

IMAGE SENSOR		Sensor size	1-type High Sensitivity MOS sensor
		Total pixels	20.9 megapixels
		Camera effective pixels	20.1 megapixels
		Color filter	Primary color filter
LENS		Aperture	F2.8 - 4.5 / 9 diaphragm blades (F2.8 - 11.0 (W), F4.5 - 11.0 (T))
		Optical zoom	20x
		Focal length	f = 8.8 - 176mm/(26 - 520mm in 35mm equiv. in 4:3)/(24 - 480mm in 35mm equiv. in 3:2)/(25 - 500mm in 35mm equiv. in 16:9)/(31 - 620mm in 35mm equiv. in 1:1)/(36 - 720mm in 35mm equiv. in 4:3, 3:2, 16:9 4K PHOTO recording)/(38 - 760mm in 35mm equiv. in 1:1 4K PHOTO recording)/(25 - 500mm in 35mm equiv. in 16:9 video recording / O.I.S. Off / Level Shot function Off)/(27 - 540mm in 35mm equiv. in 16:9 video recording / O.I.S. On / Level Shot function Off)/(30 - 600mm in 35mm equiv. in 16:9 video recording / O.I.S. On / Level Shot function On)/(36 - 720mm in 35mm equiv. in 4K video recording)
		Extra Optical Zoom (EZ)	28.1x (3:2 / 10M (M)), 40x (3:2 / 5M (S))
		Intelligent Zoom	40x
		Lens	LEICA DC VARIO-ELMARIT/16 elements in 11 groups/(5 aspherical lenses (8 aspherical surfaces) / 4 ED lenses / 1 UHR lens)
		Changing of zoom speed	5-speed zoom
		Optical image stabilizer	5-Axis HYBRID O.I.S. +*/* 5-Axis compensation works in video recording except for 4K video, variable frame rate video or dolly zoom video recording.
		Digital zoom	Max. 4x (When digital zoom is used simultaneously with Intelligent Zoom, you can only increase the zoom ratio up to 2x.)
		Zoom in motion picture	Yes
RECORDING	Recording file	Still image	JPEG (DCF, Exif 2.3), RAW, DPOF

SYSTEM	format		
		Motion picture	MOV (Audio format LPCM), MP4 (Audio format LPCM / AAC 2ch), AVCHD (Audio format: Dolby Digital 2ch)
	System frequency		59.94Hz, 50.00Hz, 24.00Hz
	Aspect ratio		4:3, 3:2, 16:9, 1:1
	Image quality		RAW, RAW+Fine, RAW+Standard, Fine, Standard
	Color Space		sRGB, AdobeRGB
	File size(Pixels)	Still Image	[4:3] 4864x3648(L) / 3456x2592(M) / 2432x1824(S)/[3:2] 5472x3648(L) / 3888x2592(M) / 2736x1824(S)/[16:9] 5472x3080(L) / 3840x2160(M) / 1920x1080(S)/[1:1] 3648x3648(L) / 2592x2592(M) / 1824x1824(S)
	Motion picture (*1)	MOV 59.94Hz	[4K] 3840x2160:29.97p, 100Mbps (IPB) (LPCM)/[4K] 3840x2160:23.98p, 100Mbps (IPB) (LPCM)/[Full HD] 1920x1080:59.94p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:29.97p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:23.98p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
		MOV 50.00Hz	[4K] 3840x2160:25.00p, 100Mbps (IPB) (LPCM)/[Full HD] 1920x1080:50.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:25.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
		MOV 24.00Hz	[C4K] 4096x2160:24.00p, 100Mbps (IPB) (LPCM)/[4K] 3840x2160:24.00p, 100Mbps (IPB) (LPCM)/[Full HD] 1920x1080:24.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
		MP4 59.94Hz	[4K] 3840x2160:29.97p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC)/[4K] 3840x2160:23.98p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC)/[Full HD] 1920x1080:59.94p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:29.97p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:23.98p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:59.94p, 28Mbps (IPB) (AAC)/[Full HD] 1920x1080:29.97p, 20Mbps (IPB) (AAC)/[HD] 1280x720:29.97p, 10Mbps (IPB) (AAC)
		MP4 50.00Hz	[4K] 3840x2160:25.00p, 100Mbps (IPB) (LPCM) / 100Mbps (IPB) (AAC)/[Full HD] 1920x1080:50.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:25.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)/[Full HD] 1920x1080:50.00p, 28Mbps (IPB) (AAC)/[Full HD] 1920x1080:25.00p, 20Mbps (IPB) (AAC)/[HD] 1280x720:25.00p, 10Mbps (IPB) (AAC)

