



LUMIX Digital Camera DMC-TZ110

Metrics	Dimensions (W x H x D)	110.5 x 64.5 x 44.3 mm
	Dimensions (W x H x D)	(4.35 x 2.54 x 1.74 inch)
Optics	Weight	Approx. 310g with Battery and SD Memory Card (0.681lb)
	Weight	Approx. 268 g without Battery and SD Memory Card (0.590 lb)
Pixels	Camera Effective Pixels	20.1 Megapixels
Sensor	Sensor Size / Total Pixels / Filter	1-type High Sensitivity MOS Sensor / 20.9 Total Megapixels / Primary Color Filter
Lens	Aperture	F2.8 - 5.9 / Multistage Iris Diaphragm
	Aperture	(Still Image: F2.8 - 8.0 (W), F5.9 - 8.0 (T), Motion Picture: F2.8 - 8.0 (W), F5.9 - 8.0 (T))
	Optical Zoom	10x
	Focal Length	f = 9.1 - 91mm
	Focal Length	(27 - 270mm in 35mm equiv. in 4:3)
	Focal Length	(25 - 250mm in 35mm equiv. in 3:2)
	Focal Length	(26 - 260mm in 35mm equiv. in 16:9)
	Focal Length	(32 - 320mm in 35mm equiv. in 1:1)
	Focal Length	(37 - 370mm in 35mm equiv. in 4:3 4K Photo recording)
	Focal Length	(37 - 370mm in 35mm equiv. in 3:2 4K Photo recording)
	Focal Length	(37 - 370mm in 35mm equiv. in 16:9 4K Photo recording)
	Focal Length	(40 - 400mm in 35mm equiv. in 1:1 4K Photo recording)
	Focal Length	(26 - 260mm in 35mm equiv. in 16:9 video recording / O.I.S. Off / Level Shot function Off)
	Focal Length	(28 - 280mm in 35mm equiv. in 16:9 video recording / O.I.S. On / Level Shot function Off)
	Focal Length	(31 - 310mm in 35mm equiv. in 16:9 video recording / O.I.S. On / Level Shot function On)
	Focal Length	(37 - 370mm in 35mm equiv. in 4K video recording)
	Extra Optical Zoom (EZ)	14x (3:2 / 10M (M)), 20x (3:2 / 5M (S))
	Intelligent Zoom	20x
	Lens	LEICA DC VARIO-ELMARIT
	Lens	

