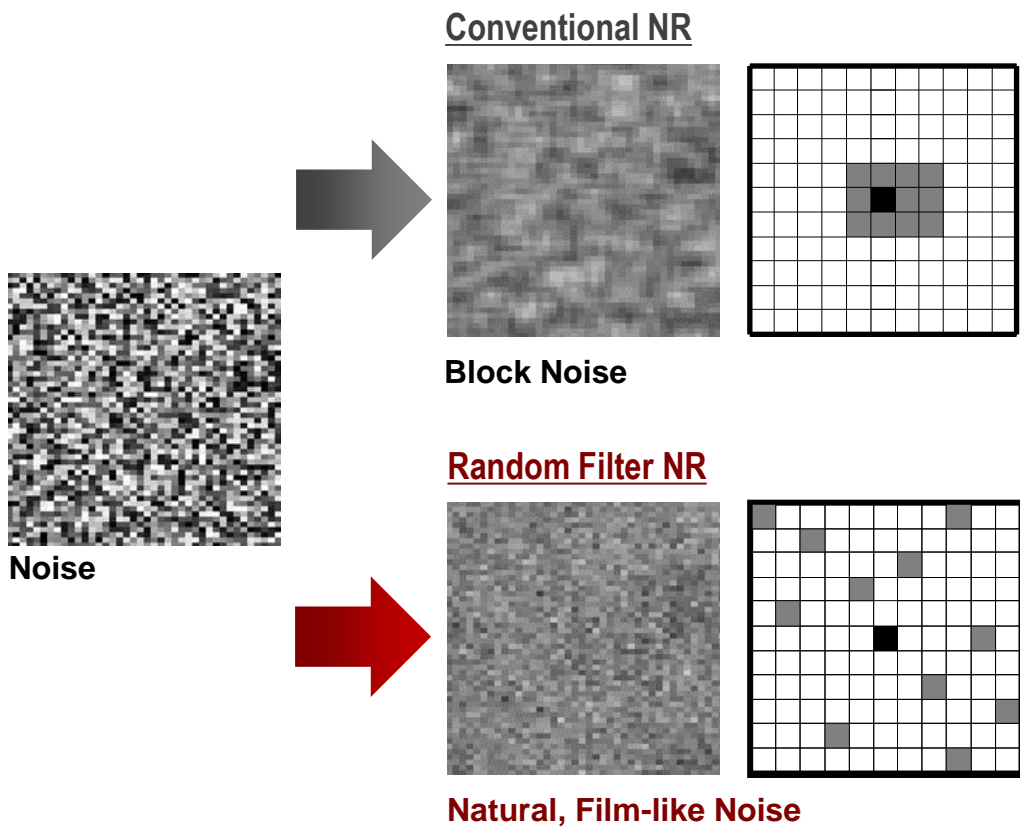Accurate evaluation of each color even if it is similar in color phase, saturation and luminosity.

Smooth Gradation

- Improved sensor control

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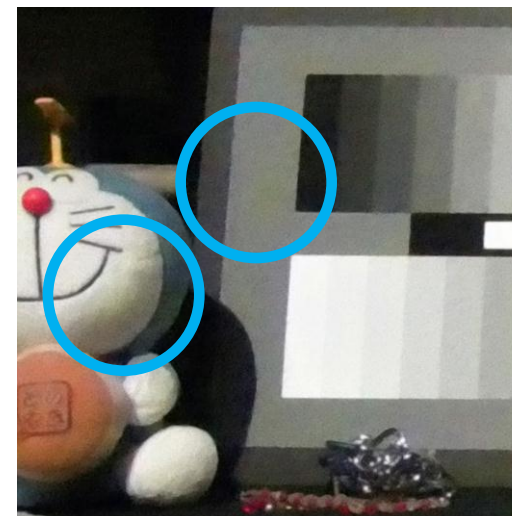
LUMIX G

New Random Filter

Block noise becomes "Grainy", which is closer to film pictures.

Conventional NR

Block Noise

Noise

Random Filter NR

Natural, Film-like Noise

Chrominance NR of Color Temperature

This removes "Yellow Block Noise".

V8FHD

V9AHD

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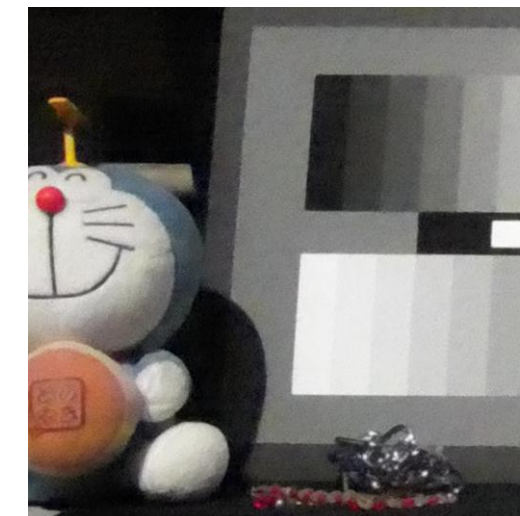
Low Resolution

Natural Imaging

Strong Sharpness

Adding Edge Processing at higher frequency achieves
the Optimal Edge Processing at a wide range (from low to high frequency).

This makes images more natural (Enhanced MTF).

Optimal Edge Processing of the skin tones & the subtle beauty of the hair!

