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) memory cards and Eye-Fi cards.

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. 24.20 megapixels
Total pixels: Approx. 24.70 megapixels

Pixel Unit
3.72μm square

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
3:2

1. Large: Approx. 24.00 Megapixels (6000 x 4000)
2. Medium: Approx. 10.60 Megapixels (3984 x 2656)
3. Small 1: Approx. 5.90 Megapixels (2976 x 1984)
4. Small 2: Approx. 2.50 Megapixels (1920 x 1280)
5. Small 3: Approx. 0.35 Megapixels (720 x 480)

6. RAW: Approx. 24.00 Megapixels (6000 x 4000)

4:3
1. Large: Approx. 21.30 Megapixels (5328 x 4000)
2. Medium: Approx. 9.50 Megapixels (3552 x 2664)
3. Small 1: Approx. 5.30 Megapixels (2656 x 1992)
4. Small 2: Approx. 2.20 Megapixels (1696 x 1280)
5. Small 3: Approx. 0.31 Megapixels (640 x 480)
6. RAW: Approx. 24.00 Megapixels (6000 x 4000)

16:9

1. Large: Approx. 20.20 Megapixels (6000 x 3368)
2. Medium: Approx. 8.90 Megapixels (3984 x 2240)
3. Small 1: Approx. 5.00 Megapixels (2976 x 1680)
4. Small 2: Approx. 2.10 Megapixels (1920 x 1080)
5. Small 3: Approx. 0.29 Megapixels (720 x 408)
6. RAW: Approx. 24.00 Megapixels (6000 x 4000)

1:1

1. Large: Approx. 16.00 Megapixels (4000 x 4000)
2. Medium: Approx. 7.10 Megapixels (2656 x 2656)
3. Small 1: Approx. 3.90 Megapixels (1984 x 1984)
4. Small 2: Approx. 1.60 Megapixels (1280 x 1280)
5. Small 3: Approx. 0.23 Megapixels (480 x 480)
6. RAW: Approx. 24.00 Megapixels (6000 x 4000)

Backup Recording
N/A

File Numbering
The following three types of file numbering method 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
Yes

Color Space
sRGB, Adobe RGB

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

* In Basic Zone modes, "Auto" is set automatically.
* In Creative Zone modes, you can select or set the Picture Style.
* Default settings for [User Defined 1-3] are [Auto].

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. 0.82x / 23.2° (50mm lens ∞, -1 m^{-1})

Eye Point
Approx. 19 mm (At -1m^{-1} from the eyepiece lens center)

Dioptric Adjustment Correction
Adjustable from approx. -3.0 to +1.0 m^{-1} (dpt)

Focusing Screen
Fixed

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

Viewfinder Information

AF information (AF points and focus confirmation light)
Exposure information (Shutter speed, aperture, ISO speed (always displayed), AE lock, exposure level, spot metering circle, exposure warning)
Flash information (Flash ready, flash exposure compensation, high-speed sync, FE lock, red-eye reduction light)
Image information (Highlight tone priority (D+), monochrome shooting, 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
19 points
All AF points are cross-type at f/5.6
Center AF point is diagonal cross-type at f/2.8

AF Working Range
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)
*Switches between One-Shot AF and AI Servo AF
(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
Intermittent firing of built-in flash
* 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
7560-pixel RGB+IR metering sensor
Metering with the area divided into 63 segments (9x7)
1) Evaluative metering (linked to all AF points)
2) Partial metering (center, approx. 6.0% of viewfinder)
3) Spot metering (center, approx. 3.5% of viewfinder)
4) Center-weighted average metering

Metering Range
EV 1 - 20 (at 23°C / 73°F 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
* 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:
Manual setting range of ISO 100-12800, expansion to ISO 25600 equivalent

Shooting Mode	ISO Settings	
	Without Flash	With Flash

Auto, Flash OFF, Creative Auto, Portrait, Macro, Sports	ISO 100–6400	
Landscape	ISO 100–1600	
Scene	Children, Food, Candlelight, Night Portrait, HDR Backlight	ISO 100–6400	ISO 400*2*3 (excluding Auto, Children, Night Portrait, Handheld Night Scene)
	Handheld Night Scene	ISO 100–12800	
P, TV, Av, M*2	ISO 100–6400*3	
With flash	ISO 400	

*1: Depends on the maximum ISO speed that has been set.
*2: If fill-flash will result in overexposure, the ISO speed can be set to ISO 100 at the maximum.
*3: If you use bounce flash with an external Speedlite in the Creative Auto, Portrait, Landscape, Macro, Sports, Food, or P mode, the ISO speed is set automatically within ISO 400–ISO 1600 (or up to the maximum limit) to match the brightness.

