

Clifton Cameras Product Specification

Panasonic LUMIX DC-G9 MK II

Specifications

TYPE	Type	Digital Single Lens Mirrorless camera		
	Lens mount	Micro Four Thirds mount		
IMAGE SENSOR	Type	Live MOS sensor (17.3 x 13.0 mm)		
	Camera effective pixels / Total pixels	25.21 megapixels / 26.52 megapixels		
	AR (Anti Reflection) coating	Yes		
	Aspect ratio / Color filter	4:3 / Primary color filter		
	Dust reduction system	Image sensor shift type		
LATITUDE		13+ stops (V-Log) (Sensor output is 60fps or less) 12+ stops (V-Log) (Sensor output is 61fps or higher)		
STILL IMAGE	Recording file format	JPEG (DCF, Exif 2.31), RAW		
	Aspect ratio	4:3 / 3:2 / 16:9 / 1:1		
	File size (Pixels)	4:3	5776x4336(L) / 4096x3072(M) / 2944x2208(S) / 11552x8672(XL)* / 8192x6144(LL)* *High Resolution Mode.	
		3:2	5776x3848(L) / 4096x2728(M) / 2944x1960(S) / 11552x7696(XL)* / 8192x5464(LL)* *High Resolution Mode.	
		16:9	5776x3248(L) / 4096x2304(M) / 2944x1656(S) / 11552x6496(XL)* / 8192x4608(LL)* *High Resolution Mode.	
		1:1	4336x4336(L) / 3072x3072(M) / 2208x2208(S) / 8672x8672(XL)* / 6144x6144(LL)* *High Resolution Mode.	
	Image quality	RAW / RAW+Fine / RAW+Standard / Fine / Standard (High Resolution mode: Combined / RAW / RAW+Fine / Fine)		
Color space	sRGB, AdobeRGB			
MOTION PICTURE	Recording file format	MOV: H.264/MPEG-4 AVC, H.265/HEVC, Apple ProRes MP4: H.264/MPEG-4 AVC, H.265/HEVC		
	Audio format	MOV: LPCM (2ch 48kHz/24-bit, 96kHz/24-bit*) (4ch 48kHz/24-bit**, 96kHz/24-bit***) MP4: AAC (2ch 48kHz/16-bit) *When attaching Φ 3.5mm microphone or DMW-XLR1 (sold separately). **When attaching DMW-XLR1 (sold separately).		
	System frequency	59.94Hz / 50.00Hz / 24.00Hz		
	Image area of video	FULL / PIXEL/PIXEL		
	MOV (*1) (*2) *HLG is selectable.	59.94Hz	[5.8K] 5760x4320 (4:3)	29.97p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 23.98p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to FULL during this recording mode.
			[5.7K] 5728x3024 (17:9)	59.94p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 47.95p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 29.97p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 23.98p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to FULL during this recording mode.

			<p>[4.4K] 4352x32 64 (4:3)</p> <p>59.94p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 47.95p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to PIXEL/PIXEL during this recording mode.</p>
			<p>[C4K] 4096x21 60</p> <p>119.88p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 59.94p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 59.94p, 600Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 59.94p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 59.94p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 47.95p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 47.95p, 600Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 47.95p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 47.95p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 29.97p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 29.97p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 29.97p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 23.98p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 23.98p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD. **External USB-SSD recording.</p>
			<p>[4K] 3840x21 60</p> <p>119.88p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 59.94p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 59.94p, 600Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 59.94p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 59.94p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 47.95p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 47.95p, 600Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 47.95p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 47.95p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 29.97p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 29.97p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 29.97p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 23.98p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 23.98p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 23.98p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD. **External USB-SSD recording.</p>

			<p>[FHD] 1920x1080</p> <p>239.76p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/** 239.76p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM)*/** 239.76p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/** 119.88p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 119.88p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM)** 119.88p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)** 59.94p, 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 59.94p, 100Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 59.94p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 47.95p, 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 47.95p, 100Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 47.95p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 29.97p, 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 29.97p, 100Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 29.97p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 23.98p, 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 23.98p, 100Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 23.98p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *Image Area of Video is set to FULL during this recording mode. **External USB-SSD recording. An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required. ***An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD.</p>
	50.00Hz	<p>[5.8K] 5760x4320 (4:3)</p> <p>25.00p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to FULL during this recording mode.</p>	
		<p>[5.7K] 5728x3024 (17:9)</p> <p>50.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 25.00p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to FULL during this recording mode.</p>	
		<p>[4.4K] 4352x3264 (4:3)</p> <p>50.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to PIXEL/PIXEL during this recording mode.</p>	
		<p>[C4K] 4096x2160</p> <p>100.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 50.00p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 50.00p, 600Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 50.00p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 50.00p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 25.00p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 25.00p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 25.00p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)</p>	