LUMIX GH4

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Conventional: Adjustable range is narrow

DMC-GH4: Flexible color reproduction

Red → Yellow

Saturation   Brightness   Saturation   Brightness

Hue

Saturation

Brightness

INTERNAL USE ONLY
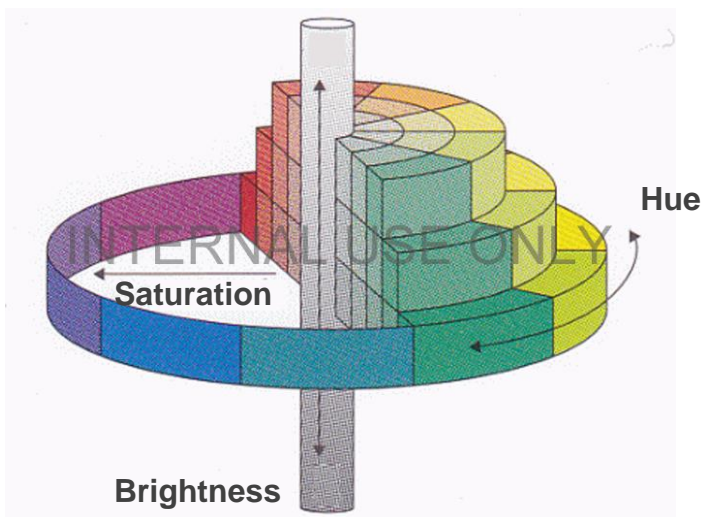
Finely adjustment dividing hue / saturation / luminosity into 16-axis!

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Focus Peaking   **NEW**

This function shows the peak of the focus in MF and AF+MF modes.

- Available when controlling the camera with a smartphone or tablet via Wi-Fi®
- Available for both photo and video recording

Highlight Shadow   **NEW**

The Live View function makes it possible to adjust highlight/shadow separately with the front/rear dials.

Available Settings

- Manual Adjustment
- 3 Preset Mode
- 3 Custom Mode

Preset 1 Higher Contrast

Preset 2 Lower Contrast

Preset 3 Brighten Shadow

RAW Processing   **NEW**

You can convert a picture taken in the RAW format into the JPEG format right on the camera.

Available Settings

- Exposure Comp.
- Photo Style
- i. Dynamic
- Contrast
- Highlight
- Shadow
- Saturation
- Noise Reduction
- i. Resolution
- Sharpness
- White Balance
- Color Space / Picture Size

LUMIX G

	Panasonic		Olympus	Canon	Nikon
	GH3	**GH4**	**E-M1**	**7D Successor**	**D7100**
Image Sensor	MFT, 16.05M	MFT, 16.05M	MFT, 16.28M	APS-C, 20M	APS-C, 24.1M
ISO Sensitivity	ISO200-12800, 125 / 25600 (Extended)	ISO200-25600, 100 (Extended)	ISO200-25600, 100 (ISO Low)	ISO100-12800, 25600 (Extended)	ISO100-6400, 25600 (Extended)
Shutter Speed	1/4000-60, Bulb, X=1/160 sec	1/8000-60, Bulb, X=1/250	1/8000-60, Bulb, X=1/320 (Built-in Flash)	1/8000-30, Bulb, X=1/250	1/8000-30, Bulb, X=1/250
Shutter Life	100,000 Times	**200,000 Times**	100,000 Times	150,000 Times	150,000 Times
Silent Shutter	Yes	**Yes**	-	Yes (Slightly Noisy)	Yes (Slightly Noisy)
AF System	Contrast AF, 23-area	Contrast AF with DFD, 49-area	Hybrid AF, 81-area (C) / 37-area (P)	Phase Difference AF, 19-area	Phase Difference AF, 51-area
AF Detective Range	0-18 EV	**-4-18 EV (Low Light AF)**	N/A	-0.5-18 EV	-2-19 EV
Burst Speed	6fps / 4fps with AF Tracking	**12fps / 7fps with AF Tracking**	10fps / 6.5fps with AF Tracking	8fps / N/A	6fps / N/A
Recordable Number	18 images (RAW) / 36 images (JPEG)	40 images (RAW) / 100 images (JPEG)	50 images (RAW) / 100 images (JPEG)	15 images (RAW) / 126 images (JPEG)	13 images (RAW) / 31 images (JPEG)
Finder	1744K-dot OLED LVF	**2359K-dot OLED LVF**	2360K-dot LCD EVF	OVF	OVF
Rea Monitor	3.0" 610K-dot OLED Free-angle, Static Touch	**3.0" 1036K-dot OLED Free-angle, Static Touch**	3.0" 1040K-dot LCD Tiltable, Static Touch	3.0" 1040K-dot LCD Static Touch	3.2" 1229K-dot LCD -
Wi-Fi / NFC	Yes / -	**Yes / Yes**	Yes / -	Optional Transmitter	Optional Transmitter
Flash Sync Terminal	Yes	Yes	Yes	-	-
Exterior Design	Mag Alloy Body & Splash/Dustproof	Mag Alloy Body & Splash/Dustproof	Mag Alloy Body & Splash/Dustproof	Mag Alloy Body & Splash/Dustproof	Mag Alloy Body & Splash/Dustproof
Battery Life	540 images	500 images	350 images	850 images	950 images
Dimensions (W x H x D)	132.9 x 93.4 x 82.0 mm	132.9 x 93.4 x 83.9 mm	130.4 x 93.5 x 63.1 mm	148.2 x 110.7 x 73.5 mm	135.5 × 106.5 × 76 mm
Weight (with SD, Battery)	550g	560g	497g	910g	765g

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The World's First 4K Video Recording*

* With a mirrorless camera.
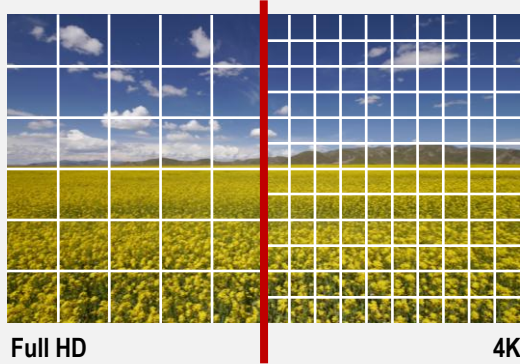
4 times the resolution of full HD!

