

Specifications E-M1 Mark III

Type

Body material	Magnesium alloy body
Lens mount	Micro Four Thirds

Image Sensor

Type	4/3" Live MOS sensor
Effective pixels	20.4 Megapixels

Engine

Type	TruePic IX
------	------------

Filter

Dust reduction filter	Supersonic Wave Filter
-----------------------	------------------------

Viewfinder

Type	Electronical Viewfinder
Pixel number	2,360 K dots
Diopter adjustment	Equipped -4.0 - +2.0 diopters / built-in type
Field of view	Approx. 100%
Magnification	Max. 1.48 x with a 50mm lens set to infinity at -1 dioptre (depending on selected viewfinder style)
Eye point	21 mm at -1 dioptre from eyepiece lens
Style	3 styles selectable
Brightness adjustment	Adaptive Brightness Technology / Manual settings: +/- 7 levels
Correction of colour temperature	+/- 7 levels
S-OVF	Expands the Live View dynamic range

*Available in the EVF when in P, A, S, M and B modes. Art filter, WB and exposure are not reflected in EVF.

Live View

Displayed information	Aperture, Shutter speed, Auto bracket, AE lock, Focus mode, Shooting mode, Battery check, IS activating mode, Face / Eye detection mode, Record mode, ISO, Sequential shooting mode, White Balance, Metering mode, Exposure compensation value, AF frame display, AF confirmation mark, Shooting information, Spot metering area, Super FP, Flash status, Touch Panel Condition, Focal length, Flash mode, Histogram, Level Gauge, Highlight & Shadow, Focus peaking, Number of storable pictures, Custom, Face detection, Flash intensity, WiFi
Field of view	Approx. 100%
Magnification levels	3 / 5 / 7 / 10 / 14 x
Dynamic range expansion	When in HDR1 or HDR2
Display modes	Comparison, Grid (4 types), Grid, Histogram, Level Gauge, Magnified View, Standard information, Off

Image Stabiliser

Type	Sensor shift
------	--------------

Image Stabiliser

Modes	Five-dimensional, vertical or horizontal activation, automatic
-------	--

Effective Compensation Range	Up to 7.0 EV steps*
------------------------------	---------------------

Up to 7.5 EV steps**

Based on CIPA measurement conditions

*When using M.Zuiko Digital ED 12-40mm f/2.8 PRO (focal length =40mm (35mm equivalent: 80mm))

**When using M.Zuiko Digital ED 12-100mm F4 PRO (focal length =100mm (35mm equivalent: 200mm)), halfway release image stabilization Off, Frame rate: High

Live View stabilisation	Available
-------------------------	-----------

Focusing System

Method	TTL phase difference detection system, contrast detection system
--------	--

Focus areas	121 points / cross-type phase detection AF
-------------	--

121 points / contrast AF

All target, single target (normal / small), group target (5-area / 9-area / 25-area), custom target 1-4 (AF area and its increment steps selectable)

AF working range	-6 - 20 EV (ISO approx.100, with a f/1.2 lens)
------------------	--

AF lock	Available, Locked by first position of shutter release button in single AF mode, AE/AF lock button (customised)
---------	---

Modes	Manual focus, Preset MF**, Single AF*, Continuous AF*, AF* Tracking, Stacking, Bracketing
-------	---

* incl. manual override

** Distance setting values are rough estimates and only AF lenses can be used.

AF illuminator	Equipped
----------------	----------

Manual focus	Available, With enlarged focusing area or focus peaking
--------------	---

Face Detection extension	Eye Detect AF: Off, Left side priority, Near side priority, Right side priority
--------------------------	---

Predictive AF	Available
---------------	-----------

AF tracking	Available, Available in continuous AF mode
-------------	--

Focus peaking

Colour selection	White, black, red, yellow
------------------	---------------------------

Intensity	High / Normal / Low
-----------	---------------------

Back light effect	On / Off
-------------------	----------

Focus Bracketing Mode

Number of images	3 - 999 shots
------------------	---------------

Step size	10 levels
-----------	-----------

Compatible with: All Micro Four Thirds AF lenses

Focus Stacking Mode

Technology	3-15 images are taken at different focus points and automatically composited together into a single image
------------	---

