

Image sensor size

17.3 x 13.0 mm (in 4:3 aspect ratio)

Lens mount

Micro Four Thirds mount

Type

Live MOS Sensor

Total pixels

21.77 megapixels

Camera effective pixels

20.30 megapixels

Color filter

Primary color filter

Dust reduction system

No

Latitude

12 stops (V-Log L)

Image Stabilization System

5-axis HYBRID I.S.

Recording File Format: Still image

JPEG (DCF, Exif 2.31)

RAW

Recording File Format: 4K PHOTO

MP4 (H.264/MPEG-4 AVC

Audio format: AAC (2ch))

Extracted still images: JPEG (DCF, Exif 2.31)

Recording File Format: Motion picture

MP4 (H.264/MPEG-4 AVC

Audio format: AAC (2ch))

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: 5184x3888(L) / 3712x2784(M) / 2624x1968(S) / 3328x2496(4K Photo)

3:2: 5184x3456(L) / 3712x2480(M) / 2624x1752(S) / 3504x2336(4K Photo)

16:9: 5184x2920(L) / 3840x2160(M) / 1920x1080(S) / 3840x2160(4K Photo) 1:1: 3888x3888(L) / 2784x2784(M) / 1968x1968(S) / 2880x2880(4K Photo)

File size (Pixels): Motion picture

MP4: [4K] 3840x2160

4K/30p: 100Mbps

4K/24p: 100Mbps

[Full HD] 1920x1080:

FHD/60p: 28Mbps

FHD/30p: 20Mbps

FHD/24p: 24Mbps

[HD] 1280x720

HD/30p: 10Mbps

File size (Pixels): Slow & Quick

MP4: [Full HD] 1920x1080

60p, 28Mbps (Sensor output is 120fps / 30fps / 15fps / 8fps)

30p, 20Mbps (Sensor output is 120fps / 60fps / 15fps / 8fps / 4fps)

Type

LCD Live View Finder

Pixels

Approx. 3,680k dots equivalent

Field of view / Magnification

Approx. 100% / Approx. 1.46x / 0.73x (35mm camera equivalent) with 50 mm lens at infinity; -1.0 m-1

Eye point / Diopter adjustment

Approx. 20 mm / -4.0 - +2.0 (dpt)

Eye sensor

Yes

Type

TFT LCD monitor with static touch control

Monitor size

Free-angle, 3.0-inch (7.5cm), 3:2 aspect

Pixels

Approx. 1,840k dots

Field of view

Approx. 100%

Type

Contrast AF system

DFD technology

Yes

#### Focus mode

- AFS (Single)
- AFF (Flexible)
- AFC (Continuous)
- MF

#### AF mode

- Face
- Eye Detection
- Tracking
- 49–Area
- Custom Multi
- 1–Area
- Pinpoint

#### AF detective range

EV -4 – 20 (ISO100 equivalent)

#### Starlight AF

Yes

#### AF assist lamp

Yes

#### AF lock

Set the Fn button in custom menu to AF lock

#### Post Focus / Focus Stacking

Yes / Yes

#### Others

AF-ON, Shutter AF, Half Press Release, Focus/Shutter Priority, Quick AF, Continuous AF (during motion picture recording), Eye Sensor AF, AF+MF, MF Guide, MF Assist, Touch MF Assist, Focus Peaking, Touch AF/AE Function, Touch Pad AF, Touch Shutter, Focus Switching for Vert/Hor, Focus Ring Lock, Loop Movement Focus Frame, Lens Focus Resume

#### Light metering system

1728–zone multi–pattern sensing system

#### Light metering mode

- Multiple
- Center Weighted
- Spot

#### Metering range

EV 0 – 18 (F2.0 lens, ISO100 equivalent)

#### Exposure mode

- Program AE
- Aperture Priority AE
- Shutter Priority AE
- Manual Exposure

#### Exposure compensation

1/3 EV step, +/-5EV ( +/-3 EV for motion picture)

#### AE lock

Set the Fn button in custom menu to AE lock

#### 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

#### Type

Electronically-control focal-plane shutter

#### Shutter speed

Still image: Time (Max. 60 second), 1/16,000 – 60

Motion picture: 1/16,000 – 1/25

Creative Video M mode / MF mode: 1/16,000 – 1/2

#### Live View Composite

1/2 – 60

#### Self timer

10sec, 3 images / 2sec / 10sec

#### Silent mode / Shutter type

Yes / Yes (Auto / Electronic front curtain / Electronic)

#### 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

#### White balance bracket

3 images in blue/amber axis or in magenta/green axis, color temperature setting

#### Burst speed

Electronic first curtain shutter:

AFS/MF: H: 6 frames/sec, M: 4 frames/sec (with Live View), L: 2 frames/sec (with Live View)

AFF/AFC: H: 5 frames/sec, M: 4 frames/sec (with Live View), L: 2 frames/sec (with Live View)

Electronic shutter

AFS/MF: H: 10 frames/sec, M: 4 frames/sec (with Live View), L: 2 frames/sec (with Live View)

AFF/AFC: H: 10 frames/sec, M: 4 frames/sec (with Live View), L: 2 frames/sec (with Live View)

Number of recordable images

RAW / RAW+JPEG: More than 20 images

JPEG: More than 480 images (When using a card with SD Speed Class with "UHS-I UHS Speed Class 3 (U3)".)