Full HD — 4K

Versatile Video Recording Capability

- **Container Format:**
  MOV, MP4 (AAC, LPCM), AVCHD Progressive

- **Higher Bitrate:**
  100Mbps (IPB), 200Mbps (ALL-Intra)

- **System Frequency Selectable:**
  59.94Hz (23.98Hz) / 50.00Hz / 24.00Hz

LUMIX GH4

Unique Expression

- **Variable Frame Rate:**
  Quick Motion, Slow Motion

- **22 LUMIX Interchangeable Lenses:**
  Full-time AF with Smooth, Silent Focusing

- **Interval Video Recording:**
  Time Lapse Video, Stop Motion Animation

Expandability

- **Interface Unit (SDI output, XLR input)**
  (DMW-YAGH* / AG-YAGHG) * For US/Europe

- **Wireless Flash (GN58) (DMW-FL580L)**

- **Stereo / Gun / Newly Added Zoom Function**
  (DMW-MS2)

The DMC-GH4, with its heat-dispersing design, boasts unlimited continuous recording while achieving 4K recording and adopting versatile recording formats!

Video Performance Matching the Professional Workflow	GH3	GH4	5D MKIII	AF105 (MFT Pro. Movie)
4K / C4K video recording (3840x2160 / 4096x2160)	-	✔	-	-
System frequency is selectable (59.94Hz (23.98HZ) / 50.00Hz / 24.00Hz)	-	✔	-	✔
100Mbps (IPB) / 200Mbps (ALL-Intra) high-bitrate full-HD video recording	-	✔	-	-
Container format for high-bitrate is selectable (MP4 / MOV)	-	✔	-	-
HDMI monitor-through in video recording	✔	✔	✔	✔
HDMI monitor-through with 4:2:2 8/10 bit output	-	✔	-	Recordable with 4:2:2 10 bit
Variable frame rate	△	✔	-	Many modes
OSD display & control monitor for video	-	✔	-	✔
Operation type is switchable (Shutter Duration/ISO, Angle/ISO, Shutter Duration/dB)	-	✔	-	✔
Zebra pattern	-	✔	-	✔
Center marker	-	✔	-	✔
Color bars & 1KHz test tone	-	✔	-	✔
Zoom function of external mic DMW-MS2	-	✔	-	Also available with built-in mic
Manual directional changes of external mic DMW-MS2	-	✔	-	Also available with built-in mic
Synchro scan	△	✔	-	✔
Time code (Rec run / Free run)	✔	✔	✔	✔
Master pedestal adjustment	-	✔	-	✔
Hue adjustment	-	✔	-	✔
Cinelike gamma	-	✔	-	✔
Luminance level adjustment (16-255 / 16-235 / 0-255)	-	✔	-	-
SDI output with 4:2:2 8/10 bit (With time code) (Interface unit)	-	✔	-	Recordable with 4:2:2 10 bit
XLR input (Interface unit)	-	✔	-	✔
External input of time code (Shooting in multiple or editing) (Interface unit)	-	✔	-	Time code input /output is available

	Container	Recording Size	System Frequency	Frame Rate	Bitrate	Compression	Sound	Time Code	GH3	GH4
4K / C4K	MOV / MP4	4096x2160	24.00Hz	24.00p	100Mbps	IPB	LPCM	Yes	-	✔
		3840x2160	59.94Hz	29.97p / 23.98p					-	✔
			50.00Hz	25.00p					-	✔
			24.00Hz	24.00p					-	✔
	MP4		59.94Hz	29.97p / 23.98p			AAC	-	-	✔
			50.00Hz	25.00p					-	✔
High Bitrate Full HD	MOV / MP4	1920x1080	59.94Hz	59.94p / 29.97p / 23.98p	200Mbps	ALL-Intra	LPCM	Yes	MOV Only 72Mbps 29.97p / 25.00p 24.00p	✔
			50.00Hz	50.00p / 25.00p						✔
			24.00Hz	24.00p						✔
			59.94Hz	59.94p / 29.97p / 23.98p	100Mbps	IPB			-	✔
			50.00Hz	50.00p / 25.00p					-	✔
			24.00Hz	24.00p					-	✔
			59.94Hz	59.94p / 29.97p / 23.98p	50Mbps					✔
			50.00Hz	50.00p / 25.00p					MOV Only	✔
			24.00Hz	24.00p						✔

Selectable
MOV / MP4

Recordable
C4K / 4K

Selectable
System Frequency

3 Times Higher Bitrate
200Mbps

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Low Bitrate Full HD / **VGA / HD**

Container	Recording Size	System Frequency	Frame Rate	Bitrate	Compression	Sound	Purpose	GH3	GH4
AVCHD Progressive	1920x1080	59.94Hz	59.94p	28Mbps	IPB	Dolby	VIERA / DIGA	✔	✔
		50.00Hz	50.00p					✔	✔
AVCHD		59.94Hz	59.94i	24Mbps				✔	✔
				17Mbps				✔	✔
			23.98p	24Mbps				✔	✔
		50.00Hz	50.00i	24Mbps				✔	✔
				17Mbps				✔	✔
MP4		59.94Hz	59.94p	28Mbps		AAC	Computer	Firmware Ver. 1.1	✔
		50.00Hz	50.00p						✔
		59.94Hz	29.97p	20Mbps			Tablet / Smartphone	✔	✔
		50.00Hz	25.00p					✔	✔
	1280x720	59.94Hz	29.97p	10Mbps			Smartphone	✔	✔
		50.00Hz	25.00p					✔	✔
	640x480	59.94Hz	29.97p	4Mbps			Web	✔	✔
		50.00Hz	25.00p					✔	✔

Selectable **System Frequency**

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4:2:2 8-bit Output

NEW

It is possible to record motion pictures* on the SD memory card in the camera unit, while outputting them through the HDMI connection.