		MP4 24.00Hz	[C4K] 4096x2160:24.00p, 100Mbps (IPB) (LPCM)/[4K] 3840x2160:24.00p, 100Mbps (IPB) (LPCM)/[Full HD] 1920x1080:24.00p, 200Mbps (ALL-Intra) (LPCM) / 100Mbps (IPB) (LPCM) / 50Mbps (IPB) (LPCM)
		AVCHD Progressive, AVCHD 59.94Hz	[Full HD] 1920x1080:59.94p, 28Mbps (IPB) (Dolby)/[Full HD] 1920x1080:59.94i, 24Mbps (IPB) (Dolby) (Sensor output is 30.00fps)/[Full HD] 1920x1080:59.94i, 17Mbps (IPB) (Dolby) (Sensor output is 60.00fps)/[Full HD] 1920x1080:23.98p, 24Mbps (IPB) (Dolby)
		AVCHD Progressive, AVCHD 50.00Hz	[Full HD] 1920x1080:50.00p, 28Mbps (IPB) (Dolby)/[Full HD] 1920x1080:50.00i, 24Mbps (IPB) (Dolby) (Sensor output is 25.00fps)/[Full HD] 1920x1080:50.00i, 17Mbps (IPB) (Dolby) (Sensor output is 50.00fps)
	Continuous recordable time (Motion picture) (*1)		AVCHD [FHD/60i] [FHD/50i]: Approx. 115 min (rear monitor), 105 min (LVF)
	Actual recordable time (Motion picture) (*1)		AVCHD [FHD/60i] [FHD/50i]: Approx. 60 min (rear monitor), 55 min (LVF)
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)
VIEWFINDER		Type	OLED Live View Finder (2,360k dots)
		Field of view	Approx. 100%
		Magnification	Approx. 2.18x / 0.74x (35mm camera equiv. in 4:3)
		Eye point	Approx. 20 mm from eyepiece lens
		Diopter adjustment	-4.0 - +4.0 (dpt)
		Eye sensor	Yes
		Eye sensor adjustment	High / Low
FOCUS		Focusing area	Normal: Wide 30 cm - infinity / Tele 100 cm - infinity/AF Macro / MF / Intelligent Auto / Motion picture: Wide 3 cm - infinity / Tele 100 cm - infinity

		Focus mode	AF / AF Macro / Macro Zoom * Each available with AFS (Single) / AFF (Flexible) / AFC (Continuous) / MF
		Others	One Shot AF, Shutter AF, Half Press Release, Quick AF, AF Sensitivity, 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, Low Light AF, Starlight AF
		DFD technology	Yes
		Post Focus	Yes
		Focus Stacking	Yes
		AF mode	Face/Eye Detection / Tracking / 49-Area / Custom Multi / 1-Area / Pinpoint/(Full area touch is available)
		AF detective range	EV -4 - 18 (ISO100 equivalent)
		AF assist lamp	Yes
		AF lock	Yes (AF/AE LOCK button)
EXPOSURE CONTROL	Light metering mode		Multiple / Center Weighted / Spot
	Exposure mode		Program AE, Aperture Priority AE, Shutter Priority AE, Manual
	Exposure compensation		1/3 EV step ±5EV (±3EV for motion picture)
	AE lock		Yes (AF/AE LOCK button)
	ISO sensitivity (Standard output sensitivity)	Still image	Auto / Intelligent ISO / 80* / 100* / 125 / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600* * Extended ISO/(Changeable to 1/3 EV step) (ISO Auto in M mode)
Motion picture		Auto / 125 / 200 / 400 / 800 / 1600 / 3200 / 6400/(Changeable to 1/3 EV step)	
WHITE BALANCE		White balance	Auto / 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	Self timer		10sec, 3 images / 2sec / 10sec
	Remote control		Remote control with Bulb function by DMW-RSL1 (Optional)

