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ILCE-6400/B

α6400 Mirrorless APS-C Interchangeable-Lens Camera

Advanced APS-C camera with 24.2 MP Exmor® CMOS sensor, the World's fastest autofocus (AF) speed[1] at 0.02 sec., advanced Real-time Eye-AF and Real-time object Tracking AF with Wide 425-phase/425-contrast detection AF points over 84% of sensor, up to 11fps continuous shooting[3] with continuous autofocus and auto-exposure, 4K HDR video[2], 180-degree tiltable touchscreen LCD and Wi-Fi® for easy file transfer and remote control.

Key Features

24.2MP and incredible image quality

The α6400's APS-C image sensor with approximately 24.2 effective megapixels uses copper wiring and a highly effective circuit process, resulting in efficient light collection that achieves a wide sensitivity range (Expandable ISO 100 – 102400) and excellent low noise performance even at high ISO. The design significantly increases readout speed, enabling functionality including 11fps continuous shooting[3], 4K recording[2] with full pixel readout without pixel binning and Full HD 120fps high-speed shooting. A front-end LSI supports the image processing of the new-generation BIONZ X image processing engine. Advances in image processing algorithms have further improved the superb image clarity, texture reproduction and image quality.

World's fastest autofocus[1] with 4D FOCUS™

The α6400's unrivaled 4D FOCUS™ system boasts the world's fastest autofocus (AF) acquisition time[1] that can lock focus on even the fastest moving subject in as little as 0.02 seconds[1]. It also boasts an incredible 425 phase detection and 425 contrast detection AF points that are densely positioned over 84% of the image area, effectively tracking subjects as they move across the frame. Moreover, the α6400 takes full advantage of its enhanced fast hybrid AF for movies in both HD and 4K[2]. With the optimized new-generation subject motion prediction algorithm from the α9. Both AF detection accuracy and tracking performance have been boosted.

Advanced Real-time Eye-AF

Advanced "Real-time Eye AF" employs artificial intelligence to detect and process eye data in real time, resulting in improved accuracy, speed and tracking performance of Eye AF. With a half press of the shutter button, the camera can automatically detect the eyes of the subject and activate Eye AF in all autofocus modes and when in either AF-C or AF-A mode, eye capture is continuously maintained. Additionally, the preferred eye (left or right) of your subject can be selected as the focus point. Choices include Auto/Right Eye/Left Eye, and a Switch Right/Left Eye function is assignable to a custom function as well.

Real-time Tracking AF

"Real-time Tracking" utilizes a special object recognition algorithm that processes color, subject distance (depth), brightness (pattern) as spatial information, plus AI information including face and eye location, ensuring that all subjects can be captured with extreme accuracy and precision. This can be activated by a simple half press of the shutter button, or can be assigned to a custom function as well.

Up to 11fps[3] at 24.2MP with AE/AF tracking

The α6400 has been designed to allow for high resolution, continuous shooting at high frame rates. It features a front-end LSI that works with the image sensor, BIONZ X image processing engine and a newly designed shutter mechanism with `braking feature' to enable continuous shooting at impressive speeds up to 11fps[3] with continuous autofocus and auto-exposure tracking at full 24.2MP resolution while utilizing the mechanical shutter, and up to 8 fps3 with full AF/AE tracking while silent shooting. The α6400 can also shoot continuously for up to 116 JPEG and 46 compressed RAW frames[4], thanks to a large buffer. These shots can be viewed immediately after shooting, even when in high-speed continuous shooting mode.

4K movie[2] w/ 2.4x oversampling4, full pixel readout, no pixel binning

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The α6400 offers internal 4K (QFHD: 3840 x 2160) recording[2] in Super 35mm format with full pixel readout and no pixel binning at 2.4x oversampling[4] (6K equivalent) for the ultimate 4K footage with exceptional detail and depth. Additional professional video features include; HDR (HLG), S-Gamut3/S-Log3and 3, plus Gamma Display Assist, the ability to record Full HD at 120 fps for up to 5x slow motion HD video[7], both a mic jack and XLR compatibility via the MI shoe, enhanced Zebra functionality, focus peaking, picture profile settings, as well as Time Code / User Bit, clean HDMI output and much more.

Fast Hybrid AF allows smooth focusing for movies

Effective use of the focal plane phase-detection system makes focusing during movie shooting fast and stable. The upgraded Fast Hybrid AF technology keeps your subject in constant smooth focus no matter the scene. This advanced AF plus touch focus functionality on the 180-degree titlable LCD make it an ideal camera choice for many vloggers and video creators that are regularly creating and uploading content online. Touching the subject that you wish to focus on the screen initiates accurate and smooth continuous focus tracking, while analyzing color, brightness pattern, distance (depth) and face information. AF drive speed and AF Tracking Sensitivity are also adjustable to support creative moviemaking.

