

**Canon**

**EOS  
REBEL T8i  
EOS 850D**



Advanced User Guide

**E**

# Specifications

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## Type

**Type:** Digital AF/AE single-lens reflex camera

**Lens mount:** Canon EF mount

**Compatible lenses:** Lenses in Canon EF product group (including EF-S lenses, excluding EF-M lenses)

**Lens focal length:** Approx. 1.6 times the focal length indicated on the lens

## Image sensor

**Type:** CMOS sensor

Screen size	Approx. 22.3 × 14.9 mm
Effective pixels*	Approx. 24.1 megapixels
Dual Pixel CMOS AF	Supported

\* Rounded to the nearest 100,000.

## Recording system

**Image recording format:** Compliant to Design rule for Camera File system 2.0 and Exif 2.31\*

\* Supports time difference information

## Image type and extension

Image type		Extension
Stills	JPEG	JPG
	RAW	CR3
	C-RAW	

## Still photo recording

### Image type in still photo recording

Image quality		Resolution (Pixels)
JPEG	 / 	24 megapixels (6000 × 4000)
	 / 	Approx. 10.6 megapixels (3984 × 2656)
	 / 	Approx. 5.9 megapixels (2976 × 1984)
	<b>S2</b>	Approx. 3.8 megapixels (2400 × 1600)
RAW	 / 	24 megapixels (6000 × 4000)

### Still photo pixel count

Image quality	Pixel count			
	Aspect ratio			
	3:2	4:3	16:9	1:1
 / 	24 megapixels (6000 × 4000)	Approx. 21.3 megapixels* (5328 × 4000)	Approx. 20.2 megapixels* (6000 × 3368)	16 megapixels (4000 × 4000)
 / 	Approx. 10.6 megapixels (3984 × 2656)	Approx. 9.5 megapixels (3552 × 2664)	Approx. 8.9 megapixels* (3984 × 2240)	Approx. 7.1 megapixels (2656 × 2656)
 / 	Approx. 5.9 megapixels (2976 × 1984)	Approx. 5.3 megapixels (2656 × 1992)	Approx. 5.0 megapixels* (2976 × 1680)	Approx. 3.9 megapixels (1984 × 1984)
<b>S2</b>	Approx. 3.8 megapixels (2400 × 1600)	Approx. 3.4 megapixels* (2112 × 1600)	Approx. 3.2 megapixels* (2400 × 1344)	Approx. 2.6 megapixels (1600 × 1600)
 / 	24 megapixels (6000 × 4000)			

\* Values for Recording Pixels are rounded off to the nearest 100,000th.

\* JPEG images are generated in the set aspect ratio.

\* RAW/C-RAW images are generated in [3:2], and the set aspect ratio is appended.

\* Aspect ratios are slightly different than indicated for image sizes marked with an asterisk.

\* These aspect ratios (M, S1, and S2) and pixel counts also apply to resizing.

## Still photo file size / Number of possible shots / Maximum burst for continuous shooting

Image quality	File size (Approx. MB)	Possible shots (Approx.)* <sup>1</sup>	Maximum burst (Approx.)* <sup>1</sup>
 L	8.4	3600	170
 L	4.5	6610	170
 M	4.6	6480	167
 M	2.6	11400	167
 S1	3.1	9690	163
 S1	1.8	16010	163
S2	1.8	16340	164
 RAW	27.2	1120	40
 RAW	15.8	1930	75
 RAW +  L	35.6	850	35
 RAW +  L	24.2	1250	57

\* 1: Number of shots available and standard maximum burst in viewfinder shooting with a 32 GB UHS-I card conforming to Canon testing standards.

\* File size, number of possible shots, and maximum burst vary depending on shooting conditions (including subject, memory card brand, ISO speed, Picture Style, and Custom Function).