	Shutter speed (Approx.)	Still image	Mechanical shutter type: 1/4,000 - 60, Bulb (Max. 2 minutes)/Electronic shutter type: 1/16,000 - 1
		Motion picture	59.94Hz: 1/16,000 - 1/30, 50.00Hz: 1/16,000 - 1/25, 24.00Hz: 1/16,000 - 1/24 (When using Synchro Scan)/Creative Video M mode / MF mode: 1/16,000 - 1/2
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 in 1 EV step
		Focus Bracket	1 to 999 images, focus steps can be set in 10 levels
PANORAMA SHOT			Yes (Standard / Wide)
BURST SHOOTING	Number of recordable images		More than 30 images (when there are RAW files with the particular speed)/More than 100 images (when there are no RAW files)/(Depending on memory card type, aspect, picture size and compression)
	Burst speed (Approx.)	Mechanical shutter	AFS: H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)/AFC: H: 7 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)
		Electronic shutter	AFS: H: 12 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)/AFC: H: 7 frames/sec, M: 7 frames/sec (with Live View), L: 2 frames/sec (with Live View)
4K PHOTO MODE		4K Photo mode (*1)	4K Burst: 30 frames/sec/4K Burst (S/S): 30 frames/sec/4K Pre-Burst: 30 frames/sec, approx. 2 seconds/(Depending on memory card size and battery power)
		Exif information	Yes
		Marking function	Yes (in 4K Burst (S/S) mode)
		Loop rec function	Yes (in 4K Burst (S/S) mode)
FLASH		Shooting distance	0.5 - 13.2m (Wide / ISO Auto), 1.0 - 7.9m (Tele / ISO Auto)
		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.
		Flash output adjustment	1/3EV step ±3EV
		Flash synchronization	1st Curtain Sync., 2nd Curtain Sync.
		Synchronization for flash dimming and	Yes

			exposure compensation	
			Wireless control	Yes (When using DMW-FL200L / FL360L / FL580L (Optional))
REAR MONITOR			Type	TFT LCD monitor with static touch control
			Monitor size	Free-angle 7.5cm (3.0-inch) / 3:2 aspect / Wide viewing angle / AF coating
			Pixels	Approx. 1,040k dots
			Filed of view	Approx. 100%
			Monitor adjustment	Brightness, Contrast, Saturation, Red-Green, Blue-Yellow
PHOTO STYLE			Photo style	Standard / Vivid / Natural / Monochrome / Scenery / Portrait / Custom / Cinelike D* / Cinelike V* / V-Log L*/**/*When Creative Video mode is selected. **Upgrade Software Key DMW-SFU1(Optional) is required.
			Picture adjustment	Contrast, Sharpness, Noise Reduction, Saturation*, Hue, Color Tone**, Filter Effect**/*Except for Monochrome mode. **For Monochrome mode only.
CREATIVE CONTROL				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* *Photo only.
CREATIVE VIDEO MODE	Exposure mode			Program AE/ Aperture-Priority / Sutter-Priority / Manual Exposure
	Dolly zoom			Yes
	Variable frame rate	59.94Hz	MOV/FHD/100Mbps/29.97p, MP4(LPCM)/FHD/100Mbps/29.97p:2fps, 15fps, 26fps, 28fps, 30fps, 32fps, 34fps, 45fps, 60fps, 75fps, 90fps, 96fps, 120fps/MOV/FHD/100Mbps/23.98p, MP4(LPCM)/FHD/100Mbps /23.98p:2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps, 72fps, 84fps, 96fps, 120fps/AVCHD/FHD/24Mbps/29.97p:2fps, 15fps, 26fps, 28fps, 30fps, 32fps, 34fps, 45fps, 60fps/AVCHD/FHD/24Mbps /23.98p:2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps	
		50.00Hz	MOV/FHD/100Mbps/25.00p, MP4(LPCM)/FHD/100Mbps/25.00p:2fps, 12fps, 21fps, 23fps, 25fps, 27fps, 30fps, 37fps, 50fps, 62fps, 75fps, 96fps, 120fps/AVCHD/FHD/24Mbps/25.00p:2fps, 12fps, 21fps, 23fps, 25fps, 27fps, 30fps, 37fps, 50fps	
24.00Hz		MOV/FHD/100Mbps/24.00p, MP4(LPCM)/FHD/100Mbps/24.00p:2fps, 12fps, 20fps, 22fps, 24fps, 26fps, 28fps, 36fps, 48fps, 60fps, 72fps, 84fps, 96fps, 120fps		
MOTION PICTURE FUNCTION			Master pedestal level	31 steps

