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. 18.0 megapixels

Pixel Unit
4.3 µm square

Total Pixels
Total pixels: Approx. 18.50 megapixels

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 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. 0.85x / 23.8° (50mm lens ∞, -1 m^{-1})

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

Dioptric Adjustment Correction
-3.0 to +1.0 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+), 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
9 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)
  (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. 13.2 ft. / 4m at center, approx. 11.5 ft. / 3.5m at periphery

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

* Compatible with assist-beam (intermittent firing) of 270EX II, 320EX, 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
* 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
- 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)

Shooting Mode	ISO Settings
Auto, Flash OFF, Creative Auto, Landscape, Close-up, Sports, Night Portrait, HDR Backlight Control mode	ISO 100–6400
Night Landscape	ISO 100–12800
Portrait	ISO 100[*1]
P, TV, Av, M[*2]	ISO 100–6400[*3]
With flash	ISO 400[*4,5]

[*1]: If fill-flash is used, ISO 100–6400 will automatically be set.
[*2]: Fixed at ISO 400 for Bulb exposures. [*3]: Depends on the maximum ISO speed that has been set. [*4]: If shooting in bright light results in overexposure, the ISO speed can be set as low as ISO 100.
[*5]: If you use bounce flash with an external Speedlite in the Creative Auto, Portrait, Landscape, Close-up, Sports or 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: ±5 stops in 1/3- or 1/2-stop increments (AEB ±2 stops)

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 1/60 sec., X-sync at 1/200 sec. (Scene Intelligent Auto)
* With a wide-angle lens, the shutter may be 1/60 sec. or slower.

1/4000 to 30 sec., 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.

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

* 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
Single, Continuous, 10-sec. self-timer/Remote control, 2-sec. self-timer, Continuous shooting after 10-sec. self-timer (2 to 10 shots)

Continuous Shooting Speed
High-speed continuous shooting: Max. approx. 5.0 fps
* With One-Shot AF or AI Servo AF

Maximum Burst
Based on 8GB memory Card:
JPEG Large/Fine: Approx. 22 Shots
RAW: Approx. 6 Shots
RAW+JPEG Large/Fine: 3 Shots
Based on 8GB UHS-I memory card:
JPEG Large/Fine: Approx. 30 Shots
RAW: Approx. 6 Shots
RAW + JPEG Large/Fine: 3 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. 8.8% of Live View screen)
(3) Spot metering (approx. 2.8% 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 23°C/73°F, 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
Not 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[1]/25 fps/24 fps[2]): 330 MB/min.
[HD]
1280 x 720 (60 fps[3]/50fps): 330 MB/min.
[SD]
640 x 480 (30 fps[1]/25fps): 82.5 MB/min.

* If the file size exceeds 4GB, a new file will be automatically created.
* See following section for actual frame rates.

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

Focusing
(1) One-shot AF
(2) Servo AF
(3) Manual Focus
* Magnify the image by approx. 5x or appox. 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 (±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
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
  (2) Index 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:

*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, Auto Lighting Optimizer, built-in flash func. setting, AF mode, drive mode, metering mode, and image recording quality.
(2) With Live View shooting:

AF mode, drive mode, white balance, Picture Style, Auto Lighting Optimizer, image-recording quality, and built-in flash func. setting.
(3) With video shooting:

AF mode, white balance, Picture Style, Auto Lighting Optimizer, image recording quality (stills), video-recording size, and video snapshot.

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)
- 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
Not Provided

Power Source

Battery
One Battery Pack LP-E8

* With the AC Adapter Kit ACK-E8, AC power is possible.

* With Battery Grip BG-E8, it is possible to use two Battery Pack LP-E8 units.

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. 550 shots	Approx. 440 shots
	At 32°F / 0°C	Approx. 470 shots	Approx. 400 shots
Live View Shooting	At 73°F / 23°C	Approx. 200 shots	Approx. 180 shots
	At 32°F / 0°C	Approx. 170 shots	Approx. 150 shots

2) With Battery Grip BG-E8

Shooting Method	Battery	Temperature	Shooting Conditions (Approx.)	
			AE 100%	AE 50%, FA 50%
Viewfinder Shooting	LP-E8 x 1	Same as (1)		
	LP-E8 x 2	At 73°F / 23°C	Approx. 1100 shots	Approx. 880 shots
		At 32°F / 0°C	Approx. 940 shots	Approx. 800 shots
	Size AA/LR6 Alkaline Batteries	At 73°F / 23°C	Approx. 470 shots	Approx. 270 shots
		At 32°F / 0°C	Approx. 130 shots	Approx. 80 shots
Live View shooting	LP-E8 x 1	Same as (1)		
	LP-E8 x 2	At 73°F / 23°C	Approx. 400 shots	Approx. 360 shots
		At 32°F / 0°C	Approx. 340 shots	Approx. 300 shots
	Size AA/LR6 Alkaline Batteries	At 73°F / 23°C	Approx. 180 shots	Approx. 150 shots
		At 32°F / 0°C	Approx. 30 shots	Approx. 30 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
It is not replaceable by the user. It recharges when LP-E8 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. 0.1 sec. (based on CIPA testing standards)

Dimensions and Weight

Dimensions (W x H x D)
Approx. 5.2 x 3.9 x 3.1 in.
Approx. 133.1 x 99.8 x 78.8mm

Weight
Approx. 20.5 oz. / 580g (CIPA standard)
Approx. 18.5 oz. / 525g (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.
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