



Canon EOS 650D Specification Sheet

IMAGE SENSOR

Type	22.2 x 14.8mm CMOS
Effective Pixels	Approx. 18.0 megapixels
Total Pixels	Approx. 18.5 megapixels
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 5
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LENS

Lens Mount	EF/EF-S
Focal Length	Equivalent to 1.6x the focal length of the lens

FOCUSING

Type	TTL secondary image forming, phase difference detection with AF dedicated CMOS sensor
AF System/ Points	9 cross-type AF points (f/2.8 at centre)
AF working Range	EV -0.5 - 18 (at 23°C & ISO100)
AF Modes	AI Focus One Shot AI Servo
AF Point Selection	Automatic selection, Manual selection
Selected AF Point Display	Superimposed in viewfinder and indicated on LCD monitor
Predictive AF ⁽¹⁾	Yes, up to 10m
AF Lock	Locked when shutter button is pressed half way
AF Assist Beam	Intermittent firing of built-in flash or emitted by optional dedicated Speedlite
Manual Focus	Selected on lens

EXPOSURE CONTROL

Metering Modes	TTL full aperture metering with 63-zone SPC Evaluative metering (linked to all AF points) Partial metering at centre (approx. 9% of viewfinder) Spot metering (approx. 4% of viewfinder at centre) Centre weighted average metering
Metering Range	EV 1-20 (at 23°C with 50mm f/1.4 lens ISO100)
AE Lock	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
Exposure Compensation	+/-5 EV in 1/3 or 1/2 stop increments (can be combined with AEB)
AEB	3 shots +/- 2 EV, 1/2 or 1/3-stop increments
ISO Sensitivity ⁽²⁾	AUTO(100-6400), 100-12800 in 1-stop increments ISO can be expandable to H: 25600)

SHUTTER

Type	Electronically-controlled focal-plane shutter
Speed	30-1/4000 sec (1/2 or 1/3 stop increments), Bulb (Total shutter speed range. Available range varies by shooting mode)

WHITE BALANCE

Type	Auto white balance with the imaging sensor
Settings	AWB, Daylight, Shade, Cloudy, Tungsten, White Fluorescent light, Flash, Custom White balance compensation: Blue/Amber +/-9 Magenta/ Green +/-9
Custom White Balance	Yes, 1 setting can be registered

	WB Bracketing	+/-3 levels in single level increments 3 bracketed images per shutter release Selectable Blue/Amber bias or Magenta/ Green bias
VIEWFINDER		
	Type Coverage (Vertical/Horizontal) Magnification Eyepoint Dioptr Correction Focusing Screen Mirror Viewfinder Information Depth of Field Preview Eyepiece Shutter	Pentamirror Approx. 95% Approx. 0.85x ⁽³⁾ Approx. 19mm (from eyepiece lens centre) -3 to +1 m-1 (dioptr) Fixed Quick-return half mirror (Transmission: reflection ratio of 40:60, no mirror cut-off with EF600mm f/4 or shorter) AF information: AF points, focus confirmation light 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: Highlight tone priority (D+), monochrome shooting, maximum burst (1 digit display), White balance correction, SD card information Yes, with Depth of Field preview button On strap
LCD MONITOR		
	Type Coverage Viewing Angle (horizontally/vertically) Coating Brightness Adjustment Display Options	Touch screen vari angle 7.7cm (3.0") 3:2 Clear View II TFT, approx. 1040K dots Approx. 100% Approx 170° Anti smudge Adjustable to one of seven levels Quick Control Screen Camera settings
FLASH		
	Built-in Flash GN (ISO 100, Meters) Built-in Flash Coverage Built-in Flash Recycle Time Modes Red-Eye Reduction X-sync Flash Exposure Compensation Flash Exposure Bracketing Flash Exposure Lock Second Curtain Synchronisation HotShoe/ PC Terminal External Flash Compatibility External Flash Control	13 Up to 17mm focal length (35mm equivalent: 28mm) Approx. 3 seconds Auto, Manual flash, Integrated Speedlite Transmitter Yes - with red eye reduction lamp 1/200sec +/- 2EV in 1/2 or 1/3 increments Yes, with compatible External Flash Yes Yes Yes/ No E-TTL II with EX series Speedlites, wireless multi-flash support Via camera menu screen