		Luminance level	0-255 / 16-235 / 16-255
		Synchro scan	Yes
		Time code	Count Up: Rec Run/Free Run selectable, Time Code Mode: Drop frame/Non-drop frame selectable (When system frequency [59.94Hz] is selected.)
		SS/Gain operation	Shutter Duration/ISO / Angle/ISO / Shutter Duration/dB
		Color bars / 1kHz test tone	Yes (SMPTE / EBU / ARIB) / Yes
		Cinelike gamma	Cinelike D / Cinelike V
		V-Log L	Yes *Upgrade Software Key DMW-SFU1(Optional) is required.
OTHER FUNCTIONS			Level Gauge, Real-time Histogram, Guide Lines (3 patterns), Center Marker (Still image / motion picture), Highlight display (Still image / motion picture), Zebra Pattern (Still image / motion picture)
PLAYBACK	Playback function		30-thumbnail display, 12-thumbnail display, Calendar display, Zoomed playback (Max. 16x), Slideshow (All / Picture Only / Video Only), Playback Mode (Normal / Picture Only / Video Only), Location Logging, RAW Processing, 4K PHOTO Bulk Saving, Light Composition, Clear Retouch, Title Edit, Text Stamp, Video Divide, Time Lapse Video, Stop Motion Video, Resize, Cropping, Rotate, Rotation Display, Favorite, Print Set, Protect, Face Recognition Edit, Picture Sort, Delete Confirmation
IMAGE PROTECTION / ERASE	Protection		Single / Multi
	Erase		Single / Multi / All / Except Favorite
PRINT	Direct Print		PictBridge compatible
INTERFACE	Recording media		SD Memory Card, SDHC Memory Card, SDXC Memory Card/(Compatible with UHS-I UHS Speed Class 3 standard SDHC / SDXC Memory Cards)
	USB		USB 2.0 Micro-B
	HDMI (*2)	Monitor-through	4:2:2 8-bit / 4:2:2 10-bit (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.)/Information display ON/OFF (selectable)/Automatic down-conversion (4K --> 1080p only)
		Playback	microHDMI TypeD / VIERA Link, Audio: LPCM / Stereo/59.94Hz: Auto / 4K / 1080p / 1080i / 720p / 480p/50.00Hz: Auto / 4K / 1080p / 1080i / 720p / 576p/24.00Hz: Auto / C4K / 4K / 1080p
	Audio video output		No