* 4:2:0 8-bit motion picture recording on the SD memory card in the camera unit.
・For [4K] or [C4K] video output, use an HDMI cable that has the HDMI logo on it,
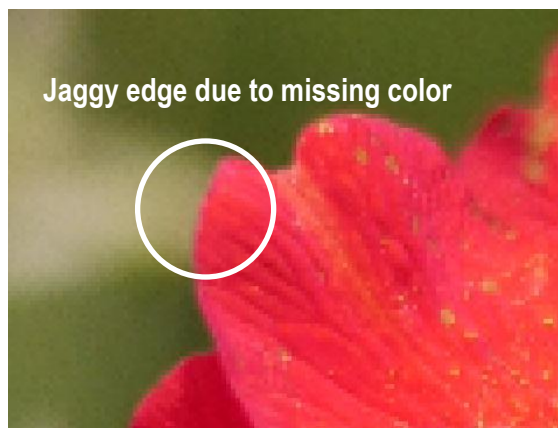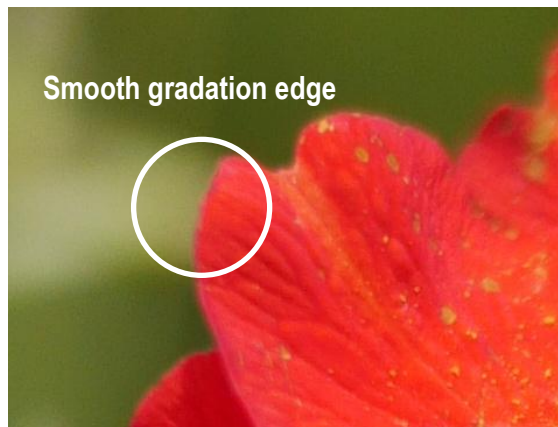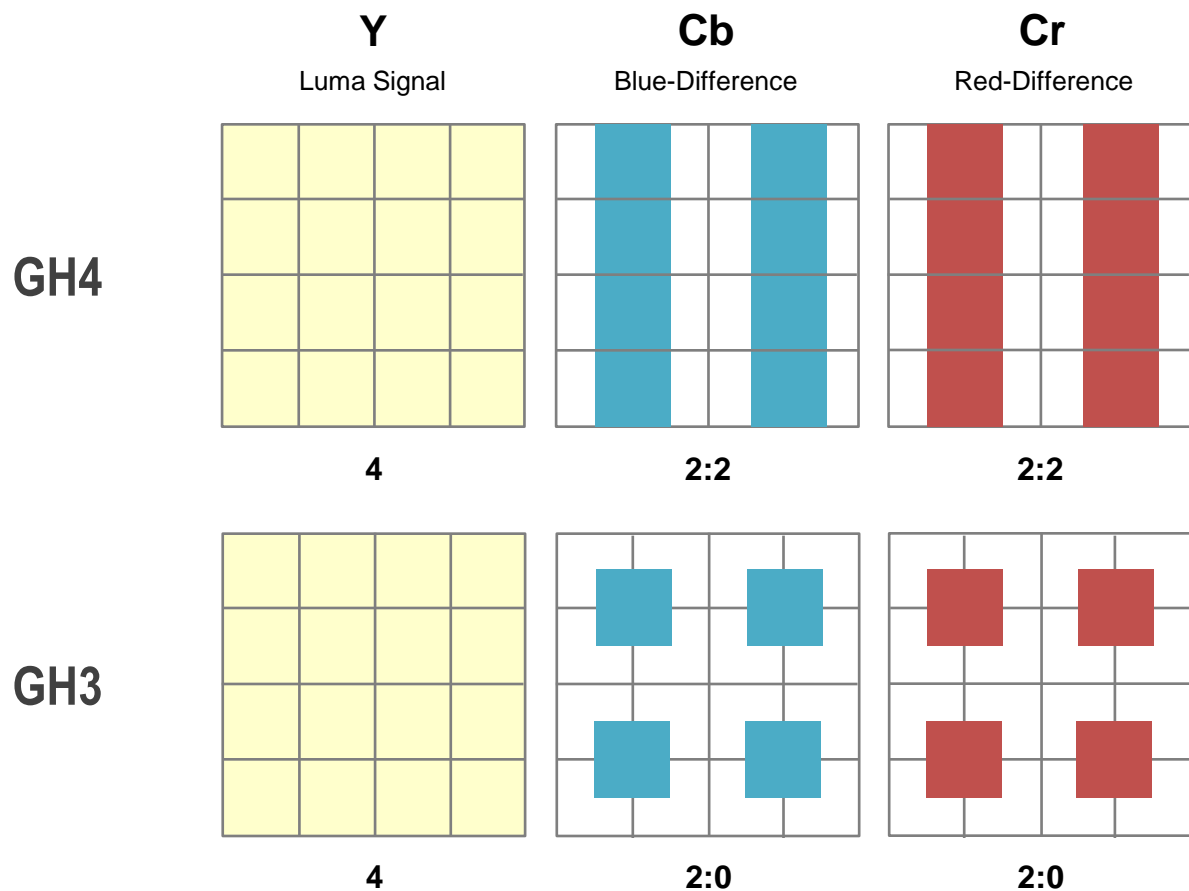and that is described as "4K compatible".

4:2:2 10-bit Output

NEW

In Creative Video Mode, it is possible to output motion pictures* through the HDMI connection in higher picture quality.
Ideal when the HDMI output is to be saved on external devices.

* It is not possible to record motion picture or still picture on the SD memory card in the camera unit.
・For [4K] or [C4K] video output, use an HDMI cable that has the HDMI logo on it,
and that is described as "4K compatible".

Information Display

■ It is possible to output the camera display to an external monitor.

■ It is possible to display information simultaneously on both the main unit's rear monitor and the external monitor.

■ <u>Furthermore, you can choose to output only the recording content or the content with the setting menus individually depending on a display.</u>

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HDMI Monitor-Through with 4:2:2 – Twice the Vertical Resolution of 4:2:0

The LUMIX GH4 features an HDMI monitor-through with 4:2:2*, which has twice the vertical resolution of the GH3's 4:2:0.
This achieves rich gradation and smooth edges with faithful color reproduction. It is also suitable for editing because it results in less deterioration when re-rendering.

Y	Cb	Cr
Luma Signal	Blue-Difference	Red-Difference

GH4

4   2:2   2:2

Smooth gradation edge

GH3

4   2:0   2:0

Jaggy edge due to missing color

* When 4:2:2 8-bit mode is selected, it is possible to record "4:2:0 8-bit" motion picture or still picture on the SD memory card in the camera unit. When 4:2:2 10-bit mode is selected, it is NOT possible to record motion picture or still picture on the SD memory card in the camera unit.