Focusing System

Compatible with: M.Zuiko Digital ED 60mm F2.8 Macro, M.Zuiko Digital ED 30mm F3.5 Macro, M.Zuiko Digital ED 7-14mm F2.8 PRO, M.Zuiko Digital ED 12-40mm F2.8 PRO, M.Zuiko Digital ED 12-45mm F4 PRO, M.Zuiko Digital ED 12-100mm F4 IS PRO, M.Zuiko Digital ED 40-150mm F2.8 PRO, M.Zuiko Digital ED 8mm F1.8 Fisheye PRO, M.Zuiko Digital ED 300mm F4 PRO

M.Zuiko Digital 1.4x Teleconverter MC-14, M.Zuiko Digital 2x Teleconverter MC-20

Angle of view becomes slightly smaller

AF targeting pad	Available (activate/deactivate with double tap on rear monitor)
------------------	---

Exposure System

Modes	Programme automatic, Aperture priority, Shutter priority, Manual, Bulb, Time, Movie, HDR, My Mode, Custom shooting, Custom 1, Custom 2
-------	--

Exposure compensation	+/- 5 EV (1, 1/2, 1/3 steps)
-----------------------	--------------------------------

Note: Monitor and EVF displays only up to ±3 EV.

Exposure bracketing	2 / 3 / 5 frames (+/- 1/3, 2/3, 1 EV steps)
---------------------	---

7 frames (+/- 1/3, 1/2, 2/3 EV steps)

ISO bracketing	3 frames (1/3, 1/2, 1 EV steps)
----------------	-----------------------------------

AE lock	Available
---------	-----------

My Mode	4 settings storable
---------	---------------------

Enhancement function	Digital Shift (horizontal and vertical compensation can be performed simultaneously)
----------------------	--

Shadow Adjustment Technology

Flicker Scan: Available for M, S and silent mode (can be confirmed in Live View)

HDR bracketing	3 / 5 frames (+/- 2 / 3 EV steps)
----------------	-------------------------------------

7 frames (+/- 2 EV steps)

Multi-Exposure

Max. number of frames	2 frames (shooting)
-----------------------	---------------------

3 frames (editing)

Auto gain control	Available
-------------------	-----------

Frame assistance	Live View
------------------	-----------

Light Metering

Method	TTL open aperture light metering
--------	----------------------------------

Zones	324 zones Multi-pattern Sensing System
-------	--

Detection range	-2 - 20 EV (17mm f2.8, ISO 100)
-----------------	---------------------------------

Modes	ESP light metering, Spot metering, Centre weighted metering, Highlight, Shadow
-------	--

Art Filter

Modes	Pop Art, Soft Focus, Pale & Light Colour, Light Tone, Grainy Film, Pin Hole, Diorama, Cross Process, Dramatic Tone, Gentle Sepia, Key Line, Water colour, Vintage, Partial Colour*, Bleach Bypass
Variation / Effect	Available
Art Filter bracketing	Art Filters selectable

Sensitivity

Auto	(customisable, default ISO LOW - 6400)
Manual	ISO LOW - 25600 in 1/3 or 1 EV ISO steps

Shutter

Shutter type	Computerised focal-plane shutter
Self timer	2 s / 12 s / Custom
Durability	400,000 shots

Shutter Speeds

Shutter speed range	1/8000 - 60 s (in 1/3, 1/2, 1 EV steps)
Bulb mode	Up to 30 minutes (selectable longest time in the menu, default: 8 minutes)

High res shot

Shutter type	Electronic shutter
Shutter speed	1/8000 - 60 s
Start delay	0, 1/8, 1/4, 1/2, 1, 2, 4, 8, 15, 30 s
Resolution	JPEG: 10368x7776 / 8160 x 6120 / 5760 x 4320 RAW: 10368 x 7776 Equivalent to 80M / 50M / 25M pixel sensor (8 shots combined into a single JPEG using sensor shift) Available in P/A/S/M mode

Handheld High res shot

Shutter type	Electronic shutter
Shutter speed	1/8000 - 60 s
Resolution	JPEG: 8160 x 6120 / 5760 x 4320 RAW: 8160 x 6120 Equivalent to 50M / 25M pixel sensor (8 shots combined into a single JPEG using sensor shift) Available in P/A/S/M mode Flash can not be used

Anti shock mode

Shutter type	Electronic first curtain shutter
Shutter speed	1/320* - 60 s
Start delay	0, 1/8, 1/4, 1/2, 1, 2, 4, 8, 15, 30 s * For speeds over 1/320 sec., mechanical shutter will automatically be selected.