Exposure Compensation
(1) Manual: ±5 stops in 1/3- or 1/2-stop increments

(2) AEB : ±2 stops in 1/3- or 1/2-stop increments

* If the exposure compensation exceeds ±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., Bulb (total shutter speed range)
X-sync at 1/200 sec.

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. 0.100 sec. for Silent Shooting: approx. 0.250 sec. with flash
2. Time lag between simultaneous SW-1/SW-2 ON and start of exposure: Approx. 0.240 sec.
   *Time lag with the aperture stopped down by 3 stops or less (Excludes AF operation time).
   *Approx. 0.265 sec. for Silent Shooting

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 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
   Max. approx. 5.0 fps
   * At 1/500 sec. or faster shutter speed, and at the maximum aperture (varies depending on the lens).
3. Silent single shooting
4. Silent continuous shooting
   Max. approx. 3.0 fps
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. 5.0 fps

Maximum Burst

Number of Shots Based on 8GB memory Card:
JPEG Large/Fine: Approx. 180
JPEG Large/Norma: Approx. 1810 (Full)
Medium/Fine: Approx. 1770 (Full)
Medium/Normal: Approx. 3500 (Full)
S1/Fine: Approx. 2830 (Full)
S1/Normal: Approx. 5320 (Full)
S2: Approx. 5320 (Full)
S3: Approx. 20180 (Full)
RAW: Approx. 7 Shots
RAW+JPEG Large/Fine: 6 Shots

Number of Shots Based on 8GB UHS-I memory card:
JPEG Large/Fine: Approx. 940 (Full)
JPEG Large/Norma: Approx. 1810 (Full)
Medium/Fine: Approx. 1770 (Full)
Medium/Normal: Approx. 3500 (Full)
S1/Fine: Approx. 2830 (Full)
S1/Normal: Approx. 5320 (Full)
S2: Approx. 5320 (Full)
S3: Approx. 20180 (Full)
RAW: Approx. 8 Shots
RAW+JPEG Large/Fine: 6 Shots

* The number of possible shots and maximum burst are those obtained with the 8 GB card of Canon's testing standards.
* The file size, number of possible shots, and maximum burst differ depending on shooting conditions (aspect ratio of 3:2, subject, memory card brand, ISO speed, Picture Style, etc.).
* Figures appended with an "Full" indicate that continuous shooting is possible until the card becomes full.

Live View Functions

Shooting Modes
Still photo shooting and video shooting

Focusing
(1) Hybrid CMOS AF III
* Covers approx. 80% (width) x 80% (height) of the screen area.

(2) Manual focus
*Manual focusing by enlarging images by approx. five to ten times

Real-time evaluative metering with image sensor.
(1) Evaluative metering (315 zones)
(2) Partial metering (approx. 10.0% of Live View screen)
(3) Spot metering (approx. 2.7% of Live View screen)
(4) Center-weighted average metering
* AE lock possible. The active metering time can be changed.

Metering Range
EV 0 - 20 (at 73°F/23°C at ISO 100); EV 0 - 18 (width Hybrid CMOS AF III at 73°F/23°C at ISO 100)

Grid Display
(1) 3x3
(2) 6x4

Exposure Simulation
Provided

Silent Shooting
Not provided

Video Shooting

File Format
MP4:
Movie: MPEG-4 AVC / H.264
* Variable (average) bit rate
Audio: AAC
MOV: MOV format movie cannot be shot. (playback is possible)

File Size
Recording Size:

[Full HD]
Standard: 1920 x 1080 (30 fps/25 fps/24 fps): 216 MB/min.
Lightweight: 1920 x 1080 (30 fps/25 fps): 87 MB/min.

[HD]
Standard: 1280 x 720 (60 fps/50 fps): 187 MB/min.
Lightweight: 1280 x 720 (30 fps/25 fps): 30 MB/min.

[SD]
Standard: 640 x 480 (30 fps/ 25 fps): 66 MB/min.
Lightweight: 640 x 480 (30 fps/ 25 fps): 23 MB/min.