180-degree fully tiltable LCD touch screen for self-recording

The fully tiltable (180-degree), 3" (3.0-type) LCD flip screen with 921k-dots of high-resolution allows for simple and effective selfie-style shooting for both still image and video capture. Utilizing this capability, vloggers will be able to check and monitor composition throughout their entire creative process. The LCD screen is also equipped with touch functionality, with options for Touch Pad, Touch Focus, Touch Shutter and new Touch Tracking which quickly activates "Real-time Tracking" through the touch screen.

A wide variety of touch screen operations

The LCD offers a wide variety of touch operations enabling intuitive shooting and fast focus operation. The Touch Focus function allows the desired focus point to be specified instantaneously by touching the subject on the monitor. Touch Shutter function instantaneously focuses on the subject touched on the monitor and releases the shutter, so that the desired subject can be captured with one touch. The touchpad function allows smooth focus position adjustment while using the viewfinder. Sliding a finger across the monitor moves the focus area position and can be moved smoothly while looking through the viewfinder. Touch Tracking function, works by touching the subject that you wish to focus on the screen and then half-pressing the shutter button activates Real-time Tracking. When shooting movies, touching the subject initiates tracking that maintains focus on the subject.

Interval recording for time-lapse videos

Time-lapse movies document changes with the passing of time. The a6400 features built-in interval recording, for time-lapse movie creation, that can be set anywhere between 1 and 60 seconds, with a total number up of shots from 1 to 9999. AE tracking sensitivity can be adjusted to "High", "Mid" or "Low" during interval shooting, allowing for reduced changes in exposure over the shooting interval. The still images shot can then be edited into a time-lapse movie on a computer with the Viewer software from the Imaging Edge software suite[5]. A convenient variable-speed preview function is also provided to get an image, on the camera, of how the finished movie will look. Combining with silent shooting means that you need not worry about durability of the mechanical shutter. When interval shooting is carried out over a long period, the camera can use an optional mobile battery or the multi-battery adaptor kit NPA-MQZ1K to supply power (not provided), so shooting outdoors and/or for extended periods is worry-free.

HDR video with LG (Hybrid Log-Gamma)

HLG (Hybrid Log-Gamma) [6] picture profile that supports an instant HDR workflow. Recorded movies played back on an HDR (HLG) [6] compatible TV, without the need for color grading, will appear true-to-life, with no blocked shadows or blown highlights. The BT.2020 color space is supported, providing a wider color gamut. Four gamma settings are provided (HLG, HLG1, HLG2, HLG3). The HLG setting conforms to ITU-R BT.2100, while The HLG1, HLG2, and HLG3 gamma settings provide wider dynamic range. The balance of dynamic range and noise produced by each setting is different, allowing selection to best match the scene being recorded.

S-Log shooting support[7]

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The S-Log3 and S-Log2 Gamma[7] curves feature wide dynamic range (up to 1300%) to minimize whiteout and blackout, and permit wider movie expression by performing color grading in post-production. The S-Log3 gamma setting further realizes a 14-stop latitude. The S-Gamut, S-Gamut3, and S-Gamut3.Cine color spaces are handled. A wide variety of professional end-uses such as cinema and broadcast are supported.

Zebra function

Checking exposure is often difficult especially when shooting movies in the S-Log setting[7], but the Zebra function is provided to simplify the task. The Zebra display brightness level standard is IRE 0 – 109%, and the target range can be set freely between +10% and -10% of a selected value in 1% increments. This helps users to easily adjust exposure whether shooting still images, 4K video4 and when using S-Log2 and S-Log3, by specifying the target value and range of the exposure level for Zebra display in accordance with their intentions. Furthermore, users can set a minimum brightness level.

Gamma Display Assist[8]

Gamma Display Assist[8] is a function that allows users to monitor images or check focus while enlarging images of natural contrast when recording in the S-Log setting. It converts S-Log2 and S-Log3 into ITU709 (800%) gamma for monitoring8 on the LCD screen or viewfinder.

Ultra-fast OLED w/ EVF benefits and optical viewfinder immediacy

The 2.36 million-dot XGA OLED Tru-Finder electronic viewfinder has the ability to deliver continuous live shooting at up to 8 fps with AF/AE tracking - making it easy to track fast moving subjects - thanks to overall improvements in the EVF algorithm. This offers photographers a shooting experience with the immediacy of an optical viewfinder, while still offering all of the benefits of an electronic viewfinder including a live preview of exposure, white balance and several other camera settings. The viewfinder frame rate can be selected at either "Standard" or "High" to match the subject.