Silent mode

Shutter type	Electronic shutter
Shutter speed	1/32000 - 60 s

Shutter Speeds

Start delay	0, 1/8, 1/4, 1/2, 1, 2, 4, 8, 15, 30 s
Flicker Scan	
Stills	1/7634 - 1/50 s
Movies	1/250 - 1/30 s* * Frame rates greater 30fps are limited to their reciprocal value

White Balance

AUTO WB system	Advanced detection system with Live MOS sensor
Manual White balance (One-Touch)	Available
White balance bracketing	3 frames / +/- 2, 4, 6 mired steps
One-touch white balance	4 custom settings can be registered
Custom WB	1 setting can be registered at Kelvin temperature (2000K - 14000K)
Preset values	Tungsten, Fluorescent 1, Sunlight, Flash, Overcast, Shade, Underwater
Auto Flash adjustment	Off / Auto WB / Flash
Keep warm colour	On / Off

Sequence Shooting

Speed (H)	Approx. 15 fps Max. number of frames: RAW 101 / JPG (LF): 134
Speed (L)	10 fps Max. number of frames: RAW 286 / JPG (LF): Up to card capacity
Silent mode	
Speed (H)	Approx. 60 fps Max. number of frames: RAW 50 / JPG (LF): 50
Speed (L)	Approx. 18 fps Max. number of frames: RAW 76 / JPG (LF): 90
Pro Capture mode	
Speed (H)	Approx. 60 fps
Speed (L)	Approx. 18 fps
Pre-shutter Frames	0 - 35 frames (recorded by half release prior to full release)
Frame count limiter	1 - 99 frames / Off (unlimited frames) (incl. pre-shutter frames)
Conditions	Memory card: TOSHIBA SDHC UHS-II R95 W90 EXCERIA™

Sequence Shooting

When using the M.Zuiko Digital ED 12-40mm F2.8 Pro Maximum sequential shooting speed may be affected by several factors including lens used, brightness, aperture, shutter speed, and ISO setting.

When ISO is 8000 or above, 30 fps becomes the maximum sequential shooting speed. The actual shooting speed may become slower than the set shooting speed by a few frames per second. When using ISO Bracketing, performance will be affected at ISO 2000 or above.

Image Processing

Colour space	sRGB / AdobeRGB
Sharpness + Contrast	5 levels
Contrast	5 levels
Saturation	5 levels
Black & White filter	Yellow, Orange, Red, Green
Black & White toning	Sepia, Blue, Purple or Green in Black & White mode
Picture mode	i-Enhance, Vivid, Natural, Portrait, Muted, Monotone, Art Filter, Custom
Gradation	4 levels (auto, high key, normal, low key)
Engine	TruePic IX
Art Filter bracketing	Available
Tele converter effect	2 x
Fisheye compensation	Available when M.Zuiko Digital ED 8mm Fisheye PRO is attached Angle of view adjustable in 3 levels Compensation automatically ON when using Underwater Modes, available (can be confirmed in Live View)

External Flash Control

X-sync speed	1/250 s / 1/8000 s (Super FP Mode)
Type	TTL AUTO, AUTO, MANUAL, FP TTL AUTO, FP MANUAL
Compatible external flash	FL-14, FL-20, FL-36R, FL-50R, FL-300R, FL-600R, FL-700WR, FL-900R, STF-8
Modes	Auto, Red-eye reduction, Slow synchronisation, 2nd curtain and slow synchronisation, Fill-in for exclusive flash, Manual
Intensity	+/- 3 EV (1/3, 1/2, 1 EV steps) Note: Some functions are only available if they are supported by the external flash.

Wireless Flash Control

Number of channels	4 channels
Compatible external flash	FL-36R, FL-50R, FL-300R, FL-600R, FL-700WR, FL-900R, STF-8
Control method	Triggered and controlled by bundled flash
Group setting	4 groups

Wireless Flash Control

Available when used together with cameras compatible with the Olympus wireless RC flash system.

