

# Specifications

## Type

Digital AF/AE single-lens reflex camera with built-in flash

## Recording Media

SD card, SDHC card, SDXC memory card

\* Compatible with Ultra High Speed (UHS-I) and Eye-Fi Cards.

\* Eye-Fi card compatible

## Image Format

Approx. 22.3mm x 14.9mm (APS-C)

## Compatible Lenses

Canon EF lenses (including EF-S lenses)

## Lens Mount

Canon EF mount

## Image Sensor

### Type

CMOS Sensor

### Pixels

Effective pixels: Approx. 18.0 megapixels

### Pixel Unit

4.3 µm square

### Total Pixels

Total pixels: Approx. 18.50 megapixels: 5288 (H) x 3506 (V) pixels

### Aspect Ratio

3:2 (Horizontal : Vertical)

### Color Filter System

RGB primary color filters

### Low Pass Filter

Fixed position in front of the image sensor

### Dust Deletion Feature

(1) Self Cleaning Sensor Unit

Removes dust adhering to the low-pass filter.

Self-cleaning executed automatically (taking approx. 2 sec.) when power is turned on or off. Manual execution also possible (taking approx. 5 sec.).

(2) Dust Delete Data acquisition and appending

The coordinates of the dust adhering to the low-pass filter are detected by a test shot and appended to subsequent images.

The dust coordinate data appended to the image is used by the provided software to automatically erase the dust spots.

(3) Manual cleaning

## Recording System

### Recording Format

Complies with Design rule for Camera File system 2.0 and Exif 2.30

**File Size**

- (1) Large: Approx. 17.90 Megapixels (5,184 x 3,456)
- (2) Medium: Approx. 8.00 Megapixels (3,456 x 2,304)
- (3) Small 1: Approx. 4.50 Megapixels (2,592 x 1,728)
- (4) Small 2: Approx. 2.50 Megapixels (1920 x 1280)
- (5) Small 3: Approx. 0.35 megapixels (720 x 480)
- (6) RAW: Approx. 17.90 Megapixels (5,184 x 3,456)

**Backup Recording**

N/A

**File Numbering**

The following three types of file numbering methods can be set:

- (1) Continuous numbering

\* The numbering of captured images will continue even after you replace the camera's card.

- (2) Auto reset

\* When you replace the camera's card, the numbering will be reset to start from 0001. If the new card already contains images, the numbering will continue from the last recorded image in the card.

- (3) Manual reset

\* Resets the file number to 0001, and creates a new folder automatically.

**RAW + JPEG Simultaneous Recording**

Still: JPEG, RAW (Canon RAW 2nd edition), RAW+JPEG

Video: MOV (Image data: H.264, Audio: Linear PCM)

**Color Space**

sRGB, Adobe RGB

**Picture Style**

Auto, Standard, Portrait, Landscape, Neutral, Faithful, Monochrome, User Defined 1-3

**White Balance****Settings**

Auto, Preset (Daylight; Shade; Cloudy, Twilight, Sunset; Tungsten Light; White Fluorescent Light; Flash), Custom (Approx. 2,000° - 10,000°K), White Balance Correction, and White Balance Bracketing

**Auto White Balance**

Auto white balance with the image sensor

**Color Temperature Compensation**

White balance correction:

- Blue/amber bias: ±9 levels
  - Magenta/green bias: ±9 levels
- \* Correction based on the current WB mode's color temperature.

**Color Temperature Information Transmission**

Provided

**Viewfinder****Type**

Eye-level SLR (with fixed pentamirror)

**Coverage**

Approx. 95% vertically and horizontally (with Eye point approx. 19mm)

**Magnification**

Approx. 0.87x / 24.5° (50mm lens  $\infty$ ,  $-1\text{m}^{-1}$ )

**Eye Point**

Approx. 19 mm (At  $-1\text{m}^{-1}$  from the eyepiece lens center)

**Dioptric Adjustment Correction**

-3.0 to  $+1.0\text{ m}^{-1}$  (dpt)

**Focusing Screen**

Fixed

**Mirror**

Quick-return half mirror (transmission: reflection ratio of 40:60)

**Viewfinder Information**

- 1) AF information (AF points and focus confirmation light)
- 2) Exposure information (Shutter speed, aperture, ISO speed (always displayed), AE lock, exposure level, spot metering circle, exposure warning)
- 3) Flash information (Flash ready, flash exposure compensation, high-speed sync, FE lock, red-eye reduction light)
- 4) Image information (Highlight tone priority (D+), maximum burst (1-digit display), white balance correction, SD card information)

**Depth Of Field Preview**

Enabled with depth-of-field preview button

**Autofocus****Type**

TTL secondary image-forming, phase-difference detection

**AF Points**

9 points (Center AF point is AF cross-type at f/5.6, Center AF point is vertical line-sensitive at f/2.8.)