Slow and quick motion[9]

Slow and quick motion[9] offers an almost endless variety of creative ways to express the passage of time. Video shooting frame rate are selectable in 8 steps from 1fps to 120fps, and the recording frame rate is selectable from 24p/30p/60p. Capture Full HD up to 50 Mbps with up to 5-times slow motion and up to 60-times quick motion.

Rugged body and durable shutter mechanism

Designed for solid reliability and steady handling, the compact α6400 is built to withstand the rigors of shooting in the field, thanks to an internal structure of the strong and rigid magnesium alloy body. The highly durable and reliable shutter unit has been proven to endure approximately 200,000 shutter releases[10] which ensure long-lasting shooting performance that takes into consideration the high-speed continuous shooting capabilities up to 11fps[3] and the large number of photos shot by enthusiasts.

Make it your own with easy button and dial customization

Make operation more intuitive, quick and easy. You can assign any of 89 functions to any of 8 custom buttons. Independent function sets can be assigned for stills, movies, and playback. "My Dial" allows for frequently-used functions to be assigned to the control dial and control wheel. The My Menu function allows up to 30 frequently-used menu items to be registered. They can be re-ordered by frequency of use, and little-used items can be deleted, allowing the user to create a menu that reflects their usage patterns.

Wi-Fi®/NFC™/QR code for easy file transfer and remote control[11]

Easily connect with NFC or QR code (for non-NFC devices) to smartphones or tablets with the built-in Wi-Fi® and Sony's Imaging Edge mobile application available for free on the Android™ and iOS platforms[11]. Control your camera or transfer photos and video to your device for fast and easy sharing without the need of a computer.

16-bit processing and 14-bit RAW output

The a6400 employs 16-bit processing and 14-bit RAW output for natural gradations. The digital signal from the image sensor's AD converter is processed in 16-bit form by the front-end LSI and BIONZ X processor before being output as 14-bit RAW data to the memory card. The result is smoother, more natural gradations that contribute to higher overall image quality. Compressed and uncompressed 14-bit RAW format are supported.

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High-quality view mode for finer, natural detail

A menu setting allows viewfinder and monitor display quality to be set to "Standard" or "High." The "High" mode takes maximum advantage of the data read from the 24.2 effective megapixel sensor to provide extra fine viewfinder and monitor displays, with finer detail and a more natural overall view that can be a huge advantage when focus is critical. The "Standard" setting provides longer battery life.

Monitor OFF" selectable via DISP button

A new "Monitor OFF" selection has been added for the DISP button while shooting. When "Monitor OFF" is selected the monitor will be off except during image playback and when using the menus. This can be useful when shooting the night sky or in other situations where a bright monitor might be a distraction.

GPS location data via Bluetooth[11]

The α6400 offers location data acquisition via a Bluetooth connection to a compatible mobile device with Imaging Edge Mobile App installed[11]. After the camera has been paired to the Imaging Edge Mobile installed on a compatible mobile phone or tablet device, it can acquire location data from the mobile device and record that data with still images. The acquired location data can also be used to correct the camera's date/time and location settings.

Silent Shooting

Silent Shooting features an electronic shutter that is noiseless so you can shoot high-resolution images in situations that require complete silence. Continuous autofocus and auto exposure is available when using silent shooting.

AF accuracy in dark scenes

Advanced AF algorithm contribute to high AF precision in AF-S mode down to light levels as low as EV-2 (ISO 100 equivalent, F2.0 lens), a step darker than the α6300. Shooting using highly precise AF is possible even in dark scenes.

More detailed face detection settings

The face detection feature has been updated with individual AF Face Detection Priority (ON/OFF), Face Detect Frame Display (ON/OFF) and Multi AE Face Detect Priority (ON/OFF) settings that were not available on the α6300. This provides the flexibility needed for a variety of situations, such as where face priority needs to be applied in AF only, for example.

AF in Focus Magnifier

When shooting stills, it is possible to use autofocus while the selected image area is magnified in the viewfinder or monitor. You can even magnify the view after autofocus has been achieved for finer focus confirmation or refocusing. Since this function can be used to focus on an area smaller than the Flexible Spot, it is ideal for macro photography and other situations where focus must be precise.

Additional 1:1 image aspect ratio

In addition to 3:2 and 16:9 aspect (width: height) ratios, the 1:1 aspect ratio used by Instagram etc. can also be selected. This eliminates the need for cumbersome hand-trimming of images after shooting before they can be posted on social media.

Proxy recording

4K movies and lower-resolution proxy movies can be recorded simultaneously. Proxy movie files are smaller than the corresponding 4K files, and are therefore ideal for quick previewing or pre-editing that can reduce the time required for final 4K editing.