LUMIX GH4

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Variable Frame Rate

Dramatic slow-motion and unique quick-motion can be recorded in full HD.

GH4				GH3
59.94Hz		24.00Hz	50.00Hz	
29.97p	23.98p	24.00p	25.00p	23.98p
2fps		2fps	2fps	-
15fps		12fps	12fps	8fps/12fps/15fps
26fps		20fps	21fps	-
28fps		22fps	23fps	-
30fps		24fps	25fps	24fps
32fps		26fps	27fps	-
34fps		28fps	30fps	30fps
45fps		36fps	37fps	-
60fps		48fps	50fps	50fps
75fps		60fps	62fps	60fps
90fps		72fps	75fps	-
96fps		84fps	96fps	-
		96fps		-

Interval Video

The Stop Motion Animation and Time Lapse Shots that are so popular on the internet can be created right on the GH4.
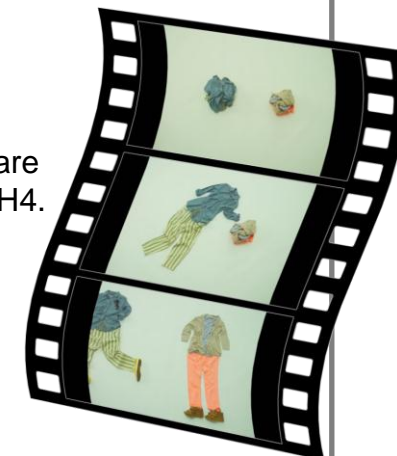
Quick Motion

- 2fps: Super Quick Video for Emotional or Humorous Expression
- Around 2 Times Quick: Humorous Expression
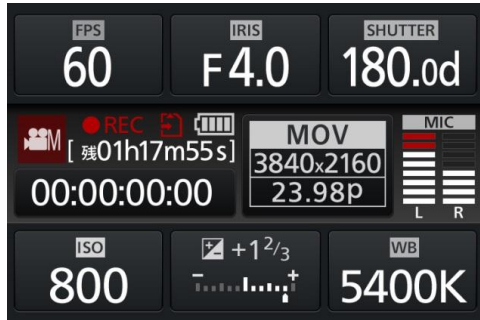- Around 1.2 Times Quick: Action Scene

Slow Motion

- 1.5-2.5 Times Slow: Lightness, Weight, Giving an Impression
- 2 Times Slow: Lightness of Background
- 3-4 Times Slow: Slow Motion Video That Is Generally Required

Control Panel **NEW**

The GUI for exclusive use of the video.

Operation Type **NEW**

Shutter Duration/ISO, Angle/ISO, Shutter Duration/dB
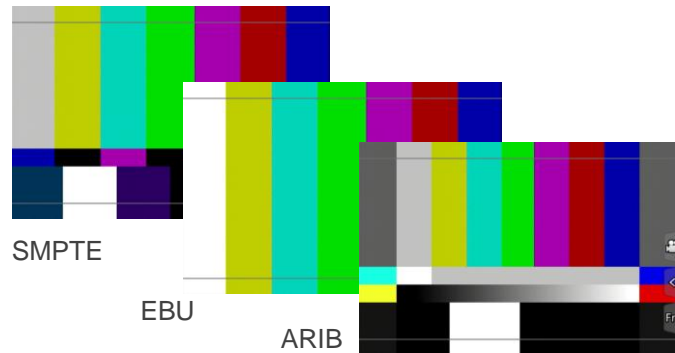

Shutter Duration
Angle
ISO
dB

Time Code

Time Code makes it easy to synchronize multiple images or sound source content in the post production workflow.

Time Code Display	ON / OFF
Count Up	Rec Run / Free Run
Time Code Value	Reset / Manual Input / Current Time
Time Code Mode	Drop Frame / Non-Drop Frame

Color Bars & 1KHz Test Tone **NEW**

SMPTE
EBU
ARIB

Synchro Scan **NEW**

You can reduce flickering and stripes on images in Creative Video Mode.
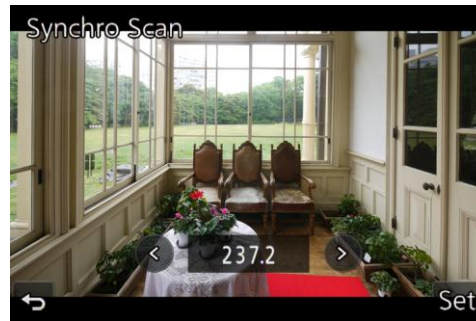
Luminance Level **NEW**

Sets the luminance range for motion pictures.

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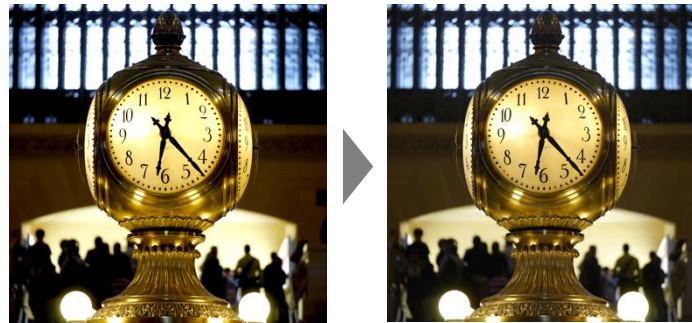
Master Pedestal Level **NEW**

Adjusts the black level in 31 steps.
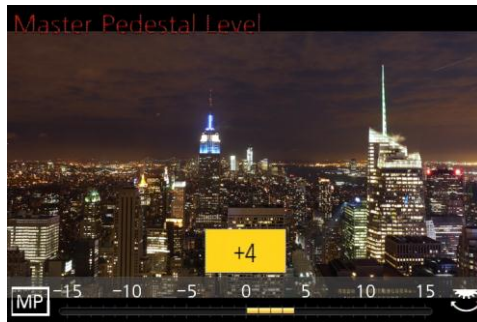
Cinelike Gamma **NEW**

This gives the video rich, cinema-like gradation.