Monitor

Monitor type	Vari-angle LCD - Touch Panel
Monitor size	7.6 cm / 3.0" (3:2)
Resolution	1,037 K dots
Brightness adjustment	+/- 7 levels
Colour balance	+/- 7 levels
Touch Control functions	AF area enlargement, AF area selection, Art Filter, Enlargement, Enlargement playback, Frame forward/backward, Live Guide, Scene Modes, Shooting mode, Shutter release, Super Control Panel, Wifi connection

Level Gauge

Detection	2-axis
Display	Rear display and viewfinder

Super Control Panel

Displayed information	Battery indicator, Record mode, Shutter speed, Aperture value, Exposure compensation indicator, ISO, AE bracketing, AF frame, Focus mode, AEL notification, Face detection, Number of storable frames, Metering mode, Exposure mode, Exposure level view, Flash compensation value, Colour space, Gradation, Colour saturation compensation value, Sharpness compensation value, Contrast compensation value, White balance, White balance compensation value, Noise reduction, Flash mode, Drive mode, Internal temperature warning, Histogram
-----------------------	---

Recording Formats

RAW	12 bit
RAW & JPEG	Applied parallel recording
JPEG	Applied
Aspect ratio	4:3 / 3:2 / 16:9 / 6:6 / 3:4

Image Size

RAW	5184 x 3888 compressed
	5184 x 3888 Fine (compression: 1/4)

Still Image Recording

EXIF	2.31
DCF	Applied
RAW	Applied
Dual SD card settings	Standard, Auto Switch, Dual Independent, Dual Same
	When two cards are inserted, card to be saved on to or to be viewed can be designated.

Movie Recording System

Recording format	MOV(MPEG-4AVC/H.264)
Picture mode	Flat, OM-Log400 (View assist compatible)

Movie Recording System

Time code	Rec run / Free run
	Drop frame / Non-drop frame
Image Stabilisation Mode	Applied Sensor shift
	M-IS1 (Image sensor shift and electronic image stabilizer with multi motion IS)
	M-IS2 (Image sensor shift with multi motion IS)
4K Movie quality	4096 x 2160 (C4K) / 24p / IPB (approx. 237 Mbps)
	3840 x 2160 (4K) / 30p, 25p, 24p / IPB (approx. 102 Mbps)
HD Movie quality	Full HD 1920 x 1080 (16:9) / 30p, 25p, 24p / ALL-I (A-I), IPB (SF, F, N) (MOV)
	Full HD 1920 x 1080 (16:9) / 60p, 50p / IPB (SF, F, N) (MOV)
	HD 1280 x 720 (16:9) / 60p, 50p, 30p, 25p, 24p / ALL-I (A-I), IPB (SF, F, N)
	ALL-I: ~ 202 Mbps
	FullHD IPB (SF: ~52Mbps, F: ~30Mbps)
	HD IPB (SF: ~26Mbps, F: ~14Mbps, N: ~10Mbps)
	HD 1280 x 720 (16:9) / 30p
Movie quality	640 x 480 / 30p (AVI Motion JPEG®)
Maximum Recording Time	29 min (MOV)
Max. file size	4 GB (AVCHD)
Exposure Modes	Aperture priority, Manual, Programme automatic, Shutter priority
	* Frame rate may drop when using certain art filter
	Class 10 or higher SD card is recommended for movie shooting
	UHS-II or UHS-I U3 card is recommended for ALL-I shooting

Movie Specialties

High-Speed Recording	1920x1080 (MOV) / 120fps
Time lapse	4k, 1080p, 720p (AVI Motion JPEG®)
Fast motion	Available
Slow motion	Available
Movie clips	1, 2, 4, 8 s
	(Extension up to 16s by pressing record button before clip ends.)
Movie effects	
Art Filter	Cross Process, Diorama, Dramatic Tone, Gentle Sepia, Grainy Film, Key Line, Light Tone, Pale & Light Colour, Pin Hole, Pop Art, Soft Focus, Vintage, Partial Colour*, Bleach Bypass
	* 18 colours selectable
	Frame rate limited to 30fps or lower
Flicker Scan	Available in M mode (can be confirmed in Live View)
HDMI Live View	
Monitor mode	Video signal and info display is processed