		12 elements in 10 groups
	Lens	(5 Aspherical Lenses / 9 Aspherical surfaces)
	Optical Image Stabilizer	5-Axis HYBRID O.I.S. +*
	Optical Image Stabilizer	* 5-Axis compensation works in video recording except for 4K video or high-speed 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.)
	Focusing Area	Normal: Wide 50 cm - infinity / Tele 70 cm - infinity
	Focusing Area	AF Macro / MF / Intelligent Auto / Motion Picture: Wide 5 cm - infinity / Tele 70 cm - infinity
	AF Assist Lamp	Yes (On / Off)
Focus	Focus	AF / AF Macro / Macro Zoom * Each available with AFS (Single) / AFF (Flexible) / AFC (Continuous) / MF Quick AF, Continuous AF (during motion picture recording), Eye Sensor AF, Touch AF/AE Function,
	Focus	Touch Shutter, Touch Pad AF, MF Assist, Touch MF Assist, AF+MF, Focus Peaking, One Shot AF (Set the Fn button in custom menu to AF-ON), Low Light AF, Starlight AF, AF/AE Lock Button
	Post Focus	Yes
	AF Metering	Face/Eye Detection / Tracking / 49-area / Custom Multi / 1-area / Pinpoint
	AF Metering	(Full area touch is available)
Shutter	Shutter Speed [Still Image]	Still Image:
	Shutter Speed [Still Image]	Approx. 60 - 1/2,000 sec (Mechanical Shutter)
	Shutter Speed [Still Image]	Approx. 1 - 1/16,000 sec (Electronic Shutter)
	Shutter Speed [Still Image]	Time (Approx. 120 sec)
	Shutter Speed [Motion Picture]	Motion Picture:
	Shutter Speed [Motion Picture]	Approx. 1/25 - 1/16,000 sec
	Shutter Speed [Motion Picture]	Approx. 1/2 - 1/16,000 sec (Creative Video M Mode / MF Mode)
Finder	Viewfinder	0.20" LVF (Live View Finder) (1,166k dots equiv.), Field of View: Approx. 100%, Lens 19.6x
	Viewfinder	Magnification: Approx. 1.25x / 0.46x (35 mm camera equivalent)
Recording File	File Format	Still Image: JPEG (DCF/Exif2.3) / RAW, DPOF
	File Format	Motion Picture: AVCHD Progressive, AVCHD, MP4
Recording Modes	Mode Dial / Mode Button	Intelligent Auto, P, A, S, M, Creative Video, C (Custom), Panorama Shot, Scene Guide, Creative Control
	Creative Control mode	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 (22 filters)
	Still Image Scene Guide	Clear Portrait, Silky Skin, Backlit Softness, Clear in Backlight, Relaxing Tone, Sweet Child's Face, Distinct Scenery, Bright Blue Sky, Romantic Sunset Glow, Vivid Sunset Glow, Glistening Water, Clear Nightscape, Cool Night Sky, Warm Glowing Nightscape, Artistic Nightscape, Glittering Illuminations, Handheld Night Shot, Clear Night Portrait, Soft Image of a Flower, Appetizing Food, Cute Dessert, Freeze Animal Motion, Clear Sports Shot, Monochrome
	Continuous Shooting Mode (Approx.)	[AFS] SH: 50 frames/sec*, H: 10 frames/sec, M: 6 frames/sec (with Live View), L: 2 frames/sec (with Live View) [AFC] H: 6 frames/sec, M: 6 frames/sec (with Live View), L: 2 frames/sec (with Live View) * Electronic shutter only.
	4K Photo Mode (*2)	4K Burst: 30 frames/sec, max. 15 min
	4K Photo Mode (*2)	4K Burst (S/S): 30 frames/sec, max. 15 min
	4K Photo Mode (*2)	4K Pre-Burst: 30 frames/sec, approx. 2 sec
	4K Photo Mode (*2)	(Depending on memory card size and battery power)
	4K Photo Mode (*2)	Exif Information: Yes
	4K Photo Mode (*2)	Selectable Aspect Ratio: Yes (4:3 / 3:2 / 16:9 / 1:1 are selectable)
	4K Photo Mode (*2)	Exposure Mode: Program AE / Aperture Priority AE / Shutter Priority AE / Manual
	4K Photo Mode (*2)	Marking Function: Yes (in 4K Burst (S/S) mode)
	4K Video	3840 x 2160 pixels, 25p (4K: 100Mbps / MP4) (Sensor Output is 25fps) (AAC)
	4K Video	3840 x 2160 pixels, 24p (4K: 100Mbps / MP4) (Sensor Output is 24fps) (AAC)
	HD Video	1920 x 1080 pixels, 50p (FHD: 28Mbps / AVCHD) (Sensor Output is 50fps) (Dolby)
	HD Video	1920 x 1080 pixels, 24p (FHD: 24Mbps / AVCHD) (Sensor Output is 24fps) (Dolby)
	HD Video	1920 x 1080 pixels, 50i (FHD: 24Mbps / AVCHD) (Sensor Output is 25fps) (Dolby)
	Motion Picture Recording (*2)	HD Video 1920 x 1080 pixels, 50i (FHD: 17Mbps / AVCHD) (Sensor Output is 50fps) (Dolby)
		HD Video 1920 x 1080 pixels, 50p (FHD: 28Mbps / MP4) (Sensor Output is 50fps) (AAC)
		HD Video 1920 x 1080 pixels, 25p (FHD: 20Mbps / MP4) (Sensor Output is 25fps) (AAC)
		HD Video 1280 x 720 pixels, 25p (HD: 10Mbps / MP4) (Sensor Output is 25fps) (AAC)
		STD Video 640 x 480, 25p (VGA: 4Mbps / MP4) (Sensor Output is 25fps) (AAC)
		High Speed Video 1920 x 1080 pixels, 25p (FHD: MP4) (Sensor Output is 100fps)
	Continuous Recordable Time (Motion Pictures)	AVCHD FHD/50p: Approx. 105 min
		AVCHD FHD/50i: Approx. 110 min
		MP4 4K/25p: Approx. 90 min
		MP4 FHD/50p: Approx. 110 min
	Actual	AVCHD

recordable Time (Motion Pictures)		FHD/50p: Approx. 50 min
	AVCHD	FHD/50i: Approx. 55 min
Exposure Parameters	MP4	4K/25p: Approx. 45 min
	MP4	FHD/50p: Approx. 55 min
	Exposure	Program AE, Aperture Priority AE, Shutter Priority AE, Manual
	Exposure Compensation	1/3 EV step, +/-5 EV (+/-3 EV for motion picture)
	Auto (AE) Bracketing	3, 5, 7 frames in 1/3, 2/3 or 1 EV Step, Max. +/-3 EV
	Light Metering	Intelligent Multiple / Center Weighted / Spot
	ISO Sensitivity	Still Image: Auto / i.ISO / 80* / 100* / 125 / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600*
	ISO Sensitivity	Motion Picture: Auto / 125 / 200 / 400 / 800 / 1600 / 3200 / 6400
	ISO Sensitivity	(Changeable to 1/3 EV step)
	ISO Sensitivity	* Extended ISO
	Still Picture Recording	[4:3] 4864x3648 (17.5M) (L) / 3456x2592 (9M) (M) / 2432x1824 (4.5M) (S)
	Still Picture Recording	[3:2] 5472x3648 (20M) (L) / 3888x2592 (10M) (M) / 2736x1824 (5M) (S)
	Still Picture Recording	[16:9] 5472x3080 (17M) (L) / 3840x2160 (8M) (M) / 1920x1080 (2M) (S)
	Still Picture Recording	[1:1] 3648x3648 (13.5M) (L) / 2592x2592 (6.5M) (M) / 1824x1824 (3.5M) (S)
Picture Quality	Image Quality	RAW / RAW+Fine / RAW+Standard / Fine / Standard
	White Balance	Auto / Daylight / Cloudy / Shade / Incandescent / Flash / White Set1 / White Set2 / White Set3 / White Set4 / Color Temperature
	White Balance	(2-axis Adjustable)
	Photo Style	Standard, Vivid, Natural, Monochrome, Scenery, Portrait, Custom, Cinelike D*, Cinelike V* * When Creative Video mode is selected.
Other	Picture Adjustment	Contrast, Sharpness, Noise Reduction, Saturation*, Color Tone**, Filter Effect**
	Picture Adjustment	* Except for Monochrome mode. ** For Monochrome mode only.
	Digital Red Eye Correction (Red-Eye Removal)	Yes (On / Off)
	GPS	-
	Wi-Fi	IEEE 802.11b/g/n
	Wi-Fi	2412 MHz - 2462 MHz (1-11 ch)
	Wi-Fi	WPA / WPA2
	Wi-Fi	