Hue Adjustment **NEW**

Hue adjustment is newly added to the Photo Style mode.

Zebra Pattern **NEW**

Indicates parts that may be washed out through overexposure in a zebra pattern.
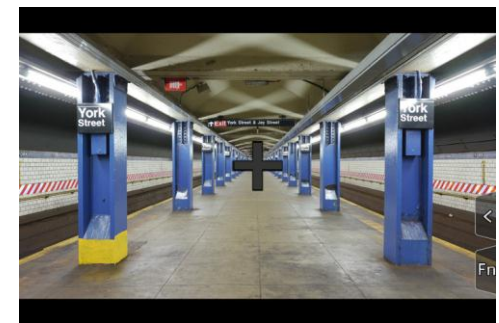

Focus Peaking **NEW**

For more practical manual focusing, the Focus Peaking function shows the peak of focus.

Center Marker **NEW**

Displays [+], which indicates the center of the recording screen.

Panasonic

LUMIX G

	Panasonic			Canon
	GH3		**GH4**	**5D Mark III**
Recording File Format	MOV (LPCM), MP4 (AAC), AVCHD (Dolby)		**MOV (LPCM), MP4 (LPCM/AAC), AVCHD (Dolby)**	MOV (LPCM)
Bitrate (Max.)	72Mbps (ALL-Intra) / 50Mbps (IPB)		**200Mbps (ALL-Intra) / 100Mbps (IPB)**	90Mbps (ALL-Intra) / 30Mbps (IPB)
File Size (Max.)	Full HD		**4K/C4K**	Full HD
System Frequency	NOT Selectable		Selectable	Selectable
Down Sampling	**Pixel Binning**		**Pixel Binning**	Line-skipping *Guess
Full Time AF	**Yes**		**Yes**	-
DF / NDF	Yes		Yes	Yes
RR / FR	Yes		Yes	Yes
Heat-Dispersing Design	**Yes**		**Yes**	- *Guess
Seamless File Generation	**Yes**		**Yes**	Yes (Max. 29 minutes 59 sec)
High-Speed Video	23.98p: 8-60fps		**29.97p/23.98p/24.00p/ 25.00p: 2-96fps**	-
Built-in Microphone	**Stereo**		**Stereo**	Monaural
Mic Level Adjustment	19-step		19-step	64-step (External)
External Microphone Input	φ3.5 mm		φ3.5 mm	φ3.5 mm
Headphone Output	φ3.5 mm		φ3.5 mm	φ3.5 mm
HDMI Output	4:2:0		**4:2:2**	4:2:0
GUI Output	**Yes**		**Yes**	Limited
Rear Monitor Display	**Yes**		**Yes**	-

Panasonic

An Interface Unit for Use in Professional Workflow

SDI Output

- ■ 4:2:2 10-bit output
- ■ 4K / HD output
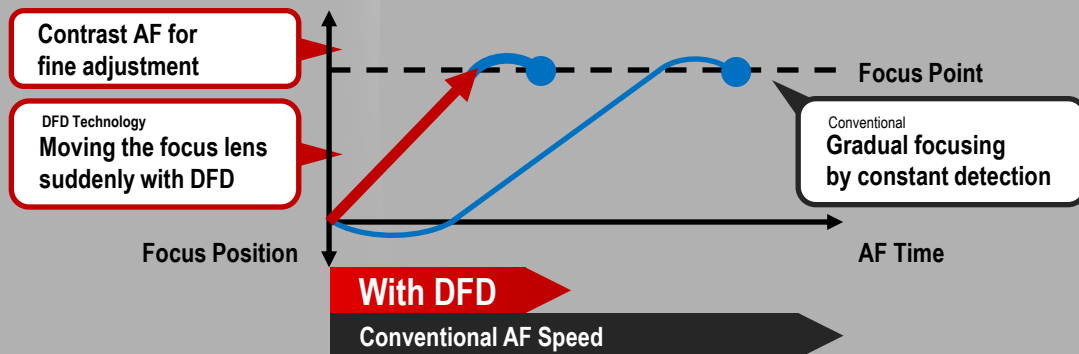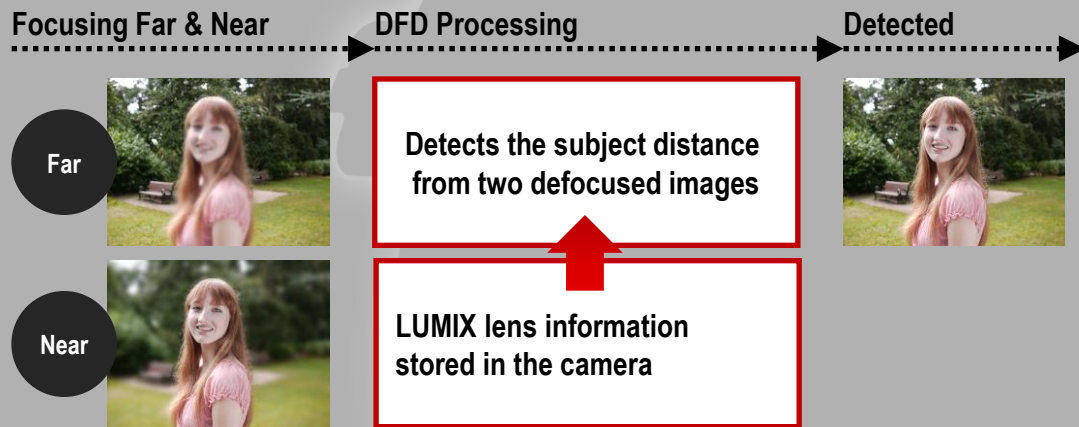- ■ 4K, 3G-SDI, HD-SDI

XLR Input

- ■ XLR input with 2 channels
- ■ Volume control dial enables L/R control
- ■ Audio level display with LED

Professional-Use

- ■ 12V DC IN (4-pin, XLR)
- ■ External input of time code (Multiple shooting or editing)

High-Speed DFD Technology & High-Precision of Contrast AF

DFD (Depth From Defocus) Technology

Focusing Far & Near → DFD Processing → Detected

Far

Near

Detects the subject distance from two defocused images

LUMIX lens information stored in the camera

Contrast AF for fine adjustment

DFD Technology
Moving the focus lens suddenly with DFD

Focus Point

Conventional
Gradual focusing by constant detection

Focus Position

AF Time

With DFD

Conventional AF Speed

* Contrast AF with DFD Technology works only with Panasonic Micro Four Thirds lenses.