## Movie recording

### Movie recording format: MP4

#### Estimated recording time, movie bit rate, and file size

Movie recording size			Total recording time (approx.)			Movie bit rate File size
			8 GB	32 GB	128 GB	
4K UHD	23.98 fps 25.00 fps	IPB (Standard)	8 min.	35 min.	2 hr. 21 min.	Approx. 120 Mbps Approx. 861 MB/min.
Full HD	59.94 fps 50.00 fps	IPB (Standard)	17 min.	1 hr. 10 min.	4 hr. 43 min.	Approx. 60 Mbps Approx. 432 MB/min.
	29.97 fps 23.98 fps 25.00 fps	IPB (Standard)	35 min.	2 hr. 20 min.	9 hr. 23 min.	Approx. 30 Mbps Approx. 217 MB/min.
	29.97 fps 25.00 fps	IPB (Light)	1 hr. 26 min.	5 hr. 47 min.	23 hr. 11 min.	Approx. 12 Mbps Approx. 88 MB/min.
HD	59.94 fps 50.00 fps	IPB (Standard)	40 min.	2 hr. 42 min.	10 hr. 49 min.	Approx. 26 Mbps Approx. 188 MB/min.

#### Movie recording notes

\* Bit rate indicates video output only, audio is not included.

\* File size and time indicates video output + audio

\* With : **Movie digital IS** set to **[Disable]**.

\* Movie recording stops automatically when the recording time reaches 29:59.

#### Card performance requirements

Movie recording size			Card performance requirements
4K UHD	23.98 fps / 25.00 fps	IPB (Standard)	UHS-I/UHS Speed Class 3 or higher
Full HD	59.94 fps / 50.00 fps	IPB (Standard)	SD Speed Class 10 or higher
	29.97 fps / 23.98 fps / 25.00 fps	IPB (Standard)	SD Speed Class 6 or higher
	29.97 fps / 25.00 fps	IPB (Light)	SD Speed Class 4 or higher
HD	59.94 fps / 50.00 fps	IPB (Standard)	SD Speed Class 4 or higher
4K UHD Time-lapse movie	29.97 fps / 25.00 fps	ALL-I	Read speed of 40 MB/s or higher
Full HD Time-lapse movies	29.97 fps / 25.00 fps	ALL-I	Read speed of 20 MB/s or higher

\* With : **Movie digital IS** set to **[Disable]**.

## Recording microphone

Built-in microphone: Stereo microphones

External microphone terminal: 3.5 mm diameter stereo mini jack

## Recording media

**Recording media:** SD, SDHC, and SDXC memory cards

SD speed class	Supported
UHS speed class	Supported
UHS-I	Supported * Supports high-speed writing

## Viewfinder

**Type:** Eye-level SLR type, with pentamirror

**Focusing screen:** Fixed

**Coverage:** Vertical/horizontal: Approx. 95%

\* Eyepoint: Approx. 19 mm

\* Lens: EF50mm f/1.8 STM

**Magnification / angle of view:** Approx. 0.82x / Approx. 23.2°

\* Lens: EF50mm f/1.8 STM at infinity

\* Diopter:  $-1 \text{ m}^{-1}$

**Dioptric adjustment range:** Approx.  $-3.0 - +1.0 \text{ m}^{-1}$  (dpt)

**Eyepoint:** Approx. 19 mm (at  $-1 \text{ m}^{-1}$  from eyepiece lens end)

## Screen

**Type:** TFT color, liquid-crystal monitor

**Screen size:** Approx. 7.5 cm (3.0 in.) (3:2)

**Dot count:** Approx. 1,040,000 dots

**Angle of view:** Approx. 170° vertically and horizontally

**Brightness adjustment:** Adjustable to one of seven brightness levels

**Touch-screen panel detection system:** Capacitive sensing

## HDMI

**HDMI video/audio output:** HDMI mini OUT terminal (Type C), CEC not compatible

**HDMI resolution:** Auto / 1080p

## Autofocus in optical viewfinder shooting (still photo)

**Focusing method:** TTL secondary image-forming phase-difference detection using AF-dedicated sensor

### Focusing operation

Autofocus	One-Shot AF
	AI Focus AF * Automatic switching between One-Shot AF and AI Servo AF
	AI Servo AF
Manual focus	Supported

## Autofocus in Live View shooting (still photo) and movie shooting

Item	Live View shooting (still photo)	Movie recording
Focus detection method	Dual Pixel CMOS AF	<ul style="list-style-type: none"><li>• Dual Pixel CMOS AF</li><li>• Contrast detection*</li></ul> <p>* For 4K UHD movies/4K UHD time-lapse movies</p>
AF area	Approx. 88% (horizontal) × 100% (vertical) Approx. 80% (horizontal) × 80% (vertical) * Varies depending on the lens used	Approx. 88% (horizontal) × 100% (vertical) Approx. 80% (horizontal) × 95% (vertical) * Varies depending on the lens used
Number of AF area available for automatic selection	Max. 143 zones	Max. 117 zones
Selectable positions for AF point	Max. 3975 positions	Max. 3375 positions
Eye Detection AF	Supported	Supported
Focusing brightness range	EV -4 – 18 (center AF point) * At 23°C/73°F, f/1.2, ISO 100, One-Shot AF	EV -2 – 18 (center AF point) * At 23°C/73°F, f/1.2, ISO 100, One-Shot AF * At 23.98 fps