		Infrastructure Mode / WPS
	NFC	-
	Zoom in Motion Picture	Yes
	Self Timer	2 sec / 10 sec / 10 sec (3 images)
	Self Shot Mode	-
	Playback Mode	All, Slideshow, Filtering Play (Picture Only, Video Only, 4K PHOTO, Post Focus, Category Selection, Favorite), Calendar
	Thumbnails / Zoomed Playback	12,30-thumbnails / Yes
Display	Set Favorites / Rotate Image	Yes / Yes
	Show Histogram/ Show Highlights	Yes / Yes
	DPOF Print Setting / Set Protection	Yes / Yes
	Retouch	-
Playback	RAW Processing	Yes
	Resize/ Cropping	Yes / Yes
	Copy / Title Edit / Text Stamp	- / Yes / Yes
	Video Divide	Yes
	Creating Still Pictures from a Motion Picture	Yes
	PictBridge Support	Single / Multi / All / DPOF / Favorites
Setup	OSD language	Japanese, English, German, French, Italian, Spanish, Chinese (Traditional), Chinese (Simplified)
Others	Monitor	LCD Monitor 7.5cm (3.0") TFT Screen LCD Display (1040k dots), Static Touch Control, AF Coating
	Flash	LCD Monitor Field of View: Approx. 100%, Wide Viewing-angle
	Built-in-Flash	Auto*, Auto/Red-eye Reduction*, Forced On, Forced On/Red-eye Reduction, Slow Sync., Slow Sync./Red-eye Reduction, Forced Off * For iA, iA+ mode only.
	Built-in-Flash	0.6 - 8.0m (Wide / ISO Auto), 0.7 - 3.8m (Tele / ISO Auto)
Media	Recording Media	SD Memory Card, SDHC Memory Card, SDXC Memory Card
	Recording Media	(Compatible with UHS-I UHS Speed Class 3 standard SDHC / SDXC Memory Cards)
	Built-in-Memory	-

Audio	Microphone / Speaker	Stereo / Mono
Interface	Interface	microHDMI typeD (*3), USB2.0 Micro-B
	Power	Li-ion Battery Pack (7.2V, 1025mAh, 7.4 Wh) (Included)
Power	Power	AC Adaptor (Input: 110 - 240V AC) (Included, connect with USB cable)
	Battery life (approx.)	300 pictures (rear monitor) / 260 pictures (LVF) (CIPA Standard) (*1)
	Included Software	<ul style="list-style-type: none"> The software to process RAW file on PC is not bundled with DMC-TZ110. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using PC connected to the Internet.
Standard Package	Included Software	<ul style="list-style-type: none"> The DMC-TZ110 Operating Instructions for advanced features is available for downloaded at Panasonic LUMIX Customer Support Site using PC, smartphone or tablet connected to the Internet.
	Included Software	<ul style="list-style-type: none"> The software for PC is not bundled with DMC-TZ110. Please use the software pre-installed to the PC or other general image viewing software to browse pictures.
	Standard Accessories	Battery Pack, AC Adaptor, USB Cable, Hand Strap, Strap Adaptor
NOTE		*1
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].
NOTE		*2
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		- 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 with [MP4] in [4K] or [4K PHOTO].

NOTE

(SD speed class is the speed standard regarding continuous writing.)

NOTE

- Maximum time to record motion pictures continuously with [AVCHD] is 29 minutes 59 seconds.

NOTE

- Maximum time to record motion pictures continuously with [MP4] in [4K] is 15 minutes.

NOTE

- Maximum time to record motion pictures continuously with [MP4] in [FHD] [HD] [VGA] is 29 minutes 59 seconds or up to 4 GB.

NOTE

- Maximum time to record High Speed motion pictures continuously with [MP4] in [FHD] is 7 minutes 29 seconds.

NOTE

*3

NOTE

For [4K] video output, use an HDMI cable that has the HDMI logo on it, and that is described as "4K compatible".