

# EOS 90D

## A DSLR BUILT FOR SPEED AND DETAIL

The EOS 90D is a DSLR with a 32.5 megapixel APS-C sensor that delivers superb image quality and extends the effective reach of telephoto lenses. Add in 45-point AF points, 10fps shooting and a multi-control dial and you have a powerful camera for wildlife and sports photography.



- From wildlife hide to trackside
- See every drop of detail
- Intuitive DSLR design
- An intelligent performance
- Superb creative video

**32.5** MEGA PIXELS  
CMOS  
TTL: 34.4 MP

Cross-type  
Max. **45** AF

EOS Movie  
4K+FULL HD

Up to  
**10**  
Frames  
Per Sec

Dual Pixel  
CMOS AF

Wi-Fi  
Bluetooth®

### PRODUCT RANGE



EOS 7D Mark II

EOS 7D Mark II

**EOS 90D**

EOS 80D

EOS 77D



EOS 90D



EOS 80D

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# TECHNICAL SPECIFICATIONS

# EOS 90D

## IMAGE SENSOR

Type	22.3mm x 14.8mm CMOS
Effective Pixels	Approx. 32.5 MP
Total Pixels	Approx. 34.4 MP
Aspect Ratio	3:2
Low-Pass Filter	Built-in/Fixed
Sensor Cleaning	EOS integrated cleaning system
Colour Filter Type	Primary Colour

## IMAGE PROCESSOR

Type	DIGIC 8
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## LENS

Lens Mount	EF/EF-S
Focal Length	Equivalent to 1.6x the focal length of the lens
Image Stabilisation	Optical Image Stabilizer on compatible lenses. Movie: Movie Digital IS

## FOCUSING

Type	Via optical viewfinder:  TTL-CT-SiR with a CMOS sensor  Via liveview on LCD screen:  Dual Pixel CMOS AF System. Phase detection pixels built onto imaging sensor <sup>[1]</sup>
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## AF System/ Points

45 cross-type AF points  
(45 f/5.6 cross-type AF points, 27 f/8 points [9 cross-type], centre point is f/2.8 and f/5.6 dual cross-type)<sup>[2][3]</sup>

## AF working range

EV -3 - 18 (at 23°C & ISO100)

## AF Modes

AI Focus  
One Shot  
AI Servo

## AF Point Selection

Automatic selection: 45 point AF  
Manual selection: Single point AF  
Manual selection: Spot AF  
Manual selection: Zone AF  
Manual selection: Large Zone AF  
AF points can be selected separately for vertical and horizontal shooting

## Selected AF point display

Indicated by a transmissive LCD in viewfinder and Quick Control screen

## Predictive AF (7)

Yes, up to 8m

## AF Lock

AF points can be selected separately for vertical and horizontal shooting

## AF Assist Beam

Intermittent firing of built-in flash or emitted by optional dedicated Speedlite

## Manual Focus

Selected on lens

## Focus Bracketing

Yes

## AF Microadjustment

+/- 20 steps (wide and tele setting for Zooms)  
Adjust all lenses by same amount  
Adjust up to 40 lenses individually  
Adjustments remembered for lens by serial number

## EXPOSURE CONTROL

### Metering modes

Via optical viewfinder:  
  
220,000-pixel RGB+IR metering sensor  
Metering with the area divided into 216 segments (18 x 12)  
(1) Evaluative metering (linked to all AF points)  
(2) Partial metering (approx. 6.5% of viewfinder)  
(3) Spot metering (approx. 2.0% of viewfinder)  
(4) Center-weighted average metering

Via liveview on LCD screen:

(1) Evaluative metering (384 zones)  
(2) Partial metering (approx. 4.5% of LCD screen)  
(3) Spot metering (approx. 2.6% of LCD screen)  
(4) Center-weighted average metering

## Metering Range

Via optical viewfinder:  
  
EV 1-20 (at 23 °C with 50mm f/1.4 lens ISO 100)

Via liveview on LCD screen:

EV -2-20 (at 23 °C, ISO 100, evaluative metering)

Movie: EV 0-20

(at 23 °C, ISO 100, evaluative metering)

Auto: In One-shot AF mode with evaluative metering exposure is locked when focus is achieved.

Manual: By AE lock button in creative zone modes.

+/-5 EV in 1/3 or 1/2 stop increments  
(can be combined with AEB).