SHOOTING		
	Modes Picture Styles Colour Space Image Processing Drive Modes Continuous Shooting Intervalometer	Scene Intelligent Auto, No Flash, Creative Auto, Portrait, Landscape, Close-up, Sports, Night Portrait, Handheld Night Scene, HDR Backlight Control, Program AE, Shutter priority AE, Aperture priority AE, Manual Auto, Standard, Portrait, Landscape, Neutral, Faithful, Monochrome, User Defined (x3) sRGB and Adobe RGB Highlight Tone Priority Auto Lighting Optimizer (4 settings) Long exposure noise reduction High ISO speed noise reduction (4 settings) Multi Shot Noise Reduction Auto Correction of Lens Peripheral illumination Basic+ (Shoot by ambience selection, Shoot by lighting or scene type) Creative filters (Art Bold, Water painting, Grainy B/W, Soft focus, Toy camera, Miniature effect, Fish-eye) - during image Playback only Single, Continuous, Self timer (2s, 10s+remote, 10s + continuous shots 2-10) Max. Approx. 5fps for approx. 22 JPEG images ⁽⁴⁾ , 6 images RAW ^{(5) (6)} Approx. 99% (horizontally and vertically)
LIVE VIEW MODE		
	Type Coverage Frame Rate Focusing Metering Display Options	Electronic viewfinder with image sensor Approx. 99% (horizontally and vertically) 30 fps Manual Focus (Magnify the image 5x or 10x at any point on screen) Autofocus: Hybrid CMOS AF (Face detection and Tracking AF, FlexiZone-Multi, FlexiZone-Single), Phase detection AF (Quick mode) Real-time evaluative metering with image sensor. Evaluative metering, partial metering, spot metering, centre-weighted average metering Grid overlay, Histogram
FILE TYPE		
	Still Image Type RAW+JPEG Simultaneous Recording Image Size Movie Type Movie Size Movie Length Folders File Numbering	JPEG: Fine, Normal (Exif 2.30 compliant) / Design rule for Camera File system (2.0), RAW: RAW (14bit, Canon original RAW 2nd edition), Digital Print Order Format [DPOF] Version 1.1 compliant Yes, RAW + Large JPEG JPEG 3:2: (L) 5184x3456, (M) 3456x2304, (S1) 2592x1728, (S2) 1920x1280, (S3) 720x480 JPEG 4:3: (L) 4608x3456, (M) 3072x2304, (S1) 2304x1728, (S2) 1696x1280, (S3) 640x480 JPEG 16:9: (L) 5184x2912, (M) 3456x1944, (S1) 2592x1456 (S2) 1920x1080, (S3) 720x400 JPEG 1:1: (L) 3456x3456, (M) 2304x2304, (S1) 1728x1728, (S2) 1280x1280, (S3) 480x480 RAW: (RAW) 5184x3456, (M-RAW) 3888x2592, (S-RAW) 2592x1728 MOV (Video: H.264, Sound: Linear PCM, recording level can be manually adjusted by user) 1920 x 1080 (29.97, 25, 23.976 fps) 1280 x 720 (59.94, 50 fps) 640 x 480 (30, 25 fps) Max duration 29min 59sec, Max file size 4GB New folders can be manually created and selected Consecutive numbering Auto reset Manual reset