			<p>LPCM) *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD. **External USB-SSD recording.</p>
			<p>[4K] 3840x21 60</p> <p>100.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 50.00p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 50.00p, 600Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 50.00p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 50.00p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 25.00p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 25.00p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 25.00p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD. **External USB-SSD recording.</p>
			<p>[FHD] 1920x10 80</p> <p>200.00p, 800Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/** 200.00p, 200Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM)*/*** 200.00p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/*** 100.00p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*** 100.00p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM)*** 100.00p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*** 50.00p, 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 50.00p, 100Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 50.00p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) 25.00p, 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 25.00p, 100Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 25.00p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *Image Area of Video is set to FULL during this recording mode. **External USB-SSD recording. An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required. ***An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD.</p>
	24.00Hz	[5.8K] 5760x43 20 (4:3)	<p>24.00p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to FULL during this recording mode.</p>

			<p>[5.7K] 5728x30 24 (17:9)</p> <p>48.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 24.00p, 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to FULL during this recording mode.</p>
			<p>[4.4K] 4352x32 64 (4:3)</p> <p>48.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* *Image Area of Video is set to PIXEL/PIXEL during this recording mode.</p>
			<p>[C4K] 4096x21 60</p> <p>120.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 24.00p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 24.00p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 24.00p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD.</p>
			<p>[4K] 3840x21 60</p> <p>120.00p, 300Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 24.00p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 24.00p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 24.00p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD.</p>
			<p>[FHD] 1920x10 80</p> <p>120.00p, 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)* 120.00p, 150Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM)* 120.00p, 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 24.00p, 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM) 24.00p, 100Mbps (4:2:2 10-bit LongGOP) (H.264/MPEG-4 AVC, LPCM) 24.00p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM) *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required on a USB-SSD.</p>
	MP4 (*1)	59.94Hz	<p>[4K] 3840x21 60</p> <p>59.94p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, AAC)* 29.97p, 72Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, AAC)* 23.98p, 72Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, AAC)* 29.97p, 100Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC) 23.98p, 100Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC) *HLG is selectable.</p>
			<p>[FHD] 1920x10 80</p> <p>59.94p, 28Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC) 29.97p, 20Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC) 23.98p, 24Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC)</p>
		50.00Hz	<p>[4K] 3840x21 60</p> <p>50.00p, 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, AAC)* 25.00p, 72Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, AAC)* 25.00p, 100Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC) *HLG is selectable.</p>
			<p>[FHD] 1920x10 80</p> <p>50.00p, 28Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC) 25.00p, 20Mbps (4:2:0 8-bit LongGOP) (H.264/MPEG-4 AVC, AAC)</p>
		24.00Hz	-

	ProRes (*1) (*2)	59.94Hz	[5.7K] 5728x30 24 (17:9)	29.97p, 1.9Gbps (ProRes 422 HQ) / 1.3Gbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* 23.98p, 1.5Gbps (ProRes 422 HQ) / 1.0Gbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* *External USB-SSD recording. Image Area of Video is set to FULL during this recording mode.
			[C4K] 4096x21 60	59.94p, 1.9Gbps (ProRes 422 HQ) / 1.3Gbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* 29.97p, 972Mbps (ProRes 422 HQ) / 648Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* 23.98p, 778Mbps (ProRes 422 HQ) / 519Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* *External USB-SSD recording.
			[FHD] 1920x10 80	59.94p, 454Mbps (ProRes 422 HQ) / 302Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM) 29.97p, 227Mbps (ProRes 422 HQ) / 151Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM) 23.98p, 181Mbps (ProRes 422 HQ) / 121Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)
		50.00Hz	[5.7K] 5728x30 24 (17:9)	25.00p, 1.6Gbps (ProRes 422 HQ) / 1.1Gbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* *External USB-SSD recording. Image Area of Video is set to FULL during this recording mode.
			[C4K] 4096x21 60	50.00p, 1.6Gbps (ProRes 422 HQ) / 1.1Gbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* 25.00p, 811Mbps (ProRes 422 HQ) / 541Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* *External USB-SSD recording.
			[FHD] 1920x10 80	50.00p, 378Mbps (ProRes 422 HQ) / 252Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM) 25.00p, 189Mbps (ProRes 422 HQ) / 126Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)
		24.00Hz	[5.7K] 5728x30 24 (17:9)	24.00p, 1.5Gbps (ProRes 422 HQ) / 1.0Gbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* *External USB-SSD recording. Image Area of Video is set to FULL during this recording mode.
			[C4K] 4096x21 60	24.00p, 779Mbps (ProRes 422 HQ) / 519Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)* *External USB-SSD recording.
			[FHD] 1920x10 80	24.00p, 182Mbps (ProRes 422 HQ) / 121Mbps (ProRes 422) (H.264/MPEG-4 AVC, LPCM)
SLOW & QUICK	MOV (*1) *HLG is selectable.	59.94Hz	[C4K] 4096x21 60	59.94p (Maximum output of sensor is 120fps), 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 29.97p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 29.97p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 23.98p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 23.98p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. **External USB-SSD recording.
			[4K] 3840x21 60	59.94p (Maximum output of sensor is 120fps), 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 29.97p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 29.97p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** 23.98p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 23.98p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. **External USB-SSD recording.