2, 3, 5 or 7 Shots +/-3 EV 1/3 or 1/2 stop increments

Auto (100-25600), 100-25600 (in 1/3-stop or whole stop increments)

ISO can be expanded to H: 51200

During Movie shooting: Auto (100-12800), 100-12800 (in 1/3-stop or whole stop increments) ISO can be expanded to H: 25,600

## AE Lock

## Exposure Compensation

## AEB

## ISO Sensitivity

## SHUTTER

### Type

Electronically-controlled focal-plane shutter

### Speed

30-1/8000 sec (1/2 or 1/3 stop increments), Bulb (Total shutter speed range. Available range varies by shooting mode). Electronic shutter up to 1/16000

## WHITE BALANCE

### Type

Auto white balance with the imaging sensor

### Settings

AWB (Ambience priority, White priority), Daylight, Shade, Cloudy, Tungsten light, White Fluorescent light, Flash, Custom, Colour Temperature Setting.

White balance compensation:

1. Blue/Amber +/-9

2. Magenta/ Green +/-9.

Yes, 1 setting can be registered

## Custom White Balance

## WB Bracketing

+/-3 levels in single level increments

3 bracketed images per shutter release.

Selectable Blue/Amber bias or Magenta/ Green bias.

## VIEWFINDER

### Type

Pentaprism

### Coverage (Vertical/Horizontal)

Approx. 100%

### Magnification

Approx. 0.95x<sup>[4]</sup>

### Eyepoint

Approx. 22mm (from eyepiece lens centre)

### Dioptr Correction

-3 to +1 m-1 (dioptr)

### Focusing Screen

Fixed (Transmissive LCD screen)

### Mirror

Quick-return half mirror (Transmission: reflection ratio of 40:60, no mirror cut-off with EF 600mm f/4 IS USM or shorter)

## Viewfinder Information

AF information: AF points, focus confirmation, AF area selection mode

Exposure information: Shutter speed, aperture value, ISO speed (always displayed), AE lock, exposure level/compensation, spot metering circle, exposure warning, AEB.

Flash information: Flash ready, high-speed sync, FE lock, flash exposure compensation, red-eye reduction light.

Image information: Card information, maximum burst (2 digit display), Highlight tone priority (D+).

Composition information: Grid, Electronic level, Aspect Ratio

Other information: Battery check, Alert symbol, Flicker Detection

Yes, with Depth of Field preview button.

## Depth of field preview

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# TECHNICAL SPECIFICATIONS

# EOS 90D

## LCD MONITOR

<b>Type</b>	Touch screen Vari angle 7.7cm (3.0") 3:2 Clear View II TFT, approx. 1040K dots
<b>Coverage</b>	Approx. 100%
<b>Viewing Angle (horizontally/vertically)</b>	Approx 170°
<b>Coating</b>	Anti smudge
<b>Brightness Adjustment</b>	Adjustable to one of seven levels
<b>Display Options</b>	(1) Quick Control Screen (2) Camera settings (3) Electronic Level

## FLASH

<b>Built-in Flash GN (ISO 100, meters)</b>	12
<b>Built-in Flash Coverage</b>	up to 17mm focal length (35mm equivalent: 27mm)
<b>Built-in Flash recycle time</b>	Approx. 3 seconds
<b>Modes</b>	Auto, Manual flash, Integrated Speedlite Transmitter
<b>X-sync</b>	1/250sec
<b>Flash Exposure Compensation</b>	+/- 3EV in 1/2 or 1/3 increments
<b>Flash Exposure Bracketing</b>	Yes, with compatible External Flash
<b>Flash Exposure Lock</b>	Yes
<b>Second Curtain Synchronisation</b>	Yes
<b>HotShoe/ PC terminal</b>	Yes/ No
<b>External Flash Compatibility</b>	E-TTL II with EX series Speedlites, wireless optical multi-flash support
<b>External Flash Control</b>	via camera menu screen