Burst speed

30 frames/sec

Exif information

Yes (Each JPEG image cropped out of the 4K burst file complies with EXIF)

Time Lapse Shot

Yes

Stop Motion Animation

Yes

Flash type

TTL Built-in-Flash, GN5.1 equivalent (ISO200 m) / GN3.6 equivalent (ISO100 m) (Reference),  
Built-in Pop-up

Flash mode

Auto

Auto/Red-eye Reduction

Forced On

Forced On/Red-eye Reduction

Slow Sync

Slow Sync./Red-eye Reduction

Forced Off

Synchronization speed

Less than 1/50 second

Flash output adjustment

1/3EV step +/-2EV

Flash synchronization

1st. Curtain Sync.

2nd Curtain Sync.

Wireless control

Yes (When using DMW-FL200L / FL360L / FL580L (sold separately)), Wireless Channel:

1ch/2ch/3ch/4ch

Digital zoom

2x

Extra Tele Conversion

Still image: 1.4x (EX M), 2.0x (EX S)

Motion picture: 2.7x (FHD), 4.0x (HD)

## Other functions

Level Gauge, Real-time Histogram  
Guide Lines (3 patterns)  
Center Marker  
Highlight display (Still image / motion picture)  
Zebra Pattern (Still image / motion picture)  
Frame Maker  
REC Frame Indicator  
Live View Boost

## Self Shot mode

Yes (Still image / motion picture)

## Shutter

Shutter Button  
Touch  
Face Shutter  
Buddy Shutter

## Effect

Soft Skin: 10 levels  
Filter Select: Expressive / Retro / High Key / Monochrome / Toy Effect  
Background Control: Defocus / Clear  
Slimming Mode: 10 levels

## Direction Detection Function

Yes

## Rec

4K PHOTO / Exposure Comp. / Wi-Fi / Q.MENU / Video Record / LVF/Monitor Switch /  
LVF/Monitor Disp. Style / AF/AE LOCK / AF-ON / Preview / One Push AE / Touch AE / Level  
Gauge / Focus Area Set / Zoom Control / Operation Lock / Focus Ring Lock / Dial Operation  
Switch / Photo Style / Filter Effect / Aspect Ratio / Picture Size / Quality / Metering Mode /  
Burst Rate / Self Timer / Live View Composite / Bracket

## Rec (Contd.)

Focus Mode / Highlight Shadow / i. Dynamic / i. Resolution / Min. Shtr Speed / HDR / Shutter  
Type / Flash Mode / Flash Adjust. / Wireless Flash Setup / Ex. Tele Conv. / Digital Zoom /  
Stabilizer / E-Stabilization (Video) / 4K Live Cropping / Snap Movie / Motion Pic. Set / S&Q  
Effect / Picture Mode in Rec. / Sound Rec Level Adj. / Sound Rec Level Disp. / Built-in Mic / Mic.  
Directivity Adjust

## Rec (Contd..)

Silent Mode / Peaking / Histogram / Guide Line / Frame Maker / Zebra Pattern / Monochrome  
Live View / Constant Preview / Live View Boost / Rec Area / Step Zoom / Zoom Speed /  
Sensitivity / White Balance / AF Mode/MF / Drive Mode / Rec/Playback Switch / Off / Restore  
to Default

## Play

Wi-Fi / LVF/Monitor Switch / Rec/Playback Switch / Send Image (Smartphone) / 4K PHOTO Play / Delete Single / Protect / Rating 1, 2, 3, 4, 5 / RAW Processing / 4K PHOTO Bulk Saving / Off / Restore to Default

#### Photo Style

Standard / Vivid / Natural / Scenery / Portrait / Monochrome / L. Monochrome / L. Monochrome D / Cinelike D / Cinelike V / V-Log L / Custom

#### Filter

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

#### Direct print

PictBridge compatible

#### USB

USB 2.0 Micro-B

#### HDMI

MicroHDMI TypeD / VIERA Link

Video: Auto / 4K/30p / 1080p / 1080i / 720p / 480p

Audio: Stereo

#### External microphone input

Dia. 3.5mm (Stereo/Lens Auto/Shotgun/Super Shotgun/Manual is selectable when attaching DMW-MS2 (sold separately).)

#### Microphone

Stereo, Wind Noise Canceller: OFF / Low / Standard / High

#### Speaker

Monaural

#### Wi-Fi

IEEE 802.11b/g/n, 2412 MHz – 2462 MHz (1–11 ch), Wi-Fi / WPA / WPA2, Infrastructure mode

#### Bluetooth

Bluetooth v4.2 (Bluetooth Low Energy (BLE))

#### Battery

Li-ion Battery Pack (7.2V, 1025mAh, 7.4Wh)

#### Battery life (CIPA standard)

Approx. 270 images (rear monitor), 250 images (LVF), 900 images (Power Save LVF mode) with H-FS12032

#### Actual recordable time (Motion picture)

4K/30p:

Approx. 40 min (rear monitor), 35 min (LVF) with H-FS12032

#### Operating temperature

0 Degree C to 40 Degree C

#### Operating humidity

10%RH to 80%RH

Recording media

SD Memory Card, SDHC Memory Card, SDXC Memory Card

Dimensions (W x H x D)

Approx. 115 x 82.5 x 54.2mm

Weight

303g (body only)

412g (including lens, SD card, and battery)

514g (including lens, SD card, battery, and tripod)