* If the recording time reaches 29 min. 59 sec., the movie shooting stops automatically.
* The file size is 4 GB, and shooting does not stop automatically.

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

MP4 Format						
Video Recording Size			Total Recording Time			File Size
			4GB	8GB	16GB	
1920 x 1080	30fps 25fps 24fps	Standard	17 min.	35 min	1 hr. 10 min.	216
	30fps 25fps 24fps	Lightweight	43 min.	1 hr. 26 min.	2 hr. 53 min.	87
1280 x 720	60fps 50fps	Standard	20 min.	40 min.	1 hr. 21 min.	187
	50fps	Lightweight	2 hr. 5 min.	4 hr. 10 min.	8 hr. 20 min.	30
640 x 480	30fps 25fps	Standard	57 min.	1 hr. 55 min.	3 hr. 50 min.	66
	30fps 25fps	Lightweight	2 hr. 43 min.	5 hr. 26 min.	10 hr. 53 min.	23
HDR Movie Shooting 1280 x 720	30fps 25fps	Standard	40 min.	1 hr. 20 min.	2 hr. 40 min.	94

* If recording time reaches 29 min. 59 sec., movie shooting stops automatically.
* See Frame Rates section for actual frame rates

Focusing
(1) Hybrid CMOS AF III
* Covers approx. 80% (width) x 80% (height) of the screen area.
(2) Manual focus
* Magnify the image by approx. 5x or approx. 10x and focus manually.

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 (±3 stops in 1/3-stop increments)

* For video, exposure compensation will not be applied beyond ±3 stops even if the exposure compensation has been set beyond ±3 stops.

* For still photo shooting, the exposure compensation can be set and applied up to ±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 (6.37cm wide, 4.25cm high)

Pixels
Approx. 1,040,000 dots

Coverage
Approx. 100%

Brightness Control

Brightness Control
Adjustable to one of seven 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
4/9/36/100 images
(3) Jump display (Image jump w/ Main Dial)
1/10/100 images, shooting 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
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

Custom Functions
14 Custom Functions with 41 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

USB Terminal
For personal computer communication and PictBridge (Hi-Speed USB)
Audio (stereo)/video (NTSC/PAL) output
To connect a GP-E2 GPS Receiver

Video 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
3.5mm diameter stereo mini-jack

Battery
One Battery Pack LP-E17

* With the AC Adapter Kit ACK-E18, AC power is possible.

* With Battery Grip BG-E18, it is possible to use two Battery Pack LP-E17 units.

Battery Life
1) Camera body only, LP-E17 x1

Shooting Method	Temperature	Possible Shots	
		AE 100%	AE 50%, FA 50%
Viewfinder Shooting	73°F / 23°C	550	440
	32°F / 0°C	470	400
Live View Shooting	73°F / 23°C	200	180
	32°F / 0°C	170	150

2) Using Battery Grip BG-E18

Shooting Method	Power Source	Temperature	Possible Shots	
			AE 100%	AE 50%, FA 50%
Viewfinder Shooting	LP-E17 x2	73°F / 23°C	1,100	880
		32°F / 0°C	940	800
Live View Shooting	LP-E17 x2	73°F / 23°C	400	360
		32°F / 0°C	340	300

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
It is not replaceable by the user. It recharges when the batter pack is loaded or when the AC adapter is connected. Without any recharging, the backup battery can maintain the date/time for approx. 3 months. The backup battery takes approx. 8 hours to be fully recharged.

Start-up Time
Approx. 0.18 sec. (based on CIPA testing standards)

Dimensions and Weight

Dimensions (W x H x D)
Approx. 5.20 x 3.98 x 3.07 in.
Approx. 131.9 x 100.9 x 77.8mm

Weight
Approx. 19.93 oz. / 565g (CIPA standard)
Approx. 18.35 oz. / 520g (Body only)

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.
Canon, DIGIC and EOS Rebel are registered trademarks of Canon Inc. in the United States and may also be registered trademarks or trademarks in other countries. Microsoft, Windows and Windows Vista are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Mac is a trademark of Apple, Inc., registered in the United States and other countries. HDMI, the HDMI logo and High-Definition Multimedia Interface are registered trademarks or trademarks of HDMI Licensing, LLC in the United States and/or other countries. All other products and brand names are registered trademarks, trademarks or service marks of their respective owners in the United States and/or other countries.