			<p>[FHD] 1920x1080</p> <p>59.94p (Maximum output of sensor is 300fps), 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/** 59.94p (Maximum output of sensor is 240fps), 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/** 29.97p (Maximum output of sensor is 300fps), 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/** 29.97p (Maximum output of sensor is 240fps), 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/** 23.98p (Maximum output of sensor is 300fps), 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/** 23.98p (Maximum output of sensor is 240fps), 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/** *Maximum output of sensor is 120fps when Image Area of Video is set to PIXEL/PIXEL. **An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. ***External USB-SSD recording. An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher.</p>
		50.00Hz	<p>[C4K] 4096x2160</p> <p>50.00p (Maximum output of sensor is 120fps), 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 25.00p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 25.00p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. **External USB-SSD recording.</p>
			<p>[4K] 3840x2160</p> <p>50.00p (Maximum output of sensor is 120fps), 200Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 25.00p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 25.00p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. **External USB-SSD recording.</p>
			<p>[FHD] 1920x1080</p> <p>50.00p (Maximum output of sensor is 300fps), 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/** 50.00p (Maximum output of sensor is 240fps), 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/** 25.00p (Maximum output of sensor is 300fps), 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/** 25.00p (Maximum output of sensor is 240fps), 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/** *Maximum output of sensor is 120fps when Image Area of Video is set to PIXEL/PIXEL. **An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. ***External USB-SSD recording. An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher.</p>
		24.00Hz	<p>[C4K] 4096x2160</p> <p>24.00p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 24.00p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. **External USB-SSD recording.</p>
			<p>[4K] 3840x2160</p> <p>24.00p (Maximum output of sensor is 120fps), 150Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)* 24.00p (Maximum output of sensor is 60fps), 400Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)** *An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. **External USB-SSD recording.</p>