	Remote input	φ2.5mm for remote
	External microphone input	φ3.5mm for external microphone
	Headphone output	φ3.5mm for headphone
	Microphone	Stereo, Wind-cut: OFF / Standard / High
	Speaker	Monaural
NOTE		*1
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 Speed Class 3 (U3)" when recording motion pictures in [4K/100Mbps] [C4K/100Mbps] [FHD/100Mbps] [FHD/200Mbps] or [4K PHOTO].
NOTE		- Use a card with SD Speed Class with "UHS-I Speed Class 1 (U1)" or higher when recording motion pictures in [FHD/50Mbps].
NOTE		- Use a card with SD Speed Class with "Class 4" or higher when recording motion pictures in [FHD/28Mbps].
NOTE		(SD speed class is the speed standard regarding continuous writing.)
NOTE		- MP4 motion pictures with [MP4] in [4K]:
NOTE		- When using an SDHC memory card: You can continue recording without interruption even if the file size exceeds 4 GB, but the motion picture file will be divided and recorded/played back separately.
NOTE		- When using an SDXC memory card: You can continue recording without interruption even if the file size exceeds 96 GB or 3 hours 4 minutes in length, but the motion picture file will be divided and recorded/played back separately.
NOTE		- MP4 motion pictures with [MP4] in [FHD] [HD]:
NOTE		- You can continue recording without interruption even if the file size exceeds 4 GB or 30 minutes in length, but the motion picture file will be divided and recorded/played back separately.
NOTE		- 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.



NOTE		- These are standard times taken at a temperature of 23 oC (73.4 oF) and a humidity of 50%RH.
NOTE		- The time available for recording varies depending on the environment, the interval between recordings, and the manner of use.
NOTE		- Actual recordable time is the time available for recording when repeating actions such as switching the power supply [ON] / [OFF], starting/stopping recording, zoom operation etc.
NOTE		*2
NOTE		For [4K] or [C4K] video output, use an HDMI cable that has the HDMI logo on it, and that is described as "4K compatible".
NOTE		*3
NOTE		Recording conditions by CIPA standard
NOTE		- Temperature: 23 oC (73.4 oF) / Humidity: 50%RH when monitor is on.
NOTE		- Using a Panasonic SDHC Memory Card
NOTE		- Using the supplied battery.
NOTE		- Starting recording 30 seconds after the camera is turned on. (When the optical image stabilizer function is set to [ON].)
NOTE		- Recording once every 30 seconds with full flash every second recording.
NOTE		- Rotating the zoom lever from Tele to Wide or vice versa in every recording.
NOTE		- The number of recordable pictures varies depending on the recording interval time.
NOTE		- If the recording interval time becomes longer, the number of recordable pictures decreases.
NOTE		- CIPA is an abbreviation of [Camera & Imaging Products Association].
LANGUAGE	OSD language	Japanese, English, German, French, Italian, Spanish
POWER	Battery	Li-ion Battery Pack (7.2V, 1200mAh, 8.7Wh) (included)
	Battery life (CIPA standard) (*3)	Approx. 350 images (rear monitor), 270 images (LVF)
DIMENSIONS / WEIGHT	Dimensions (W x H x D)	137.6 x 101.9 x 134.7 mm / 5.42 x 4.01 x 5.30 inch (excluding protrusions)

	Weight	Approx. 966g / 2.13 lb (SD card, Battery, Body)/Approx. 915g / 2.02 lb (Body only)
OPERATING ENVIRONMENT	Operating temperature	0oC to 40oC (32oF to 104oF)
	Operating humidity	10%RH to 80%RH
STANDARD ACCESSORIES	Software	<ul style="list-style-type: none"> <li>• The software to edit and playback images on computer is not bundled with DMC-FZ2000. To do this, PHOTOfunSTUDIO is available for download at Panasonic website using computer connected to the Internet. <a href="http://panasonic.jp/support/global/cs/soft/download/d_pfs99pe.html">http://panasonic.jp/support/global/cs/soft/download/d_pfs99pe.html</a> (For Windows)</li> <li>• The software to process RAW file on computer is not bundled with DMC-FZ2000. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using computer connected to the Internet. <a href="http://www.isl.co.jp/SILKYPIX/english/p/">http://www.isl.co.jp/SILKYPIX/english/p/</a> (For Windows / Mac)</li> </ul>
	Standard accessories	Battery Charger, Battery Pack, USB Cable, Lens Hood, Lens Cap, Lens Cap String, Hot Shoe Cover, Shoulder Strap/ <ul style="list-style-type: none"> <li>• The DMC-FZ2000 Operating Instructions for advanced features is available for downloaded at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.</li> </ul>