Photo Capture (image extraction from movies)

Users can select, extract and save still images of decisive moments from movie footage (frame grabs). High-quality 8-megapixels stills can be extracted from 4K video[3] and 2-megapixels from Full HD video in camera during playback and stored as separate files on the media card.

Peaking function makes manual focus even easier

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The excellent performance of the advanced BIONZ X image processor has improved the detection accuracy of the peaking function that color-highlights the most sharply focused area during manual focus and direct manual focus shooting. It's now easier than ever to identify the focus peak areas during the delicate focusing required in macro or portrait shooting. Blue has been added to the peaking colors (red, yellow, white). The expanded range of colors from which an easily-visible peaking color can be selected, depending on the subject and environment, improves the visibility when using the peaking display.

AF tracking sensitivity adjustment

When shooting movies, the sensitivity with which autofocus will follow subjects that move outside the focus area can be adjusted. Sensitivity should be set (High) for subjects at varying distances which require repeated refocusing, whereas the (Standard) setting can prevent the focus from jumping to new objects and maintain stable focus on a subject that is briefly obscured by other objects.

ISO value display while movie shooting

When shooting movies in ISO Auto mode, the current ISO value can be constantly displayed. If concerned about noise levels in a dark location, for example, the user can monitor the current ISO value.

Additional initial focus magnification setting

When shooting movies, it is now possible to set the initial focus magnification. In addition to the current 1x > 4x, a new 4x only setting has been added. Through the setting of frequently-used magnifications, the number of focus magnification operations can be minimized.

4K movie transfer to smartphone

By using the newly introduced smartphone app Imaging Edge Mobile, high-bitrate movies including 4K can be transferred to smartphones (Probability of transfer / playback depends on the performance of the smartphone). Refer to the product information for Imaging Edge Mobile for details

Microphone jack and XLR adaptor kit compatible

The a6400 provides a microphone jack for an external microphone and a MI (Multi-interface) shoe which provides direct connectivity to a range of compatible MI-shoe microphones. The MI-shoe also provides line input via optional XLR adaptor kits (XLR-K2M/XLR-K1M) that allow the connection of many types of pro (XLR) microphones. A modest audio set-up with some noise reduction supports better sound quality suitable for serious movie shooting or self-shooting for vlog.

High bitrate Full HD high-speed recording at 120 fps[2]

High-quality slow-motion sequences can be created during post-production processing as high-speed Full HD recording at 120 fps[2] is supported. A max. 100 Mbps high bit rate recording is possible with XAVC S[2] format.

Enhanced menu usability

An illustration to indicate position of camera control keys and buttons are added to the custom settings screen. A glance confirms which button or switch one is attempting to assign to. Another improvement in menu usability is that function menu options can be viewed when setting the function menu, improving ease of operation.

Restricted display of AF area and ISO display limit

On the AF area setting screen, a new function has been added that displays only focus area types that the user uses frequently. Another new function on the ISO setting screen displays only frequently-used ISO ranges. These allow setting changes to be made efficiently while shooting. These display restrictions apply even when "Switch Focus Area" is assigned to a custom button.

Improved AWB control

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Auto white balance can now be locked or unlocked at any time with the "AWB Lock function". This is convenient when one wants to fix auto white balance in an environment with multiple (artificial and natural) light sources. Setting the white balance color temperature has been simplified as well as reducing the steps in setting of custom white balance. With "Priority Set in AWB", when white balance is set to Auto and incandescent lamps or similar are the light source, the color tone priority can be set to Standard, Ambience, or White. Ambience priority produces a warm tone, while white priority produces accurate white reproduction.

Power supply via USB

The α6400 can be powered via USB connection to AC adaptor, a PC or mobile battery. This conserves the camera's battery, allowing you extended use of the camera without worrying that the battery will run out. When the camera is turned off, the battery can be charged via the same connection.