**AF Working Range**

Center AF point: EV -0.5 - 18

Other AF points: EV 0.5 - 18

(At room temperature and ISO 100, based on Canon's testing standards)

**Focusing Modes**

(1) Autofocus

One-Shot AF

Predictive AI Servo AF

AI Focus AF (\*Switches between One-Shot AF and AI Servo AF

\* Automatically set to One-Shot AF when the drive mode is set to Silent Single Shooting or Silent Continuous Shooting. (AI Servo AF and AI Focus AF cannot be selected.)

(2) Manual focus (MF)

**AF Point Selection**

(1) Manual selection

(2) Auto selection

\* Automatically set in Basic Zone modes.

### **Selected AF Point Display**

Indicated by superimposed display in the viewfinder and on the LCD monitor

### **AF Assist Beam**

(1) Intermittent firing of built-in flash

(2) Effective range: Approx. 13.1 ft./4 m. at center, approx. 11.5 ft /3.5 m. at periphery

\* With an EOS-dedicated Speedlite attached, the Speedlite's AF-assist beam is emitted instead.

\* Compatible with AF assist-beam (intermittent firing) of 320EX, 270EX II, and 270EX flashes.

## **Exposure Control**

### **Metering Modes**

TTL maximum aperture metering with 63-zone metering sensor:

- 1) Evaluative metering (linked to all AF points)
- 2) Partial metering (center, approx. 9% of viewfinder)
- 3) Spot metering (center, approx. 4% of viewfinder)
- 4) Center-weighted average metering

### **Metering Range**

EV 1.0 - EV 20.0 (at 73°F/23°C with 50mm f/1.8 II lens at ISO 100)

### **Exposure Control Systems**

#### **Creative Zone**

- (1) Program AE (shiftable)
- (2) Shutter-priority AE
- (3) Aperture-priority AE
- (4) Manual exposure (including bulb)

#### **Basic zone**

(1) Scene Intelligent Auto (Program AE / non-shiftable)

(2) Flash Off

(3) Creative Auto

\* Effect shots cannot be set simultaneously with Ambience-based shots or background blurring. Neither can continuous shooting or 2 to 10 shots after 10-sec self-timer be used with Effect shot.

\* When background blurring is set, shooting with flash is disabled. When the flash is raised, background blurring cannot be set.

(4) Portrait

(5) Landscape

(6) Close-up

(7) Sports

(8) Special scene

- Kids
- Food
- Candlelight
- Night Portrait
- Handheld Night Scene
- HDR Backlight Control mode

### **ISO Speed Range**

**For Stills:**

1. Manual setting range of ISO 100-12800, expansion to ISO 25600

2. Auto, ISO 100-6400 (in whole-stop increments)

- In Creative Zone modes, the maximum ISO speed (ISO 400, 800, 1600, 3200, or 6400) for ISO Auto can be set.

- With Highlight Tone Priority, ISO 200 or higher will be set.

Shooting Mode	ISO Settings
Auto, Flash OFF, Creative Auto, Portrait, Close-up, Sports	ISO 100–6400
Landscape	ISO 100–1600
Kids, Food, Candlelight, Night Portrait, HDR Backlight Control mode	ISO 100–6400
Handheld Night Scene	ISO 100–12800
P, TV, Av, M <sup>*1</sup>	ISO 100–6400 <sup>*2</sup>
With flash	ISO 400 <sup>*3,4,5</sup>

<sup>\*1</sup>: Fixed at ISO 400 for Bulb exposures. <sup>\*2</sup>: Depends on the maximum ISO speed that has been set. <sup>\*3</sup>: If fill-flash will result in overexposure, the ISO speed can be set as low as ISO 100. <sup>\*4</sup>: Scene Intelligent Auto, Night Portrait and Handheld Night Scene modes are excluded. <sup>\*5</sup>: Not applicable to Auto, Kids, Night Portrait, or Handheld Night Scene.

<sup>\*5</sup>: If you use bounce flash with an external Speedlite in the Creative Auto, Portrait, Landscape, Close-up, Sports, Food, Candlelight and P modes, the ISO speed is set automatically within ISO 400–1600 (or up to the maximum limit) to match the brightness.