## Exposure control

### Metering functions under various shooting conditions

Item	Still photo shooting		Movie recording
	Optical viewfinder	Live View	
Metering mode	216-zone (18 × 12) metering using approx. 220,000 pixel RGB+IR metering sensor TTL full-aperture metering	384-zone (24 × 16) metering using image sensor output signals	
Evaluative metering	Supported		Supported * When faces are detected with  +Tracking]
Partial metering	Supported: Approx. 6.5% of the screen	Supported: Approx. 5.8% of the screen	–
Spot metering	Supported: Approx. 2.0% of the screen	Supported: Approx. 2.9% of the screen	–
Center-weighted average metering	Supported		Supported * When no faces are detected
Metering brightness range * At 23°C/73°F, ISO 100	EV 1 – 20	EV –2 – 20	EV 0 – 20

### Exposure control under various shooting conditions (Creative Zone)

Item	Still photo shooting	Movie recording
Shutter speed	1/4000 – 30 sec., Bulb	1/4000 – 1/8 sec.
ISO speed (Recommended exposure index)	ISO 100*1 – 25600*2 (in 1/3-stop increments)	<ul style="list-style-type: none"> <li>• 4K UHD: ISO 100*1 – 6400 (in 1/3-stop increments)</li> <li>• Full HD / HD: ISO 100 – 12800*3 (in 1/3-stop increments)</li> </ul>
ISO Auto (Recommended exposure index)	<ul style="list-style-type: none"> <li>• Without flash firing: ISO 100*1 – 25600*4</li> <li>• Flash firing: ISO 100*1 – 1600*4+5</li> <li>• Bulb exposure: ISO 400</li> </ul>	<ul style="list-style-type: none"> <li>• 4K UHD: ISO 100*1 – 6400</li> <li>• Full HD / HD: ISO 100*1 – 12800*3+4+6</li> </ul>
Max. for ISO Auto	ISO 400 – 25600 (in 1-stop increments)	ISO 6400 – 12800*3 (in 1-stop increments)

\* 1: ISO 200 with : **Highlight tone priority**] set to **[Enable]** or **[Enhanced]**.

\* 2: H (equivalent to ISO 51200) with **[2: ISO expansion]** in : **Custom Functions(C.Fn)]** set to **[1:Enable]**.

\* 3: H (equivalent to ISO 25600) with **[2: ISO expansion]** in : **Custom Functions(C.Fn)]** set to **[1:Enable]**.

\* 4: Varies depending on **[Max for Auto]** setting.

\* 5: Maximum limit may be lower depending on the ISO speed set by variable control of maximum ISO Auto limit for E-TTL.

\* 6: ISO 6400 when Digital zoom is set.

## Built-in flash

**Type:** Retractable flash in the pentamirror housing

**Retraction method:** Manual

**Guide number:** G. No.: Approx. 12 (ISO 100, m) / 39.4 (ISO 100, feet)

## External flash

**Sync contacts:** Hot shoe: X-sync contact

\* Maximum flash sync speed: 1/200 sec.

**Flash mode:** E-TTL II metering

## Drive

### Drive mode and continuous shooting speed

Drive mode	Viewfinder shooting	Live View shooting
Single shooting	Yes	
High-speed continuous* <sup>1</sup>	Max. approx. 7.0 shots/sec.	Max. approx. 7.5 shots/sec.
Low-speed continuous	Max. approx. 3.0 shots/sec.	Max. approx. 3.0 shots/sec.
Self-timer:10 sec / remote control* <sup>2</sup>	Yes (BR-E1: Supported / RC-6: Not supported)	
Self-timer:2 sec / remote control* <sup>2</sup>	Yes (BR-E1: Supported)	
Self-timer:Continuous	Yes (2 – 10 shots)	