Specifications

Camera	
Lens Compatibility	Sony E-mount lenses
Lens Mount	E-mount
Camera Type	Interchangeable lens digital camera with built-in flash
Imaging Sensor	
Pixel Gross	Approx. 25.0 megapixels
Effective Picture Resolution	Approx. 24.2 megapixels
Color Filter System	R, G, B primary color
Recording	
Color Space	sRGB standard (with sYCC gamut) and Adobe RGB standard compatible with TRILUMINOS Color Movie: xvYCC standard (x.v.Color when connected via HDMI cable) compatible with TRILUMINOS Color
Still Image Mode	RAW, RAW & JPEG (Extra fine, Fine, Standard), JPEG (Extra fine, Fine, Standard)
Still Image Size 16:9	L: 6000 x 3376 (20M) M: 4240 x 2400 (10M) S: 3008 x 1688 (5.1M)
Still Image Size 1:1	L: 4000 x 4000 (16M) M: 2832 x 2832 (8.0M) S: 2000 x 2000 (4.0M)
Still Image Size 3:2	L: 6000 x 4000 (24M) M: 4240 x 2832 (12M) S: 3008 x 2000 (6.0M)
Panorama Still Image Size	Wide: horizontal 12,416 x 1,856 (23M), vertical 5,536 x 2,160 (12M), Standard: horizontal 8,192 x 1,856 (15M), vertical 3,872 x 2,160 (8.4M)
Still Image File Format	JPEG (DCF Ver. 2.0, Exif Ver.2.31, MPF Baseline compliant), RAW (Sony ARW 2.3 format)
Viewfinder	
Type	0.39 type (1.0 cm) electronic viewfinder (color), 2 359 296 dots
Diopter Adjustment	-4.0-+3.0 m^{-1}
Field of View	100%
Magnification	Approx. 1.07x (35mm camera equivalent: Approx. 0.70x) with 50mm lens at infinity, -1m^{-1}
Brightness Control	Auto/Manual (5 steps between -2 and +2)
Color temperature control	Manual (5 steps)
Display	Graphic Display Display All Info. No Disp. Info. Digital Level Gauge Histogram
Eye point	Approx. 23mm from the eyepiece lens, 21.4mm from the eyepiece frame at -1m^{-1} (CIPA standard)

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Finder Frame Rate Selection	NTSC mode: STD 60fps / HI 120fps PAL mode: STD 50fps / HI 100fps
LCD Display	
LCD Type	7.5cm (3.0-type) wide type TFT (921 600 dots)
Angle Adjustment	Up by approx. 180 degrees, Down by approx. 74 degrees
Brightness Control	Manual (5 steps between -2 and +2), Sunny Weather mode
Real-time image adjustment display	On/Off
Peaking	Peaking MF: Yes (Level setting: High/ Mid/ Low/ Off, Color: White/ Red/ Yellow/ Blue)
Grid Display	Yes (Rule of 3rds Grid/Square Grid/Diag. + Square Grid/Off)
Customization	Graphic Display, Display All Info, No Disp. Info, Digital Level Gauge, Histogram, For viewfinder, Monitor Off
Touch Panel	Yes
Zebra	Yes (selectable level + range or lower limit as custom setting)
Focus Control	
AF Modes	AF-A (Automatic AF), AF-S (Single-shot AF), AF-C (Continuous AF), DMF (Direct Manual Focus), Manual Focus
Focus Area	Wide (425 points (phase-detection AF), 425 points(contrast-detection AF)) / Zone / Center / Flexible Spot (S/M/L) /Expanded Flexible Spot/ Tracking (Wide / Zone / Center / Flexible Spot (S/M/L)/Expanded Flexible Spot)
Exposure System	
Auto Exposure Lock	Locked when shutter button is pressed halfway. Available with AE lock button. (On/Off/Auto)
Exposure Bracketing	Bracket: Cont., Bracket: Single, 3/5/9 frames selectable. With 3 or 5 frames, in 1/3, 1/2, 2/3, 1.0, 2.0, or 3.0 EV increments, with 9 frames, in 1/3, 1/2, 2/3, or 1.0 EV increments.
Exposure Compensation	+/- 5.0EV (1/3 EV, 1/2 EV steps selectable)
Exposure Settings	AUTO (iAuto/Superior Auto) Programmed AE (P) Aperture priority (A) Shutter-speed priority (S) Manual (M) Movie (Programmed AE (P) / Aperture priority (A) / Shutter-speed priority (S) / Manual (M)) Slow & Quick Motion (Programmed AE (P) / Aperture priority (A) / Shutter-speed priority (S) / Manual (M)) Sweep Panorama Scene Selection
ISO	Still images: ISO 100-32000 (ISO numbers up to ISO 102400 can be set as expanded ISO range.), AUTO (ISO 100-6400, selectable lower limit and upper limit) Movies: ISO 100-32000 equivalent, AUTO (ISO 100-6400, selectable lower limit and upper limit)
Metering	1200-zone evaluative metering, Exmor CMOS sensor
Metering Modes	Multi-segment, Center-weighted, Spot, Spot Standard/Large, Entire Screen Avg., Highlight
Metering Sensitivity	EV-2 to EV20 (at ISO100 equivalent with F2.0 lens attached)
Scene Mode(s)	Portrait, Sports Action, Macro, Landscape Sunset, Night Scene, Hand-held Twilight, Night Portrait, Anti Motion Blur
Flash	
Control	Pre-flash TTL
External flash	Sony α System Flash compatible with Multi Interface Shoe, attach the shoe adaptor for flash compatible with Auto-lock accessory shoe
FE Level Lock	Yes
Flash Bracketing	3/5/9 frames selectable. With 3 or 5 frames, in 1/3, 1/2, 2/3, 1.0, 2.0, 3.0 EV increments, with 9 frames, in 1/3, 1/2, 2/3, 1.0 EV increments.