			[FHD] 1920x1080	24.00p (Maximum output of sensor is 300fps), 100Mbps (4:2:0 10-bit LongGOP) (H.265/HEVC, LPCM)*/** 24.00p (Maximum output of sensor is 240fps), 200Mbps (4:2:2 10-bit ALL-Intra) (H.264/MPEG-4 AVC, LPCM)*/*** *Maximum output of sensor is 120fps when Image Area of Video is set to PIXEL/PIXEL. **An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher on a USB-SSD. ***External USB-SSD recording. An AC Adaptor DMW-AC10 (optional) and DC Coupler DMW-DCC17 (optional) are required to record video of 61fps or higher.
EXTERNAL USB-SSD RECORDING			Yes (ON / OFF)	
VIEWFINDER	Type	OLED Live View Finder		
	Pixels	Approx. 3.68 million dots		
	Field of view / Magnification	Approx. 100% / Approx. 1.6x / 0.8x (35mm camera equivalent) with 50 mm lens at infinity; -1.0 m ⁻¹ , when the aspect ratio is set to 4:3		
	Eye point / Diopter adjustment	Approx. 21 mm at infinity; -1.0 m ⁻¹ / -4.0 - +2.0 (dpt)		
	Eye sensor	Yes		
	Display speed	120fps / 60fps		
REAR MONITOR	Type	TFT LCD monitor with static touch control		
	Monitor size	Free-angle, 3.0-inch (7.6cm), 3:2 aspect		
	Pixels	Approx. 1.84 million dots		
	Field of view	Approx. 100%		
FOCUS (*3)	Type	Phase Detection AF system / Contrast AF system		
	DFD technology	Yes		
	Focus mode	AFS (Single) / AFC (Continuous) / MF		
	AF mode	Tracking / Full Area AF / Zone (Horizontal/Vertical) / Zone / 1-Area+ / 1-Area / Pinpoint *Automatic Detection can be turned ON to switch between Human / Animal / Car / Motorcycle. Except when Pinpoint is set.		
	AF detective range	EV -4 - 18 (F2.0, ISO100 equivalent, AFS)		
	AF custom setting	AF Sensitivity, AF Area Switching Sensitivity, Moving Object Prediction		
	AF assist light	Yes		
	AF lock	Set the Fn button in custom menu to AF lock		
	Focus ring control	Nonlinear / Linear* (90°/ 120°/ 150°/ 180°/ 210°/ 240°/ 270°/ 300°/ 330°/ 360°/ 720°/ 1080°/ Maximum) *When a compatible lens is attached.		
	Others	AF-ON, AF-ON: Near Shift, AF-ON: Far Shift, Focus Limiter, Focus Peaking, 1-Area AF Moving Speed, AF Micro Adjustment, Continuous AF (during motion picture recording), Focus/Shutter Priority, Focus Switching for Vert/Hor, AF/AE Lock Hold, AF+MF, MF Assist, MF Guide, Focus Ring Lock, Show/Hide AF Mode, AF-Point Scope, Shutter AF, Half Press Shutter, Quick AF, Eye Sensor AF, Loop Focus Frame, Enlarged Live Display (Video), Touch Shutter, Touch AF/AE Function, Touch Pad AF, Lens Focus Resume		
EXPOSURE CONTROL	Light metering system	1,728-zone multi-pattern sensing system		
	Light metering mode	Multiple / Center Weighted / Spot / Highlight Weighted		
	Metering range	EV0-18 (F2.0 lens, ISO100 equivalent)		
	Mode dial	Program AE (P) / Aperture Priority AE (A) / Shutter Priority AE (S) / Manual Exposure (M) / Creative Video (P/A/S/M)* / Slow&Quick / Custom 1, 2, 3 / Intelligent Auto *The same exposure operations as P/A/S/M mode is available.		
	Exposure compensation	1/3 EV step ±5EV (±3EV for motion picture)		

	ISO sensitivity (Standard output sensitivity)	Still image	<p>[Normal] Auto / 50 (Extended ISO) / 100-25600</p> <p>[V-Log] Auto / 125 (Extended ISO) / 500-12800</p> <p>*Switchable between 1/3 or 1 EV step.</p>
		Motion picture	<p>[Normal] Sensor output is 60fps or less (Base ISO 100): Auto / 50 (Extended ISO) / 100-12800 Sensor output is 61fps or higher (Base ISO 100): Auto / 50 (Extended ISO) / 100-3200 / 4000-12800 (Extended ISO)</p> <p>[V-Log] Sensor output is 60fps or less (Base ISO 500): Auto / 125-400 (Extended ISO) / 500-12800 Sensor output is 61fps or higher (Base ISO 250): Auto / 125-200 (Extended ISO) / 250-3200 / 4000-12800 (Extended ISO)</p> <p>[Hybrid Log Gamma] Sensor output is 60fps or less (Base ISO 250): Auto / 250-12800 Sensor output is 61fps or higher (Base ISO 250): Auto / 250-3200 / 4000-12800 (Extended ISO)</p> <p>*Switchable between 1/3 or 1 EV step.</p>
	ISO Auto	Still image	<p>[Normal] Minimum: 100-12800 Max: Auto / 200-25600</p> <p>[V-Log] Minimum: 500-6400 Max: Auto / 800-12800</p>