\* 1: 1/1000 sec. or faster shutter speed, EF50mm f/1.8 STM lens, open aperture, with a fully charged Battery Pack LP-E17, and at room temperature (23°C/73°F)

\* 2: Remote control icon  displayed only when paired with BR-E1

## Playback

Item	Stills	Movies
Magnify zoom display	1.5x – 10x * Can be activated by double-tapping	–
AF point display	Supported	–
Highlight alert	Supported * Detailed information display only	
Rating	OFF / ★ to ★★★★★ Select images / Select range / All images in folder / All images on card	
Image search	Search conditions: Rating / Date / Folder / Protect / Type of file	
Protect	Select images / Select range / All images in folder / Unprotect all images in folder / All images on card / Unprotect all images on card	
In-camera RAW processing	Supported	–
Resize	Supported	–
Cropping	Supported	–

## Print ordering (DPOF)

**System:** Compliant with DPOF Version 1.1

## Customization (C.Fn)

**Custom Function:** 14 Custom Functions can be configured.

## External interface

### Digital terminal

Terminal type	Micro-B
Transmission	Hi-Speed USB (USB 2.0)
Applications	For PC communication

**HDMI mini OUT terminal:** Type C (Resolution switches automatically)

**External microphone input terminal:** Compatible with the 3.5 mm diameter stereo mini plug

**Remote control terminal:** Remote Switch RS-60E3 type terminal supported

## Power source

**Battery:** Battery Pack LP-E17 × 1

## AC power source

AC adapter	AC-E6N
DC coupler	DR-E18

## Possible shots

Shooting method	Temperature	Shooting conditions	
		AE: 100%	AE: 50% / FA: 50% * CIPA testing standards
Viewfinder shooting	+23°C / 73°F	Approx. 1240 shots	Approx. 800 shots
	0°C / 32°F	Approx. 1120 shots	Approx. 730 shots
Live View shooting	+23°C / 73°F	Approx. 360 shots	Approx. 310 shots
	0°C / 32°F	Approx. 330 shots	Approx. 290 shots

\* With a fully charged LP-E17

## Time available for movie recording

Conditions of use		Temperature	Available operating time
Time available for movie recording	4K UHD, 23.98 fps, IPB (Standard)	+23°C / 73°F	Approx. 1 hr. 45 min.
	Full HD, 29.97 fps, IPB (Standard)	+23°C / 73°F	Approx. 2 hr. 30 min.
		0°C / 32°F	Approx. 2 hr. 20 min.
Time available for Time-lapse movie recording	Full HD Interval: 5 sec.	Screen on	+23°C / 73°F Approx. 2 hr. 30 min.
		Screen off	+23°C / 73°F Approx. 2 hr. 50 min.

\* With a fully charged LP-E17

## Battery information

Remaining capacity	4-level indicator
Recharge performance	3-level indicator

## Wi-Fi

### Standards compliance

Wi-Fi standards	Transmission method
IEEE802.11b	DS-SS modulation
IEEE802.11g	OFDM modulation
IEEE802.11n	

### Transmission frequency (Center frequency)

Frequency	2412 – 2462 MHz
Channels	1 – 11 channels

### Connection, authentication, and data encryption methods

Connection method	Authentication	Encryption
Camera access point	WPA2-PSK	AES
	Open	Disable
Infrastructure	Open	WEP
		Disable
	Shared key	WEP
	WPA-PSK	TKIP AES
WPA2-PSK		

## Bluetooth

**Standards compliance:** Bluetooth Specification Version 4.1 compliant (Bluetooth Low Energy Technology)

**Transmission method:** GFSK modulation

## Dimensions and weight

Dimensions (W×H×D)	Approx. 131.0 × 102.6 × 76.2 mm / 5.16 × 4.04 × 3.00 in.
Weight	Approx. 515 g / 18.17 oz. (including battery pack and card)/Approx. 471 g / 16.61 oz. (body only)

## Operating environment

Working temperature range	0 – 40°C (32 – 104°F)
Working humidity	85% or less

- All data above is based on Canon testing standards and CIPA (Camera & Imaging Products Association) testing standards and guidelines.
- Dimensions and weight listed above are based on CIPA Guidelines (except weight for camera body only).
- Product specifications and appearance are subject to change without notice.
- If a problem occurs with a non-Canon lens attached to the camera, contact the respective lens manufacturer.