### Exposure Compensation

Manual:  $\pm 5$  stops in 1/3- or 1/2-stop increments

AEB :  $\pm 2$  stops in 1/3- or 1/2-stop increments

\* If the exposure compensation exceeds  $\pm 2$  stops, the left or right icon appears in the viewfinder.

\* Manual exposure compensation and AEB can be set in combination.

\* AEB is set in the following sequence: Standard exposure, decreased exposure, and increased exposure.

\* If AEB is used with the self-timer, the three bracketed shots will be taken in succession after the 10-sec. or 2-sec. delay.

### AE Lock

(1) Auto AE lock

\* In the One-Shot AF mode with evaluative metering, AE lock takes effect when focus is achieved.

(2) Manual AE lock

\* In the P, Tv, Av, and M modes, enabled with the AE lock button. (Press again to update.)

\* Enabled in all metering modes.

## Shutter

### Type

Vertical-travel, mechanical, focal-plane shutter with all speeds electronically-controlled

\* Electronic 1st curtain and mechanical 2nd curtain

### Shutter Speeds

1/4000 to 30 sec. (total shutter speed range; available range varies by shooting mode), bulb, X-sync at 1/200 sec.

\* Settable in 1/3- or 1/2-stop increments.

### Shutter Release

Soft-touch electromagnetic release

**Self Timer**

10-sec. or 2-sec. delay

**Shutter Lag Time**

(1) During SW-1 ON, time lag between SW-2 ON and start of exposure: approx. 0.075 sec.

\* Approx. 0.168 seconds in case of silent shooting.

(2) Time lag between simultaneous SW-1/SW-2 ON and start of exposure: Approx. 0.150 sec.

\* Approx. 0.242 seconds in case of silent shooting.

\* Time lag with the aperture stopped down by 3 stops or less (Excludes AF operation time).

**External Speedlite****Flash Metering**

E-TTL II autoflash (evaluative flash metering and average flash metering), FE Lock

**Flash Exposure Compensation**

±2 stops in 1/3-stop or 1/2-stop increments

**FE Lock**

Provided

**External Flash Settings**

(1) External flash function setting

\* Flash firing, E-TTL II auto flash system, flash mode, wireless master, zoom, sync setting, flash exposure compensation, FEB, and clear setting.

\* With the 600EX-RT, radio wireless transmission control is possible.

(2) External flash C.Fn setting

\* The actual setting options for (1) and (2) will differ depending on the Speedlite used.

**PC Terminal**

Not Provided

**Drive System****Drive Modes**

(1) Single shooting

(2) Continuous shooting

(3) Silent single shooting

(4) Silent continuous shooting

\* Single silent shooting and continuous silent shooting are not possible when Basic Zone is selected, during Live View shooting, or when using AI Servo AF or AI Focus AF.

(5) 10-sec. self-timer/Remote control

(6) 2-sec. self-timer

(7) Continuous shooting after 10-sec. self-timer (2 to 10 shots)

**Continuous Shooting Speed**

High-speed continuous shooting: Max. approx. 4.0 fps

\* With One-Shot AF or AI Servo AF

Silent continuous shooting: Max. approx. 2.5 fps

\* One-Shot AF only

**Maximum Burst**

Based on 8GB memory Card:

JPEG Large/Fine: Approx. 28 Shots

RAW: Approx. 7 Shots

RAW+JPEG Large/Fine: 4 Shots

Based on UHS-I memory card:

JPEG Large/Fine: Approx. 1140 Shots

RAW: Approx. 8 Shots

RAW + JPEG Large/Fine: 4 Shots

\* Figures are based on Canon's testing standards (ISO 100 and Standard Picture Style).

\* At ISO 12800, maximum burst will greatly decrease due to internal processing.

## Live View Functions

### Shooting Modes

Still photo shooting and video shooting

### Focusing

(1) AF operation of the Hybrid CMOS AF, One-shot AF

i. Face Detection plus Tracking AF

ii. FlexiZone - Multi

\* 31 zones

\* AF at the touched zone

iii. FlexiZone - Single

(2) TTL secondary image-forming, phase-difference detection with AF operation, One-shot AF

i. Manual selection

ii. Auto selection

\* Automatically set in Basic Zone modes

(3) Manual focus

\* Manual focusing by enlarging images by approx. five to ten times

### Metering Modes

Real-time evaluative metering with image sensor.

(1) Evaluative metering (315 zones)

(2) Partial metering (approx. 10.3% of Live View screen)

(3) Spot metering (approx. 2.6% of Live View screen)

(4) Center-weighted average metering

\* AE lock possible. The active metering time can be changed.