	Motion picture	<p>[Normal] Minimum: Sensor output is 60fps or less: 100-6400 Sensor output is 61fps or higher: 100-1600 Max: Sensor output is 60fps or less: Auto / 200-12800 Sensor output is 61fps or higher: Auto / 200-3200</p> <p>[V-Log] Minimum: Sensor output is 60fps or less: 500-6400 Sensor output is 61fps or higher: 250-1600 Max: Sensor output is 60fps or less: Auto / 800-12800 Sensor output is 61fps or higher: Auto / 400-3200</p> <p>[Hybrid Log Gamma] Minimum: Sensor output is 60fps or less: 250-6400 Sensor output is 61fps or higher: 250-1600 Max: Sensor output is 60fps or less: Auto / 400-12800 Sensor output is 61fps or higher: Auto / 400-3200</p>
	AE lock	Set the Fn button in custom menu to AE lock
IMAGE STABILIZATION SYSTEM		<p>B.I.S. (5-axis / 8.0-stop*) *Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=60mm (35mm camera equivalent f=120mm) when H-ES12060 is used.]</p> <p>Dual I.S. 2 (7.5-stop**) **Based on the CIPA standard [Yaw/Pitch direction: focusing distance f=140mm (35mm camera equivalent f=280mm) when H-FSA14140 is used.]</p>
WHITE BALANCE	White balance	AWB / AWBc / AWBw / 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	Type	Focal-plane shutter
	Shutter speed	Still image: Bulb (Max. 30 minutes), 1/8,000 - 60 Electronic front curtain shutter: Bulb (Max. 30 minutes), 1/2,000 - 60 Electronic shutter: Bulb (Max. 60 sec), 1/32,000 - 60 Motion picture: 1/25,000 - 1/25 Creative Video M mode / MF mode: 1/25,000 - 1/8
	Self timer	10sec, 3 images / 2sec / 10sec / Custom Time
	Remote control	Remote control by DMW-RS2 (sold separately)
	Silent mode / Shutter type	Yes / Yes (Auto / Mechanical / Electronic front curtain / Electronic / Electronic+NR)
BRACKET	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
	Focus bracket	1 to 999 images, focus steps can be set in 10 levels
	White balance bracket	3 images in blue/amber axis or in magenta/green axis, color temperature setting

BURST SHOOTING	Burst speed	Mechanical shutter	H: 14 frames/sec (AFS/MF), 10 frames/sec (AFC) (with Live View) M: 6 frames/sec (AFS/AFC/MF) (with Live View) L: 2 frames/sec (AFS/AFC/MF) (with Live View)
		Electronic front curtain shutter	H: 14 frames/sec (AFS/MF), 9 frames/sec (AFC) (with Live View) M: 6 frames/sec (AFS/AFC/MF) (with Live View) L: 2 frames/sec (AFS/AFC/MF) (with Live View)
		Electronic shutter	SH75: 75 frames/sec (AFS/MF) SH60: 60 frames/sec (AFS/AFC/MF) SH20: 20 frames/sec (AFS/AFC/MF) SH75 PRE: 75 frames/sec (AFS/MF) SH60 PRE: 60 frames/sec (AFS/AFC/MF) SH20 PRE: 20 frames/sec (AFS/AFC/MF) H: 14 frames/sec (AFS/MF), 9 frames/sec (AFC) (with Live View) M: 6 frames/sec (AFS/AFC/MF) (with Live View) L: 2 frames/sec (AFS/AFC/MF) (with Live View)
	Number of recordable images	H/M/L* RAW+JPEG: More than 160 images RAW: More than 170 images JPEG: More than 200 images *Until the burst shooting speed slows. When recording is performed under the test conditions specified by Panasonic. *When using a card with SD Speed Class with "UHS-II UHS Speed Class 3 (U3)". SH RAW / RAW+JPEG / JPEG: 200 images	
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 only.	
	Flash synchronization	1st Curtain Sync, 2nd Curtain Sync.	
	Flash output adjustment	1/3EV step ±3EV	
	Synchronization speed	Less than 1/250 second	
	Wireless control	Yes (When using DMW-FL200L / FL360L / FL580L (sold separately)), Wireless Channel: 1ch/2ch/3ch/4ch	
EXTRA TELE CONVERSION	2.0x (EX S), 1.4x (EX M) *Only for still image recording.		
COLOR SETTINGS	Photo Style	Photo Style	Standard / Vivid / Natural / L. Classic Neo / Flat / Landscape / Portrait / Monochrome / L. Monochrome / L. Monochrome D / L. Monochrome S / LEICA Monochrome / Cinelike D2 / Cinelike V2 / Like709 / V-Log / REAL TIME LUT / Hybrid Log Gamma / My Photo Style 1-4 (5-10)* *Set to ON from Show/Hide Photo Style to select.
		Picture adjustment	Contrast / Highlight / Shadow / Saturation / Color Tone / Hue / Filter Effect / Grain Effect / Color Noise / Sharpness / Noise Reduction / ISO / WB / LUT *Adjustable settings vary depending on the Photo Style mode.
	Filter	Expressive / Retro / Old Days / High Key / Low Key / Sepia / Cross Process / Bleach Bypass	
	LUT Library	Vlog_709 / Set 1-10 *REAL TIME LUT in Photo Style, Apply LUT in Fn button, Apply LUT in RAW Processing, LUT View Assist in V-Log View Assist, LUT can be applied from these settings.	
MOTION PICTURE FUNCTION	Time lapse shot	Yes	
	Stop motion animation	Yes	