0.07sec AF Speed

DFD technology achieves high-speed auto focusing.

	GH3	GH4
	0.09 sec	0.07 sec

7 fps with AF Tracking

DFD technology improves subject tracking performance in burst shooting.

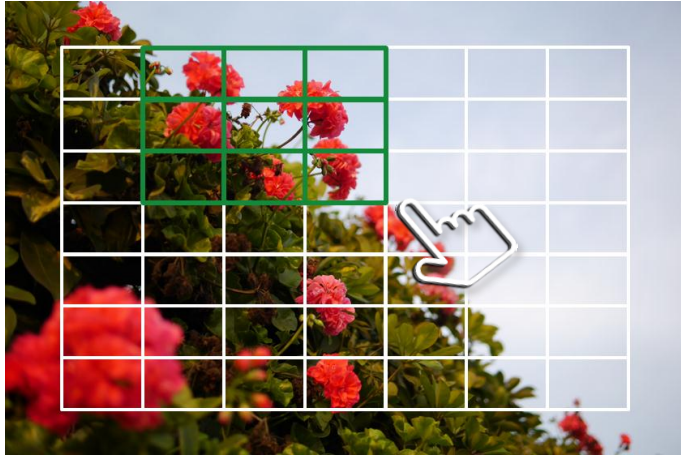|	GH3	GH4
	4.2 fps	7 fps

Accurate AFC & Improved Wobbling Quality
Both Photos & Videos

Fine wobbling improves the accuracy of AFC. A fast processing speed achieves smooth 4K video. Of course, there are no missing pixels, which is a problem with Hybrid AF.

The Ultimate Contrast AF
- Exceeding Phase-Difference AF!
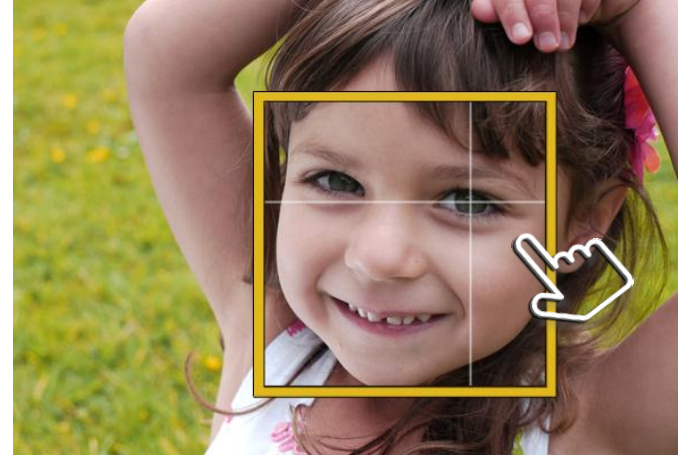
49-Area AF / Custom Multi   **NEW**

- The AF area has been increased from 23 to 49 areas.

- In Custom Multi Mode, you can freely select the AF-area group.

Face / Eye Detection AF   **NEW**

- The camera automatically detects the eyes in addition to the face.

- You can change the eye that you want to focus on with touch operation.

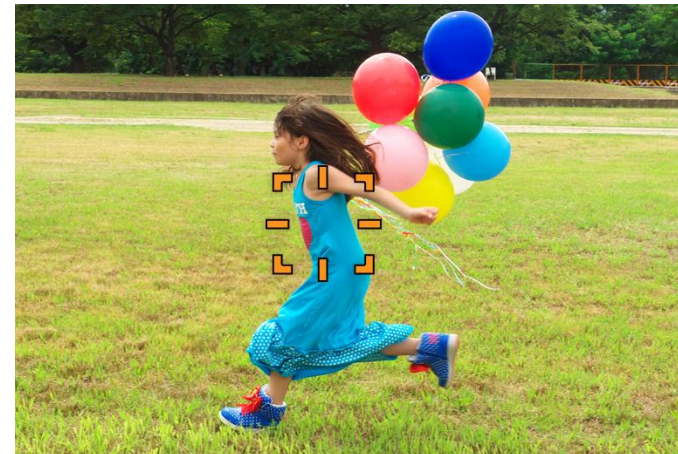- When video recording, the camera focuses on the face.

"Seamless" 1-Area AF   **NEW**

- You can freely change the size of the AF frame.

Advanced "AF Tracking"

- Tracking AF is advanced in the point of tracking accuracy.

GH4: Recognize the subject's "COLOR" and "MOVEMENT".

Previous: Recognizes the subject's "COLOR"

AF frame moves to a similar color...

Panasonic

Full-Area AF

It's possible to focus on any point
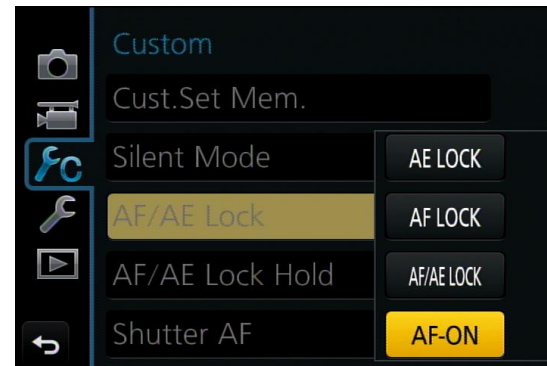in the 100% field of view.

Pinpoint AF

More precise auto focusing by further
enlarging the focusing area.
Display time is selectable.