OTHER FEATURES		
	Custom Functions	8 Custom Functions with 34 settings
	Metadata Tag	User copyright information (can be set in camera) Image rating (0-5 stars)
	Intelligent Orientation Sensor	No
	Playback Zoom	1.5x - 10x enabled in 15steps
	Display Formats	Single image with information (2 levels) Single image 4 image index 9 image index Jump Display
	Slide Show	Image selection: All images, by Date, by Folder, Movies, Stills Playback time: 1/2/3/5 seconds Repeat: On/Off
	Histogram	Brightness: Yes RGB: Yes
	Highlight Alert	Yes
	Image Erase/Protection	Erase: Single image, All images in folder, Checkmarked images, unprotected images Protection: Erase protection of one image at a time
	Menu Categories	Shooting menu (x5) Playback menu (x2) Setup menu (x3) Custom Functions menu My Menu
	Menu Languages	25 Languages English, German, French, Dutch, Danish, Portuguese, Finnish, Italian, Norwegian, Swedish, Spanish, Greek, Russian, Polish, Czech, Hungarian, Romanian, Ukrainian, Turkish, Arabic, Thai, Simplified Chinese, Traditional Chinese, Korean and Japanese
	Firmware Update	Update possible by the user
INTERFACE		
	Computer	Hi-Speed USB
	Other	Video output (PAL/ NTSC) (integrated with USB terminal), HDMI mini output (HDMI-CEC compatible), External microphone (3.5mm Stereo mini jack)
DIRECT PRINT		
	Canon Printers	Canon Compact Photo Printers and PIXMA Printers supporting PictBridge
	PictBridge	Yes
STORAGE		
	Type	UHS-1, SD, SDHC or SDXC card
SUPPORTED OPERATING SYSTEM		
	PC & Macintosh	Windows XP inc SP3 / Vista inc SP1 and SP2 (excl. Starter Edition) / 7 (excl. Starter Edition) Mac OS X 10.6 -10.7 (Intel processor required)
SOFTWARE		
	Browsing & Printing	ImageBrowser EX
	Image Processing	Digital Photo Professional
	Other	PhotoStitch, EOS Utility (inc. Remote Capture), Picture Style Editor
POWER SOURCE		
	Batteries	1 x Rechargeable Li-ion Battery LP-E8
	Battery Life	Approx. 440 (at 23°C, AE 50%, FE 50%) ⁽⁷⁾ Approx. 400 (at 0°C, AE 50%, FE 50%)
	Battery Indicator	4 levels
	Power Saving	Power turns off after 30sec or 1, 2, 4, 8 or 15mins
	Power Supply & Battery Chargers	AC Adapter Kit ACK-E8, Battery charger LC-E8, LC-E8E

PHYSICAL SPECIFICATIONS		
	Body Materials	Stainless Steel and polycarbonate resin with glass fibre
	Operating Environment	0 – 40 °C, 85% or less humidity
	Dimensions (WxHxD)	133.1 x 99.8 x 78.8 mm
	Weight (Body Only)	Approx. 575g (CIPA testing standard, including battery and memory card)
ACCESSORIES		
	Viewfinder	Eyecup Ef, E-series Dioptic Adjustment Lens with Rubber Frame Ef, Eyepiece Extender EP-EX15II, Angle Finder C
	Case	Semi-Hard Case EH22-L
	Wireless File Transmitter	Compatible with Eye-Fi cards
	Lenses	All EF and EF-S lenses
	Flash	Canon Speedlites (220EX, 270EX, 270EX II, 320EX, 420EX, 430EX, 430EX II, 550EX, 580EX, 580EX II, 600EX, 600EX-RT, Macro-Ring-Lite, MR-14EX, Macro Twin Lite MT-24EX, Speedlite Transmitter ST-E2, Speedlite Transmitter ST-E3-RT)
	Remote Controller/ Switch	Remote Switch RS-60E3, Remote Controller RC-6
	Other	Hand Strap E2

Subject to change without notice.

[1] With EF300mm f/2.8L IS USM at 50kph

[2] Recommended Exposure Index

[3] with 50mm lens at infinity, -1m^{-1} dpt

[4] Large/Fine(Quality 8) resolution

[5] 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

[6] Maximum fps and buffer capacity may be reduced depending on the cameras settings and light level

[7] Based on the CIPA Standard and using the batteries and memory card format supplied with the camera, except where indicated