	SS/Gain operation	Shutter Duration/ISO / Angle/ISO / Shutter Duration/dB	
	Luminance level	8-bit: 0-255 / 16-235 / 16-255 10-bit: 0-1023 / 64-940 / 64-1023	
	Synchro scan	Yes	
	Master pedestal level	31 steps	
	Color bars / Test tone	Yes (SMPTE / EBU / ARIB) / Yes	
	LUT view assist	Supported file types: .vlt, .cube Monitor / HDMI	
	HLG view assist	Monitor (MODE1 / MODE2 / OFF) / HDMI (AUTO / MODE1 / MODE2 / OFF)	
	Anamorphic desqueeze display	2.0x / 1.8x / 1.5x / 1.33x / 1.30x / OFF	
	Wave form monitor / Vectorscope	Selectable	
	Knee control	Yes (in Like709 mode)	
	Red REC frame indicator	ON / OFF	
VERTICAL POSITION INFORMATION		Still image / Motion picture (ON/OFF)	
LEVEL GAUGE		Yes	
FUNCTION BUTTON	REC	Exposure Comp. / Sensitivity / White Balance / Photo Style / Apply LUT / Metering Mode / Aspect Ratio / Picture Quality / Picture Size / 1 Shot Spot Metering / Long Exposure NR / Min. Shutter Speed / 1 Shot RAW+JPG / i.Dynamic Range / Filter Effect / One Push AE / Touch AE / AWB Lock / Exposure Mode / Synchro Scan / AF Mode / AF Detection Setting / Detecting Subject / AF Custom Setting(Photo) / AF Custom Setting(Video) / Focus Limiter / Focus Limiter Range Set / Focus Peaking / Focus Peaking Sensitivity / Focus Frame Moving Speed / Focus Ring Lock / AE LOCK / AF LOCK / AF/AE LOCK / AF-ON / AF-ON: Near Shift / AF-ON: Far Shift / AF-Point Scope / Focus Area Set / Enlarged Live Display (Video) / Flash Mode / Flash Adjust. / Wireless Flash Setup / Drive Mode Setting / Bracketing / Silent Mode / Image Stabilizer / Shutter Type / Ex. Tele Conv. / Live View Composite / Rec. File Format / Rec Quality / Rec Quality (My List) / Slow & Quick Setting / Time Code Display / Audio Information / Sound Rec Level Disp. / Mute Sound Input / Sound Rec Level Adj. / Sound Rec Quality / Sound Rec Level Limiter / 4ch Mic Input / XLR Mic Adaptor Setting / Sound Monitoring Channel / Image Stabilizer / E-Stabilization (Video) / Boost I.S. (Video) / Image Area of Video / Focus Transition / Q.MENU / Rec/Playback Switch / Video Record / Video Record (Creative Video) / LVF/Monitor Switch / Operation Lock / Dial Operation Switch / Preview / Preview Aperture Effect / Constant Preview / Level Gauge / Histogram / Luminance Spot Meter / Frame Marker / Photo Grid Line / Live View Boost / Monochrome Live View / Night Mode / LVF/Monitor Disp. Set / Video-Priority Display / Zebra Pattern / LUT View Assist (Monitor) / LUT View Assist (HDMI) / LUT Select / HLG View Assist (Monitor) / HLG View Assist (HDMI) / Sheer Overlay / I.S. Status Scope / WFM/Vector Scope / Anamorphic Desqueeze Display / Color Bars / Focus Ring Control / AF Micro Adjustment / Zoom Control / Step Zoom / Zoom Speed / Lens Information / Destination Card Slot / Wi-Fi / Save to Custom Mode / No Setting / Off (Disable Press and Hold) / Restore to Default	
	PLAY	Magnify from AF Point / LUT View Assist (Monitor) / HLG View Assist (Monitor) / Anamorphic Desqueeze Display / RAW Processing / Delete Single / Protect / Rating 1, 2, 3, 4, 5 / Copy / Rec/Playback Switch / LVF/Monitor Switch / Video Record / Video Record (Creative Video) / Night Mode / Card Slot Change / Sound Monitoring Channel(Play) / Wi-Fi / Send Image (Smartphone) / LUT View Assist (HDMI) / HLG View Assist (HDMI) / No Setting / Off (Disable Press and Hold) / Restore to Default	
OSD LANGUAGE		Please refer to "OSD" Sheet	
INTERFACE	USB	USB Type-C (SuperSpeed USB 10Gbps (USB 3.2 Gen2))	
	HDMI (*4)	HDMI	HDMI TypeA Audio: ON / OFF, MP4: 2ch, MOV: 2ch (When [4ch Mic Input] is set to OFF.), 4ch (When [4ch Mic Input] is set to ON.)