## SHOOTING

<b>Modes</b>	Scene Intelligent Auto (Stills and Movie), Creative Auto, SCN(Portrait, Landscape, Close-up, Sports, Night Portrait, Handheld Night Scene, HDR Backlight Control, Food, Kids, Candlelight, Group Photo, Panning), Creative filters, Program AE, Shutter priority AE, Aperture priority AE, Manual (Stills and Movie), Bulb, Custom 1, Custom 2
<b>Picture Styles</b>	Auto, Standard, Portrait, Landscape, Fine Detail, Neutral, Faithful, Monochrome, User Defined (x3)
<b>Colour Space</b>	sRGB and Adobe RGB
<b>Image Processing</b>	Highlight Tone Priority (normal plus enhanced) Auto Lighting Optimizer (4 settings) Digital Lens Optimizer Long exposure noise reduction High ISO speed noise reduction (4 settings) Multi Shot Noise Reduction Auto Correction of Lens Peripheral illumination and Chromatic aberration correction Creative Assist Creative filters (Grainy B/W, Soft focus, Fish-eye effect, Water painting effect, Toy camera effect, Miniature effect, HDR art vivid, HDR art bold, HDR art embossed, HDR art standard)) Multi-exposure RAW image processing - during image Playback only Resize to M or S1, S2
<b>Drive modes</b>	Single, Continuous L, Continuous H, Self timer (continuous, continuous panning, 2s+remote, 10s +remote), Silent single shooting, Silent continuous shooting <sup>(1)</sup>
<b>Continuous Shooting</b>	Max. Approx. 10fps. (speed maintained for 58 JPEG and 25 RAW with UHS-II card) Live view Max. Approx 11fps. with One-Shot AF, 7fps with Servo AF <sup>(6) (7)</sup>
<b>Intervalometer</b>	Built-in, number of shots selectable from 1-99 or unlimited. Bulb timer possible

## LIVE VIEW MODE

<b>Type</b>	Electronic viewfinder with image sensor
<b>Coverage</b>	Approx. 100% (horizontally and vertically)
<b>Frame Rate</b>	59.94 fps
<b>Focusing</b>	Manual Focus (Magnify the image 5x or 10x at any point on screen) Autofocus: Dual Pixel CMOS AF (Face detection and Tracking AF, Eye AF, FlexiZone-Multi, FlexiZone-Single), Tracking sensitivity adjustment (-2 to +2), acceleration tracking (-2 to +2) AF auto pt. switching (0 to +2) Real-time evaluative metering with image sensor. Evaluative metering, partial metering, spot metering, center-weighted average metering. Grid overlay (x3), Histogram, Electronic level,
<b>Metering</b>	
<b>Display Options</b>	

## FILE TYPE

<b>Still Image Type</b>	JPEG: Fine, Normal (Exif 2.31 compliant) / Design rule for Camera File system (2.0) RAW: RAW (CR3 14-bit), CRAW (Compact RAW) Digital Print Order Format (DPOF) Version 1.1 compliant Yes, any combination of RAW + JPEG possible.
<b>RAW+JPEG simultaneous recording</b>	
<b>Image Size</b>	RAW: (3:2) 6960x 4640, (4:3) 6160x 4640, (16:9) 6960 x 3904, (1:1) 4640x 4640  JPEG 3:2 (L) 6960 x 4640, (M) 4800 x 3200, (S1) 3472 x 2320, (S2) 2400 x 1600 JPEG 4:3 (L) 6160 x 4640, (M) 4256 x 3200 (S1) 3072 x 2320 (S2) 2112 x 1600 JPEG 16:9 (L) 6960x 3904, (M) 4800 x 2688 (S1) 3472 x 1952 (S2) 2400 x 1344 JPEG (1:1) (L) 4640 x 4640, (M) 3200 x 3200, (S1) 2300 x 2300 (S2) 1600 x 1600

## Movie Type

<b>Movie Size</b>	In-camera RAW processing & Image Resize available in playback MP4 [Video: MPEG-4 AVC/H.264, Audio: MPEG-4 AAC-LC (stereo)] 4K - 3840x 2160 (29.97, 25 fps) <sup>(8)</sup> Full HD - 1920 x 1080 (119.88, 100, 59.94, 50, 29.97, 25 fps) <sup>(8)</sup> HD - 1280 x 720 (59.94, 50 fps) HDR - 1920 x 1080 (29.97, 25 fps) 4K Timelapse - 3840 x 2160 (29.97, 25 fps) Max duration 29min 59sec, Max file size 4GB (If file size exceeds 4GB a new file will be created automatically except in Timelapse Movie mode, ExFat formatted cards have no file size limitation)
<b>Movie Length</b>	New folders can be manually created and selected (1) Consecutive numbering (2) Auto reset (3) Manual reset
<b>Folders</b>	
<b>File Numbering</b>	