### Metering Range

EV 0 to EV 20 (At room temperature, 50mm f/1.4 lens, ISO 100)

### Grid Display

Two grids provided:

(1) Grid 1: Pair of vertical and horizontal lines

(2) Grid 2: 5 vertical and 3 horizontal lines

### Exposure Simulation

Provided

### Silent Shooting

Provided

## Video Shooting

### File Format

MOV:

Movie: MPEG-4 AVC / H.264

\* Variable (average) bit rate

Audio: Linear PCM

\* Meta information is embedded in the MOV file (no separate THM file)

## File Size

Recording Size:

[Full HD]

1920 x 1080 (30 fps/25 fps/24 fps): 330 MB/min.

[HD]

1280 x 720 (60 fps/50fps): 330 MB/min.

[SD]

640 x 480 (30 fps/25fps): 82.5 MB/min.

\* If the file size exceeds 4GB, a new file will be automatically created.

\*\* SD Class 6 or higher required.

## Frame Rates

1920 x 1080 (Full HD): 30p (29.97) / 24p (23.976) / 25p

1280 x 720 (HD): 60p (59.94) / 50p

640 x 480 (SD): 30p (29.97) / 25p

## Continuous Shooting Time

### Based on 8GB Memory Card:

[1920 x 1080] 30 fps/25 fps/24 fps: 22 min.

[1280 x 720] 60 fps/50 fps: 22 min.

[640 x 480] 30 fps/25 fps: 1 hr. 32 min.

### Based on 16GB Memory Card:

[1920 x 1080] 30 fps/25 fps/24 fps: 44 min.

[1280 x 720] 60 fps/50 fps: 44 min.

[640 x 480] 30 fps/25 fps: 3 hr. 4 min.

\* If recording time reaches 29 min. 59 sec., movie shooting stops automatically.

## Focusing

(1) One-shot AF

(2) Servo AF

(3) Manual Focus

\* Magnify the image by approx. 5x or approx. 10x and focus manually.

AF using AF point selection:

i. Face Detection plus Tracking AF

ii. FlexiZone - Multi

\* 31 zones

\* AF at the touched zone

iii. FlexiZone - Single

## Range

8 bit, 0 - 255

## Exposure Control

(1) Program AE for movie shooting

\* In Basic Zone modes, P, Av, and Tv modes

\* Shutter speed 1/30 - 1/4000 sec. (Signal accumulation time), aperture, and ISO speed automatically set.

(2) Manual exposure

\* Shutter speed (signal accumulation time), aperture, and ISO speed (auto/manual) manually set. The shutter speed (signal accumulation time) is limited to 1/4000 sec. at the maximum and to 1/30 sec. at the minimum for 24/25/30 fps or 1/60 sec. or higher for 50/60 fps.

## Exposure Compensation

Provided ( $\pm 3$  stops in 1/3-stop increments)

\* For movies, exposure compensation will not be applied beyond  $\pm 3$  stops even if the exposure compensation has been set beyond  $\pm 3$  stops.

\* For still photo shooting, the exposure compensation can be set and applied up to  $\pm 5$  stops.

## LCD Monitor

**Type**

TFT color, liquid-crystal monitor with Touch Panel LCD (capacitive type)

**Monitor Size**

Wide 3.0-inch (Screen aspect ratio of 3:2)  
7.7cm diagonal (6.4cm wide, 4.3cm high)

**Pixels**

Approx. 1,040,000 dots

**Coverage**

Approx. 100%

**Brightness Control**

Adjustable to one of seven brightness levels

**Coating**

Anti-smudge coating

**Interface Languages**

25 (English, German, French, Dutch, Danish, Portuguese, Finnish, Italian, Norwegian, Swedish, Spanish, Greek, Russian, Polish, Czech, Hungarian, Romanian, Ukrainian, Turkish, Arabic, Thai, Simplified/Traditional Chinese, Korean, Japanese)

**Playback****Display Format**

(1) Single image display

- Single image, basic information, detailed information, histogram display  
(2) Index display
- 4/9/36/100 images  
(3) Jump display (Image jump w/ Main Dial)
- 1/10/100 images, by date, by folder, movies only, stills only, by rating

**Highlight Alert**

On the detailed information and histogram displays, highlight areas with no image data will blink.