	Monitor-through	4:2:2 10bit (When [Rec Quality] is set to [4:2:2 10bit] or [4:2:0 10bit] or [4:2:0 8bit].)		
	Playback	59.94Hz: C4K/60p / C4K/30p / 4K/60p / 4K/30p / 1080/120p / 1080p / 1080i / 720p* / 480p* 50.00Hz: C4K/50p / C4K/25p / 4K/50p / 4K/25p / 1080/100p / 1080p / 1080i / 720p* / 576p* 24.00Hz: C4K/24p / 4K/24p / 1080p *Only for playback.		
	Remote input		φ2.5mm	
	Audio	Build-in microphone	Stereo Wind Noise Canceller: OFF / Standard / High	
		External microphone / External audio device input	φ3.5mm for external microphone / external audio device MIC (Plug-in Power) / MIC / LINE Wind Cut: OFF / Low / Standard / High *When attaching φ3.5mm microphone. Special Mic: Stereo / Shotgun *When attaching DMW-MS2 (sold separately).	
		XLR microphone	Yes with DMW-XLR1 (sold separately)	
		4ch mic input	Yes with DMW-XLR1 (sold separately)	
		Speaker	Monaural	
		Headphone output	φ3.5mm	
	Card slot		Slot 1, Slot 2 SD Memory Card / SDHC Memory Card* / SDXC Memory Card* *Compatible with UHS-I/UHS-II UHS Speed Class 3 standard SDHC/SDXC Memory Cards and UHS-II Video Speed Class 90 standard SDXC Memory Cards.	
TC IN/OUT	Count up		Rec Run / Free Run	
	Time code mode		Drop Frame / Non-Drop Frame (When system frequency [59.94Hz] is selected.)	
	HDMI time code output		ON / OFF	
WIRELESS	Wi-Fi	2.4GHz (STA/AP) (IEEE802.11b/g/n) 5GHz (STA) (IEEE 802.11a/n/ac) Security: WPA/WPA2/WPA3 Please refer to "Wi-Fi" sheet		
	Bluetooth		Bluetooth® v5.0 (Bluetooth Low Energy (BLE))	
DUST AND SPLASH RESISTANT*			Yes. *Dust and Splash Resistant does not guarantee that damage will not occur if this camera is subjected to direct contact with dust and water.	
POWER	Battery		Li-ion Battery Pack (7.2V, 2200mAh, 16Wh) (bundled) USB power supply, USB power charging, USB power delivery	
	Battery life (CIPA standard)	When using SD memory card	Approx. 370 images, 1300 images (Power Save LVF mode*) with H-ES12060 / DMW-BLK22 Approx. 390 images, 1350 images (Power Save LVF mode*) with H-FS12060 / DMW-BLK22 *Using a Panasonic SDXC memory card. Under the test conditions	