## OTHER FEATURES

<b>Custom Functions</b>	29 Custom Functions
<b>Metadata Tag</b>	User copyright information (can be set in camera) Image rating (0-5 stars) Yes/Yes Yes No Yes
<b>LCD Panel / Illumination</b>	Yes/Yes
<b>Water/ Dust resistance</b>	Yes
<b>Sound Memo</b>	No
<b>Intelligent Orientation Sensor</b>	Yes
<b>Playback zoom</b>	1.5x - 10x



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# TECHNICAL SPECIFICATIONS

# EOS 90D

<b>Display Formats</b>	(1) Single image with information (2 levels) (2) Single image (3) 4 image index (4) 9 image index (5) 36 image index (6) 100 image index (7) Jump Display (8) Movie edit	<b>POWER SOURCE</b> <b>Batteries</b>	Rechargeable Li-ion Battery LP-E6N (supplied), built in for date & settings
<b>Slide Show</b>	Image selection: All images, by Date, Folder, Movies, Stills, Protect Playback time: 1/2/3/5/10/20 seconds Repeat: On/Off Background music: On/Off Transition effect: Off, Slide in 1, Slide in 2, Fade 1, Fade 2, Fade 3 Brightness: Yes RGB: Yes	<b>Battery life</b>	Approx. 1300 (at 23°C, AE 50%, FE 50%) <sup>[5]</sup> Approx. 1200 (at 0°C, AE 50%, FE 50%) 6 levels + percentage Power turns off after 1, 2, 4, 8, 15 or 30mins.
<b>Histogram</b>	Yes	<b>Battery Indicator</b>	
<b>Highlight Alert</b>	Yes	<b>Power saving</b>	
<b>Image Erase/Protection</b>	Erase: Single image, Select range, All images in folder, All images on card Protection: Single image, select range, All images in folder, All images on a card	<b>PHYSICAL SPECIFICATIONS</b> <b>Body Materials</b>	Aluminum alloy and polycarbonate resin with glass fiber
<b>Menu Categories</b>	(1) Shooting menu (x6) (2) Playback menu (x4) (3) Wireless menu (4) Setup menu (x5) (5) Custom Functions menu (6) My Menu	<b>Operating Environment</b>	0 – 40 °C, 85% or less humidity
<b>Menu Languages</b>	29 Languages English, German, French, Dutch, Danish, Portuguese, Finnish, Italian, Ukrainian, Norwegian, Swedish, Spanish, Greek, Russian, Polish, Czech, Hungarian, Vietnamese, Hindi, Romanian, Turkish, Arabic, Thai, Simplified Chinese, Traditional Chinese, Korean, Malay, Indonesian, and Japanese	<b>Dimensions (WxHxD)</b>	140.7 x 104.8 x 76.8mm
<b>Firmware Update</b>	Update possible by the user.	<b>Weight (body only)</b>	Approx. 701g (CIPA testing standard, including battery and memory card)
<b>INTERFACE</b>		<b>ACCESSORIES</b> <b>Viewfinder</b>	Eyecup Eb Rubber Frame Eb, E-series Dioptic Adjustment Lens Eyepiece Extender EP-EX15 Magnifier MG-Eb Angle Finder C
<b>Computer</b>	USB Micro-B Interface Cable IFC-600PCU	<b>Case</b>	Leather case EH21-L
<b>Wi-Fi</b>	Wireless LAN (IEEE802.11b/g/n), (2.4 GHz only, 1-11 ch)	<b>Wireless File Transmitter</b>	Built in Wi-Fi transmission Bluetooth functionality with Camera Connect app requires smart device to be equipped with Bluetooth version 4.0 (or later). Also requires smart device to be using operating system iOS 11.4 (or later) or Android 5.0 (or later)
<b>Wi-Fi Security</b>	Camera Access Point: WPA2-PSK with AES encryption or open Infrastructure: Shared key, with WEP encryption, WPA-PSK/WPA2-PSK with TKIP/AES encryption or open	<b>Lenses</b>	All EF and EF-S lenses
<b>Bluetooth</b>	Bluetooth® (Specification version 4.1, Bluetooth low energy technology) <sup>[9]</sup>	<b>Flash</b>	Canon Speedlites (90EX, 220EX, 270EX, 270EX II, EL-100, 320EX, 420EX, 430EX, 430EX II, 430EX III-RT, 470EX-AI, 580EX, 580EX II, 600EX, 600EX-RT, Macro Ring-Lite MR-14EX II, Macro Twin Lite MT-24EX, Speedlite Transmitter ST-E2, Speedlite Transmitter ST-E3-RT)