**Histogram**

Brightness / RGB

**Quick Control Function****Items****During shooting:**

When you press the Quick Control function button under the following conditions, you can set the functions below:

\*The settable functions depend on the shooting mode

(1) With viewfinder shooting:

Shutter speed, aperture, ISO speed, exposure compensation/ AEB, flash exposure compensation, Picture Style, White balance, White balance correction/White balance bracketing, Auto Lighting Optimizer, Metering mode, AF operation, Drive mode/Self-timer, image-recording quality, Flash firings, Ambience-based shots, Light/scene-based shots, Extra Effect Shot, Background blurring, Special scene modes, and Color tone.

(2) With Live View shooting:

AF method, Drive mode/Self-timer, Metering mode, image-recording quality, White balance, Picture Style, Auto Lighting Optimizer, Creative Filter, Flash firing, Ambience-based shots, Light/scene-based shots, Extra Effect Shot, Special scene modes, and Color tone.

(3) With video shooting:

AF method, Drive mode/Self-timer, image-recording quality, movie-recording size, video snapshot, White balance, Picture Style, Auto Lighting Optimizer, and Miniature effect movie.

#### **During Playback:**

When you press the Quick Control function button under the following conditions, you can set the functions below:

(1) During still photo playback:

Image protect, image rotate, rating, Creative Filters, resize, Cropping, and image jump with Main Dial

(2) During movie playback:

Image protect, rating, and image jump with Main Dial

## **Image Protection and Erase**

### **Protection**

Erase protection can be applied/canceled for a single image, all images in a folder, or all images on the card

### **Erase**

Erase single image, erase selected images, erase all images in folder, erase all images on a card, or erase only unprotected images

## **Direct Printing**

### **Compatible Printers**

PictBridge-compatible printers

### **Printable Images**

RAW, JPEG, and RAW+JPEG images complying to Design rule for Camera File System

\* Movies cannot be printed.

## **DPOF: Digital Print Order Format**

### **DPOF**

Complies to DPOF Version 1.1

## **Direct Image Transfer**

### **Compatible Images**

Not Provided

## **Customization**

### **Custom Functions**

Eight Custom Functions with 24 settings settable with the camera

### **Custom Controls**

Not Provided

### **My Menu Registration**

Up to six top-tier menu options and Custom Function settings can be registered

## **Interface**

### **USB Terminal**

For personal computer communication and PictBridge (Hi-Speed USB)

### **Video Out Terminal**

HDMI mini OUT terminal:

Type C (Switches automatically to suit the resolution)  
Video output: 1080/60i, 1080/50i, 480/60p, 576/50p  
\* Switches automatically to 1, 2, 3, or 4 to suit the TV

**Extension System Terminal**  
Not Provided

## Power Source

**Battery**  
Battery Pack LP-E12 x 1  
\* With the AC Adapter Kit ACK-E15, AC power is possible.

**Battery Life**  
1) Camera body only

Shooting Method	Temperature	Shooting Conditions	
		AE 100%	AE 50%, FA 50%
Viewfinder Shooting	At 73°F / 23°C	Approx. 480 shots	Approx. 380 shots
	At 32°F / 0°C	Approx. 420 shots	Approx. 350 shots
Live View Shooting	At 73°F / 23°C	Approx. 160 shots	Approx. 150 shots
	At 32°F / 0°C	Approx. 150 shots	Approx. 140 shots

**Battery Check**  
Automatic battery level check when power is turned ON.

Battery level indicated in one of four levels on LCD monitor.

**Power Saving**  
Power turns off after the set time of non-operation elapses

\* [Auto power off] settable to 30 sec., 1 min., 2 min., 4 min., 8 min., 15 min. or disable

**Date/Time Battery**  
Built-in secondary battery. When fully-charged, the date/time can be maintained for about three months.

**Start-up Time**  
Approx. 0.1 sec. (Based on CIPA testing standards)

## Dimensions and Weight

**Dimensions (W x H x D)**  
Approx. 4.60 x 3.57 x 2.74 in.<sup>1</sup> / 116.8 x 90.7 x 69.4mm<sup>1</sup>

<sup>1</sup>(Weight specifications and dimensions are for camera body only; does not include battery or memory card.)

**Weight**  
Approx. 14.36 oz. / 407g (CIPA standard)  
Approx. 13.06 oz.<sup>1</sup> / 370g<sup>1</sup> (Body only)

<sup>1</sup>(Weight specifications and dimensions are for camera body only; does not include battery or memory card.)

## Operating Environment

**Working Temperature Range**  
32-104°F/0-40°C

**Working Humidity Range**

85% or less

All data are based on Canon's Standard Test Method. Subject to change without notice.

If a problem occurs with a non-Canon lens attached to the camera, consult the lens maker.

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