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Flash Compensation	+/- 3.0 EV (switchable between 1/3 and 1/2 EV steps)
Flash Coverage	16mm (focal-length printed on the lens body)
Flash Modes	Flash off, Autoflash, Fill-flash, Slow Sync., Rear Sync., Red-eye reduction (on/off selectable), Wireless control, Hi-speed sync
Flash Type	Built-in flash
Guide Number	6 (in meters at ISO 100)
Recycling Time	Approx. 4 sec
Advanced Features	
Face Detection	Face Priority in AF (On/Off), Face Priority in Multi Metering (On/Off), Regist. Faces Priority (On/Off) Face registration: Yes Max. number of detectable: 8
Interface	
Microphone Input	Yes (3.5 mm Stereo minijack)
Remote Commander	Yes (RMT-DSLR2 (sold separately))
HD Output	HDMI micro connector (Type-D), BRAVIA Sync (Control for HDMI), PhotoTV HD, 4K movie output/4K still image PB
NFC	Yes (NFC forum Type 3 Tag compatible) (One-touch remote, One-touch sharing)
Wi-Fi	Yes (Wi-Fi Compatible, IEEE 802.11b/g/n (2.4GHz band)
Weights and Measurements	
Dimensions (Approx.)	4 3/4 x 2 3/4 x 2 3/8 inches (120.0mm x 66.9mm x 59.7mm) From Grip tp Monitor: 4 3/4 x 2 3/4 x 2 inches (120.0 x 66.9 x 49.9mm)
Weight (Approx.)	With battery and memory Card included: 14.3 oz (403 g) Body only: 12.7 oz (359 g)
Power	
Battery Type	One rechargeable battery pack NP-FW50
Number of Still Images	Still images Approx. 360 shots (Viewfinder) / Approx. 410 shots (LCD monitor) (CIPA standard) Movies Actual recording Approx. 70 min (Viewfinder) / Approx. 75 min (LCD monitor) (CIPA standard) Movies Continuous recording Approx. 125 min (Viewfinder) / Approx. 125 min (LCD monitor)(CIPA standard)
External Power	AC Adaptor AC-PW20 (sold separately)
Power Consumption (in View Finder Operation)	With Viewfinder; Still images: approx. 2.4W (with E PZ 16-50mm F3.5-5.6 OSS lens attached), Movies: approx. 3.5W (with E PZ 16-50mm F3.5-5.6 OSS lens attached) With LCD screen; Still images: approx. 2.1W (with E PZ 16-50mm F3.5-5.6 OSS lens attached), Movies: approx. 3.5W (with E PZ 16-50mm F3.5-5.6 OSS lens attached)
Audio/ Microphone	
Microphone	Built-in stereo microphone or XLR-K2M/XLR-K1M/ECM-XYST1M (sold separately)
Audio/ Speaker	
Speaker	Built-in,monaural
Clear Image Zoom	
Movies	Approx. 1.5x (4K), Approx. 2x (HD)
Still images	Approx. 2x
Custom function	

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Custom key settings	Yes
Programmable Setting	Yes (Body 3 sets /memory card 4 sets)
Digital zoom	
Digital zoom (Still images)	L: Approx. 4x M: Approx. 5.7x S: Approx. 8x
Smart zoom (Still images)	M: Approx. 1.4x S: Approx. 2x
Drive	
Drive modes	Single Shooting Continuous shooting (Hi+/Hi/Mid/Lo selectable) Self-timer Self-timer (Cont.) Bracket: Single Bracket: Cont. White Balance bracket DRO bracket
Self-timer	10 sec. delay/5 sec. delay/2 sec. delay/Continuous self-timer (3 frames after 10 sec. delay/5 frames after 10 sec. delay/3 frames after 5 sec. delay/5 frames after 5 sec. delay/3 frames after 2 sec. delay/5 frames after 2 sec. delay)/Bracketing self-timer (Off/2 sec. delay/5 sec. delay/10sec. delay)
Focus system	
AF illuminator	Yes (with Built-in LED type)
AF illuminator range	Approx. 0.3- approx. 3.0m (with E PZ 16-50mm F3.5-5.6 OSS lens attached)
AF micro adjustment	Yes (Sold separately) with LA-EA2 or LA-EA4
Eye AF	Yes (Right/Left Eye Select)
Eye-start AF	Yes (only with LA-EA2 or LA-EA4 attached (Sold separately))
Focus point	425 points (phase-detection AF) / 425 points (contrast-detection AF)
Focus sensor	Exmor CMOS sensor
Other Features	Predictive control, Focus lock, Swt.V/H AF Area, AF Area Regist., Circ. of Focus Point
Sensitivity range	EV-2 to EV20 (ISO100 equivalent with F2.0 lens attached)
Type	Fast Hybrid AF (phase-detection AF/contrast-detection AF)
Eye-start AF	Yes (only with LA-EA2 or LA-EA4 attached (Sold separately))
Interface	
Bluetooth	Yes (Bluetooth Standard Ver. 4.1 (2.4GHz band))
Multi Interface Shoe	Yes
PC interface	Mass-storage, MTP, PC remote
PC Remote	Yes
Image sensor	
Anti-Dust function	Yes
Anti-Dust operation (auto)	Power off
Anti-Dust system	Charge protection coating on Optical Filter and ultrasonic vibration mechanism
Type	APS-C type (23.5 x 15.6mm) Exmor CMOS sensor
Lens compensation	
Lens compensation	Peripheral Shading, Chromatic Aberration, Distortion
Movie Function	
AF Drive Speed	Yes
AF Tracking Duration	Yes
Audio Level Display	Yes