<b>Other</b>	HDMI mini output, Output of YCbCr4:2:2, 8bit over HDMI for video streaming is possible with or without shooting info. Output options include [With info], [Clean / 4K output], and [Clean / FHD output]. HDR output of photos to compatible TV supported External microphone (3.5mm Stereo mini jack), Headphone socket (Stereo mini jack)	<b>Battery Grip</b>	BG-E14
<b>DIRECT PRINT</b>		<b>Remote Controller/ Switch</b>	Remote Switch RS-60E3, Remote Controller RC-6, Remote Controller BR-E1, Timer Remote Controller TC-80N3 only when used with Remote Controller Adapter RA-E3
<b>Canon Printers</b>	Canon Compact Photo Printers and PIXMA Printers supporting PictBridge via wireless LAN	<b>Other</b>	Directional Stereo Microphone DM-E1 GPS Receiver GP-E2 Hand Strap E2, GP-E2
<b>PictBridge</b>	Yes (via Wireless LAN)	All data is based on Canon standard testing methods except where indicated. Subject to change without notice.	
<b>STORAGE</b>		<p><sup>[1]</sup> Dual Pixel CMOS AF - AF is possible over an area of up to approx. 100% Vertical x 88% Horizontal of the frame depending on the lens used</p> <p><sup>[2]</sup> Peripheral Cross type AF points will not function as a cross type AF points with the following lenses: EF 35-80mm f4.5-5.6 (II/III/USM), EF35-105mm f4.5-5.6 (USM), EF 80-200mm f4.5-5.6 (II)</p> <p><sup>[3]</sup> The number of AF points, cross-type AF points, and dual cross-type AF points vary depending on the lens used. For full compatibility list please refer to product manual on <a href="http://www.canon-europe.com/support">www.canon-europe.com/support</a></p> <p><sup>[4]</sup> with 50mm lens at infinity, -1m-1 dpt</p> <p><sup>[5]</sup> Based on the CIPA Standard and using the batteries and memory card format supplied with the camera, except where indicated</p> <p><sup>[6]</sup> Based on Canon's testing conditions, JPEG, ISO 100, Standard Picture Style. Varies depending on the subject, memory card brand and capacity, image recording quality, ISO speed, drive mode, Picture Style, Custom functions etc.</p> <p><sup>[7]</sup> Sustained continuous shooting speed is tested based on Canon's testing standard. Function requires compatible UHS II memory card, total number of frames captured varies depending on shooting subject, settings and brand of memory card</p> <p><sup>[8]</sup> 4K Movie or 120fps Full HD requires UHS-I Speed Class 3 or higher, Full HD requires SD Speed class 10 or higher</p> <p><sup>[9]</sup> Bluetooth functionality with Camera Connect app requires smart device to be equipped with Bluetooth version 4.0 (or later). Also requires smart device to be using operating system iOS 11.4 (or later) or Android 5.0 (or later)</p> <p><sup>[10]</sup> Software applications compatible with Windows 10 in Windows 10 Desktop Mode only</p> <p><sup>[11]</sup> Silent drive mode reduces the noise of the mirror mechanism, electronic shutter mode in Live View is available for silent single shots</p>	
<b>Type</b>	SD, SDHC, SDXC (UHS-II compatible)		
<b>SUPPORTED OPERATING SYSTEM</b>			
<b>PC &amp; Macintosh</b>	Windows 10 / 8.1 / 7 SP1 <sup>[10]</sup> Mac OS X 10.14 / 10.13 / 10.12		
<b>SOFTWARE</b>			
<b>Image Processing</b>	Digital Photo Professional 4 DPP Express		
<b>Other</b>	Picture Style Editor, EOS Utility, Image Transfer Utility Picture Style editor Camera Connect app available on iOS and Android devices with operating system iOS 11.4 (or later) or Android 5.0 (or later)		

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