One-Shot AF   *NEW*

This lets you use the AF even in MF mode to
roughly focus on the subject, then go back to
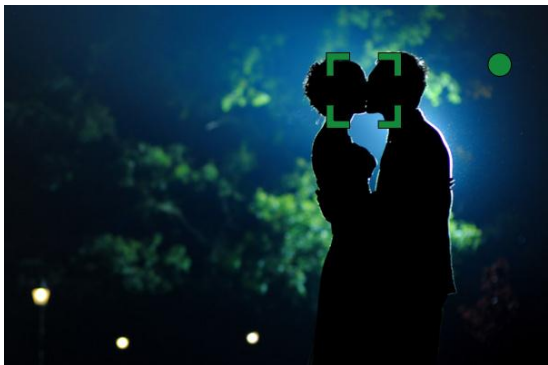MF to precisely focus.

Touch Pad AF

This function lets you use both the LVF and
monitor simultaneously.
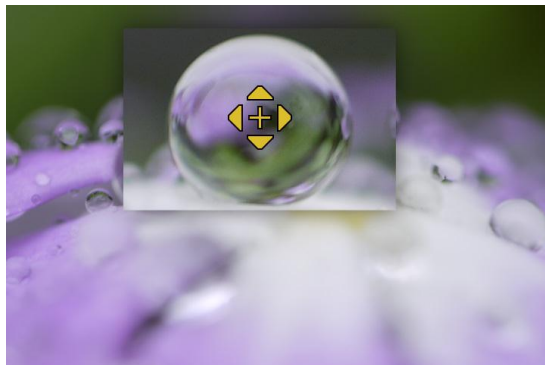Selectable relative/absolute coordinate position.

Low Light AF   *NEW*

This gains higher performance in -4EV low-lit
situations, which are as dark as a starry sky
with no other light source.

MF Assist

This function enlarges its magnification range
up to 10x in 0.1x steps. In addition to the MF
ring control, cursor operation is available.

Focus Peaking   *NEW*

This function shows the peak of the focus in
MF and AF+MF modes even while remote-
controlling the camera via Wi-Fi®.

Eye Sensor AF

Eye Sensor AF automatically starts focusing
when the user looks into the LVF.

LUMIX GH4

Panasonic

Super Responsive High-Speed Burst Shooting

12 fps with Full-resolution

The DMC-GH4 can fire off up to approx. 12 fps in full resolution.

GH3	GH4
6 fps	12 fps

7 fps with AF Tracking

DFD technology improves subject tracking performance in burst shooting.

GH3	GH4
4.2 fps	7 fps

40 fps with Electronic Shutter

Even higher-speed burst shooting is possible when the electronic shutter is used.

GH3	GH4
20 fps	40 fps

"High-Resolution" & " High-Response" OLED Display with High-Contrast Ratio

2359K-dot OLED LVF (Live View Finder)

NEW

The OLED display features a faithful contrast reproducibility of 10000:1 in the highly evolved GH4. As a result, the GH4's LVF has achieved performance similar to the OVF.

- 2359K-dot OLED display
- 100% field of view
- 1.34x / 0.67x (35mm equiv.) magnification
- Eye point 21mm
- Eye sensor

1036K-dot OLED, Touch, Free-angle Monitor

NEW

- 1036K-dot OLED display
- 3:2, 3.0-inch
- Free-angle
- Static touch

Panasonic

**The DMC-GH4 achieves a 200,000 shutter life,
which is twice as much as the normal 100,000 shutter life.**

GH3	100,000 Times
E-M1	100,000 Times
D7100	150,000 Times

GH4 : 200,000 Times

On average, pro wedding photographer takes 1,000 shots per week
x 52 = 52,000 shots meaning GH3's product life is less than 2 years.

GH4: Approx. 4 YEARS LIFE!
without changing shutter unit

Battery Grip
DMW-BGGH3

- **Comfortable grip even in vertical shooting**
- **Buttons can be used in the same way as the GH4**
- **High grade design that totally matches the GH4**

Interface Unit   **NEW**
DMW-YAGH* / AG-YAGHG * For the US / Europe.

- **SDI output**
  4:2:2 10-bit output, 4K/HD output
- **XLR input (2ch)**
  L/R control with volume control dial, LED audio level display
- **Professional-Use**
  12V DC IN Support (4-pin, XLR), External input of time code

Stereo/ Gun / Zoom Mic
DMW-MS2

- **Zoom function (Lens Auto)** *NEW*
- **Manual directional change** *NEW*
- **Holder with vibrational absorption mechanism**
- **Plug-in power type**
- **Windjammer**

Wireless Flash   **NEW**
DMW-FL580L

- **GN58**
- **Fast recycling**
- **Bounce lighting**

Large Capacity AC Adaptor   **NEW**
DMW-AC10

- **Large capacity for 4K/60p**

Input / Output Terminals

- Φ3.5mm mic socket
- Φ3.5mm headphone socket
- Flash synchro terminal
- Φ2.5mm remote socket (Compatible with IBD 3rd party video remote control)
- HDMI output
- AV composite output
- Compatible with SDXC/SDHC UHS-I Memory Cards with UHS Class 3 (U3)

LUMIX G

GN58

■ **Included Accessories**

Diffuser

Warming Filter

IR Filter

A Large-Size Flash to Achieve Comfortable Shooting Featuring Fastest Recycling & Extra Functions

1 **The Fastest Recycling Time**
Approx. 1.7sec in full flash – As fast as a large external flash

2 **Wireless Shooting Capability**
Greatly increased shooting possibilities (4 channels, 3 groups)

3 **LED Light Equipment**
Useful for dimly lit conditions or video recording against backlighting

Multi Flash

Frequency: 1-500Hz, Max. 100 times

The flash emits light sequentially while the shutter is open. You may take a picture that captures the continuous movement of the subject in a single frame.

Modeling Flash

Flash time: 1 second

Continuously flashes a fixed amount of light towards the subject. You may check the lighting condition such as reflection and shadow, before you shoot.

Flash Auto-Zoom

Range : 7mm (with wide-panel) - 100mm
* 35mm camera equivalent: 14-200mm

Automatically adjusts the lighting angle, synchronizing with the zoom ratio of the lens.

Panasonic