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Audio Rec Level	Yes
Auto Slow Shutter	Yes
Clean HDMI Info.	ON/OFF selectable
HDMI Output	3840 x 2160 (30p) 3840 x 2160 (25p) 3840 x 2160 (24p) 1920 x 1080 (60p) 1920 x 1080 (60i) 1920 x 1080 (50p) 1920 x 1080 (50i) 1920 x 1080 (24p), YCbCr 4:2:2 8bit / RGB 8bit
PAL/NTSC Selector	Yes
REC Control	Yes
TC/UB	Yes (TC Preset/UB Preset/TC Format/TC Run/TC Make/UB Time Rec)
Movie recording system (AVCHD)	
1920 x 1080(50i, 17M, FH)	Approx. 17Mbps (Average bit-rate)
1920 x 1080(50i, 24M, FX)	Approx. 24Mbps (Maximum bit-rate)
1920 x 1080(60i, 17M, FH)	Approx. 17Mbps (Average bit-rate)
1920 x 1080(60i, 24M, FX)	Approx. 24Mbps (Maximum bit-rate)
Movie recording system (XAVC S)	
1920 x 1080(24p, 50M)	XAVC S HD: Approx.50Mbps
1920 x 1080(25p, 50M)	XAVC S HD: Approx.50Mbps
Operating Temperature	
Operating temperature	32 - 104 degrees F / 0 - 40 degrees C
Other Features	
Area Setting	Yes
Clock Function,Setting	Yes
Help guide	Yes
Shop Front Mode	Yes
Print	
Compatible standards	Exif Print, Print Image Matching III, DPOF setting
Recording system	
File system	FAT12, 16, 32, exFAT
Media	Memory Stick PRO Duo Memory Stick PRO-HG Duo Memory Stick Micro (M2) SD memory card SDHC memory card (UHS-I compliant) SDXC memory card (UHS-I compliant) microSD memory card microSDHC memory card microSDXC memory card
Memory Card Slot	Multi slot for Memory Stick Duo/SD memory card
Recording system (movie)	
Audio recording format	XAVC S: LPCM 2ch AVCHD: Dolby Digital (AC-3) 2ch, Dolby Digital Stereo Creator
Creative Style	Standard, Vivid, Neutral, Clear, Deep, Light, Portrait, Landscape, Sunset, Night Scene, Autumn leaves, Black & White, Sepia,Style Box (1-6), (Contrast (-3 to +3 steps), Saturation (-3 to +3 steps), Sharpness (-3 to +3 steps))
Picture Effect	Posterization (Color), Posterization (B/W), Pop Color, Retro Photo, Partial Color (R/G/B/Y), High Contrast Monochrome, Toy Camera (Normal/Cool/Warm/Green/ Magenta), Soft High-key