			specified by Panasonic based on CIPA standard. When the time to get in the sleep mode is set to 1 sec.
		When using external USB-SSD (*6)	Approx. 310 images with H-ES12060 / DMW-BLK22 Approx. 320 images with H-FS12060 / DMW-BLK22 *Using a Samsung external SSD (T7 Shield 2TB1TB). Under the test conditions specified by Panasonic based on CIPA standard.
	Continuous recordable time (Motion picture) (*1)	When using SD memory card	MP4 [4K/60p]: Approx. 90 min *When using H-ES12060 / H-FS12060. When the battery is fully charged.
		When using external USB-SSD	MP4 [4K/60p]: Approx. 80 min *When using H-ES12060 / H-FS12060. When the battery is fully charged.
	Actual recordable time (Motion picture) (*1)	When using SD memory card	MP4 [4K/60p]: Approx. 45 min *When using H-ES12060 / H-FS12060. When the battery is fully charged.
		When using external USB-SSD	MP4 [4K/60p]: Approx. 40 min *When using H-ES12060 / H-FS12060. When the battery is fully charged.
	Battery grip		DMW-BG1 (sold separately)
DIMENSIONS / WEIGHT	Dimensions (W x H x D)		Approx. 134.3 x 102.3 x 90.1 mm / 5.29 x 4.03 x 3.55 inch (Body only, excluding protrusions) Approx. 134.3 x 102.3 x 140.7 mm / 5.29 x 4.03 x 5.54 inch (with H-FS12060, excluding protrusions) Approx. 134.3 x 102.3 x 153.8 mm / 5.29 x 4.03 x 6.06 inch (with H-ES12060, excluding protrusions)
	Weight		Approx. 658g / 1.45 lb (Body, Hot Shoe Cover, Battery, SD Memory Card x 1) (excluding body cap) Approx. 575g / 1.27 lb (Body, Hot Shoe Cover) (excluding body cap)
OPERATING ENVIRONMENT	Operating temperature		-10°C to 40°C (14°F to 104°F)
	Operating humidity		10%RH to 80%RH
STANDARD ACCESSORIES	Software	Recording	LUMIX Tether · This software is used to control a Panasonic digital camera from a computer. It allows you to change various settings of the camera, perform remote recording, and save remotely recorded images to the PC. Check the site below to download and install the software. http://panasonic.jp/support/global/cs/soft/download/d_lumixtether.html (For Windows / Mac) LUMIX Sync · This software is used to control a Panasonic digital camera from a smartphone. Check the site below to download and install the software. https://panasonic.jp/support/global/cs/dsc/ (For Android™ / iOS)
		Playback / Editing	· 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		DC-G9M2 Kit Body Cap, Hot Shoe Cover, Cover for the Battery Grip Connector, Shoulder Strap, Battery Pack, AC Adaptor, USB Connection Cable (A-C) DC-G9M2L Kit / DC-G9M2M Kit Body Cap, Hot Shoe Cover, Cover for the Battery Grip Connector, Shoulder Strap, Battery Pack, AC Adaptor, USB Connection Cable (A-C), Lens Cap, Lens Hood, Lens Rear Cap · The Operating Instructions for advanced features is available for downloaded at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.

(*1) About motion picture recording

- The cards that can be used for recording vary depending on the motion pictures bit rate and format type.
Motion pictures with 72Mbps or less: External USB-SSD, SD memory card with SD Speed Class with Class 10 or Video Speed Class 10 or higher

Motion pictures with 200Mbps or less: External USB-SSD, SD memory card with UHS-I / UHS-II UHS Speed Class 3 (U3) or Video Speed Class 30 or higher

Motion pictures with 400Mbps or less: External USB-SSD, SD memory card with Video Speed Class 60 or higher

Motion pictures with 600Mbps or less: External USB-SSD, SD memory card with Video Speed Class 90

Motion pictures with 800Mbps or more, Slow&Quick with ALL-Intra, or ProRes in 5.7K / C4K: External USB-SSD

- A new file will be created to continue recording if the continuous recording time exceeds the following conditions.

Motion pictures with less than 72Mbps: 30 minutes

Motion pictures with 72Mbps or more: 3 hours 4 minutes

- A new file will be created to continue recording if the file size exceeds the following conditions.

[MP4] in [FHD]: 4GB

[MP4] in [4K]: 96GB

[MOV] in 600Mbps or less: 192GB

[MOV] in 800Mbps: 640GB

[ProRes] in [5.7K]: 640GB

- The camera may stop the recording to protect itself when the camera temperature rises. Wait until the camera cools down.

- The camera may stop the recording when used in a temperature that is lower or higher than the recommended operating temperature (-10 to 40 degrees).

(*2) High-res audio is selectable only when attaching Φ 3.5mm microphone or DMW-XLR1 (sold separately).

(*3) About AF

- Automatic Detection is not available for High Frame Rate video shooting above 60p.

- Tracking and Automatic Detection are not available when using HDMI cable or USB connection cable for High Frame Rate video shooting above 60p.

(*4) To output motion pictures with 4K or higher, use a Premium High Speed HDMI cable (Type A - Type A plug).