Movie Specialties

	While recording, footage is simultaneously displayed on the HDMI monitor and on the camera, but the info display is shown only on either one of the two.
	While playing movies, footage is simultaneously displayed on the HDMI monitor (normal size) and on the camera (normal size or enlarged).
Record mode	Only video signal is processed
	Movie quality is set to YCbCr 4:2:2 (8 bit), frame rate follows movie setting (24p, 30p and 60p settings are not recommended.), and sound will be recorded.
Sound Recording System	
Internal microphone	Stereo
Recording format	High quality sound recording (Stereo linear PCM/24-bit, Sampling frequency 96kHz)
Image footage	30 s
Speaker	Equipped
Microphone functions	Wind Noise Reduction, Recording Volume, Volume limiter, Audio Dubbing
Linking Olympus PCM Recorders	
Functions	Slate Tone / Synchronised Audio Rec-Movie Rec
	Compatible with: LS-100, LS-P4

View Images

Modes	Single, Index, Clips, Calendar, Zoom, Movie, Slide show, Light box
Auto rotation	Available
Histogram in playback mode	Available
Shooting information	Off / On
Highlight/Shadow point warning	Available

Erase / Protect / Copy Function

Erase modes	Single, All, Selected
Image protect mode	Single frame, Selected frames, All Frames, Release protect (Single/All selected)

Image Editing

Editing functions	RAW data edit, Red-eye reduction, Sepia, Black & White, Resize, Correction of saturation, Correction of brightness, Correction of colour balance, Shadow Adjustment, Trimming, e-Portrait, Aspect ratio
-------------------	---

Menu

Menu languages in camera	English, French, German, Spanish, Italian, Russian, Czech, Dutch, Danish, Polish, Portuguese, Swedish, Norwegian, Finnish, Croatian, Slovenian, Hungarian, Greek, Slovak, Turkish, Latvian, Estonian, Lithuanian, Ukrainian, Serbian
--------------------------	--

Customisation Options

Fn Button	Equipped
My Mode	4 settings storable (Can be set to mode dial.)
Programmable button	Equipped

Interface	
Media	SD Memory Card (SDHC, SDXC, UHS-I, UHS-II compatible) Class 10 or higher SD card is recommended for movie shooting UHS-II or UHS-I U3 card is recommended for 4K, C4K, ALL-I shooting.
HDMI™	Applied Micro connector (Type D) *
USB 3	Type C
Wireless connectivity	WiFi, Bluetooth® <small>* „HDMI“, the HDMI logo and „High-Definition Multimedia Interface“ are trademarks or registered trademarks of HDMI Licensing LLC.</small>
Tethered control	USB cable (camera operation by both PC or camera controls) WiFi (transfer of recorded images to PC via access point, 5GHz and 2.4GHz available)
Microphone jack	3.5 ø mm mini-jack
Earphone jack	3.5 ø mm mini-jack
Synchro socket	Equipped

Wi-Fi Functions	
Easy Connection	QR code setting
Wireless Shooting	Live View, Power off, Rec View, Self timer, Touch AF & Shutter, P/A/S/M exposure modes, Bulb mode, Zoom, Movie recording, Live Composite, Short movie

Power Supply	
Battery	BLH-1 Lithium-Ion Battery
Sleep mode	1, 3, 5min. and off selectable.
DC-input	AC-5
Internal Charging	USB (Camera must be switched off)
USB charging	Performance varies depending on different USB devices
USB bus power	USB PD bus power can be used (PD compliant camera: Rev 3.0 Ver 1.0a)
Battery life	
Image shooting	420 shots (using BLH-1 and Toshiba SDHC UHS-I Card Exceria with IS on, with no flashes attached , based on CIPA test standards) 900 shots (using quick sleep mode, under Olympus testing conditions based on CIPA test standards)
Movie recording	85 min (standard JEITA conditions) 140 min (when zoom and other operational functions are not used) <small>Note: Values are approximate.</small>

Environment	
Temperature	-10 - 40°C Operating temperature / -20 - 60°C storage temperature
Humidity	30 - 90% operation humidity / 10 - 90% storage humidity

Dimensions	
Width	134.1 mm

Dimensions	
Height	90.9 mm
Depth	68.9 mm
Weight	580 g (including battery and memory card) 504 g (body only)