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Recording format	XAVC S AVCHD format Ver. 2.0 compliant
Video compression	XAVC S: MPEG-4 AVC/H.264, AVCHD: MPEG-4 AVC/H.264
Recording system (still image)	
Creative Style	Standard, Vivid, Neutral, Clear, Deep, Light, Portrait, Landscape, Sunset, Night Scene, Autumn leaves, Black & White, Sepia, Style Box (1-6), (Contrast (-3 to +3 steps), Saturation (-3 to +3 steps), Sharpness (-3 to +3 steps))
Dynamic Range functions	Off, Dynamic Range Optimizer (Auto/Level (1-5)), Auto High Dynamic Range (Auto Exposure Difference, Exposure Difference Level (1-6 EV, 1.0 EV step))
Picture Effect	13 types: Posterization (Color), Posterization (B/W), Pop Color, Retro Photo, Partial Color (R/G/B/Y), High Contrast Monochrome, Toy Camera (Normal/Cool/Warm/ Green/Magenta), Soft High-key, Soft Focus (High/Mid/Low), HDR Painting (High/ Mid/Low), Rich-tone Monochrome, Miniature (Auto/Top/Middle (H)/Bottom/Right/ Middle (V)/Left), Watercolor, Illustration (High/Mid/ Low)
Playback	
Modes	Single (with or without shooting information Y RGB histogram & highlight/shadow warning) 12/30-frame index view Enlarged display mode (L: 16.7x, M: 11.8x, S: 8.3x, Panorama (Standard): 19.2x, Panorama (Wide): 29.1x) Auto Review (10/5/2 sec,Off) Image orientation (Auto/Manual/Off selectable) Slideshow Panorama scrolling Folder selection (Date/ Still/ AVCHD/XAVC S HD/XAVC S 4K) Forward/Rewind (movie) Delete Protect Rating Disp Cont Shoot Grp
Shutter	
Electronic Front Curtain Shutter	Yes (ON / OFF)
Flash sync. speed	1/160 sec.
Shutter speed	Still images:1/4000 to 30 sec, Bulb, Movies: 1/4000 to 1/4 (1/3 steps), up to 1/50 in AUTO mode (up to 1/25 in Auto slow shutter mode)
Silent Shooting	Yes (ON / OFF)
Type	Electronically-controlled, vertical-traverse, focal-plane type
Slow & Quick Motion (S&Q)	
Image frame rate	NTSC mode: 1fps, 2fps, 4fps, 8fps, 15fps, 30fps, 60fps, 120fps PAL mode: 1fps, 2fps, 3fps, 6fps, 12fps, 25fps, 50fps, 100fps
Image size (frame rate)	NTSC mode: 1920x1080 (60p, 30p, 24p) PAL mode: 1920x1080 (50p, 25p)
White balance	
AWB micro adjustment	Yes (G7 to M7,57-step) (A7 to B7, 29-step)
Bracketing	3 frames, H/L selectable
Modes	Auto / Daylight / Shade / Cloudy / Incandescent / Fluorescent (Warm White / Cool White / Day White / Daylight) / Flash /Underwater/ Color Temperature (2500 to 9900K) & color filter (G7 to M7 (57-step), A7 to B7 (29-step)) / Custom
Priority Set in AWB	Yes
Wi-Fi	
Send to Computer	Yes
View on Smartphone	Yes

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View on TV	Yes
Accessories	
Supplied Accessories	Power cord Rechargeable Battery NP-FW50 AC Adaptor: AC-UUE12 Shoulder strap Body cap Accessory shoe cap Eyepiece cup Micro USB cable

1. Among interchangeable-lens digital cameras equipped with an APS-C image sensor as of January 2019, based on Sony research, measured using CIPA-compliant guidelines, and internal measurement method with an E 18-135mm F3.5-5.6 OSS lens mounted, Pre-AF off and viewfinder in use.
2. SDHC/SDXC memory card of Class 10 or higher is required for movie recording in XAVC S format. UHS-I (U3) SDHC/SDXC card is required for 100Mbps recording. Movie recording is possible for approximately 29 minutes.
3. High-speed continuous shooting is available at up to approx. 11fps in “Hi+” continuous shooting mode and up to approx. 8fps in “Hi” continuous shooting mode. Maximum fps will depend on camera settings.
4. With "Hi" continuous shooting mode. Sony internal measurement.
5. The latest version of Imaging Edge “Viewer” and PlayMemories Home desktop applications are required
6. Connect this product to an HDR (HLG) compatible Sony TV via a USB cable when displaying HDR (HLG) movies.
7. S-Log2 and S-Log3 functions assume video processing after shooting.
8. The Gamma Display Assist function is not available for monitoring on external displays and television sets
9. Sound cannot be recorded during S&Q. SDHC/SDXC memory card of Class 10 or higher is required. Full HD up to 50 Mbps; 60x quick motion/5x slow in NTSC and 50x quick motion/4x slow in PAL.
10. Based on Sony research .
11. The latest version of Imaging Edge Mobile is required for the smartphone or tablet device. Mobile devices that can communicate with this camera via Bluetooth are the following (as at the release date of this camera): Android terminals (Android 5.0 or later, Bluetooth 4.0 or later), iPhone/iPad iPhone 4S or later / iPad（3rd generation or later). Please refer to detailed instructions at http://www.sony.net/pmm/btg/