Canon *New Product Specifications*

EOS 40D

Imaging Sensor

Resolution	Approx. 10.1 million effective pixels (total pixels: approx 10.5 million)
Recording pixels	3888 x 2592
Sensor type	CMOS sensor, with primary R-G-B filtration
Sensor size	22.2 x 14.8mm
Pixel size	5.7 microns square
Lens focal length factor	1.6x
Sensor Dust removal	EOS Integrated Cleaning System • Active removal of dust by vibrating front low-pass filter • Automatic removal of dust spots, in Canon Digital Photo Professional software (v. 3.1 or higher)

Performance

Maximum frames per second	6.5 fps (at full resolution)
Maximum number of frames / burst	• JPEG: 75 • RAW: 17
Shutter speeds	30 seconds ~ $\frac{1}{8000}$, plus Bulb ($\frac{1}{3}$ or $\frac{1}{2}$-step increments)
Flash sync speed	Up to $\frac{1}{250}$, with EX-series Speedlites
Anticipated shutter durability	100,000 exposures, based on Canon Inc. test methods
Computer Interface	USB 2.0 (Hi-speed)

Image Recording

Storage media	CompactFlash cards (type I or II, including Microdrives)
Card compatibility	"FAT32" compatible — OK for cards over 2GB
Image format options	• JPEG (choice of "Fine" or "Normal" compression) • RAW (Canon .CR2 RAW file format) • RAW + JPEG (any JPEG file size available; JPEG file written as separate file)
Analog to Digital conversion	14 bits per channel (16,382 separate tones from brightest to darkest, for each channel)
Resolution options	"Large" — 3888 x 2592 (approx. 10.1 million pixels) "Medium" — 2816 x 1880 (approx. 5.3 million pixels) "Small" — 1936 x 1288 (approx. 2.5 million pixels)
File numbering	sRGB color space: IMG_0001.JPG or IMG_0001.CR2 • Adobe 1998 RGB color space: first character is always underscore (_)
Folders	Automatically created for image storage • New folder can be user-created with "Manual Reset" function • Folders *cannot* be freely selected on memory card by the photographer
Highlight Tone priority	Expands tonal range of bright highlights by about one stop • ISO range limited to 200~1600 • Activated by C.Fn II-3-1
Data Verification	"Original Image Data' can be appended to each image via Custom Function IV-6-1 • Requires optional Canon Original Data Security Kit OSK-E3 to check authenticity

Live View

Viewing options
- Camera's LCD monitor
- Computer monitor, via USB
- Computer monitor, via Wireless Transmitter WFT-E3A

Manual Focus Viewed on LCD monitor, with option to magnify focus area 5x or 10x

Auto Focus Possible — C.Fn III-6-1 active, press AF On button
- Mirror drops down temporarily while AF On button is pressed, allowing AF to function

Silent mode Live View shooti Mode 1 — First shutter curtain remains open; shooting up to 6.5 fps possible
Mode 2 — Quieter option; 2nd shutter curtain doesn't close until user's finger
is taken off shutter button

Wireless Operation

Accessory Wireless Transmitter Canon WFT-E3A (optional, dedicated wireless transmitter)

Attachment to camera Attaches to base of camera; totally integrated with EOS 40D's design

Wireless transfer methods 802.11b or 802.11g
- Link speed: approx. 11 megabits/sec. (802.11b) or 54 megabits/sec. (802.11g)

Connection method Infrastructure or Ad Hoc (802.11g functions in Ad Hoc mode)

Maximum wireless distance Approx. 490 feet (150m), if "receiver" has its own antenna (depends on environment)

Wireless channels 11 (in North American market)

Ethernet (wired) transfer Yes; Ethernet 100Base-TX (max. distance approx. 1,000 feet)
- Link speed: approx. 100 megabits/second

Transfer options: 1. FTP mode (images sent to folder on host computer)
2. PTP mode (remote control of camera possible from computer)
3. HTTP mode (view camera's files using web browser; remote firing of camera possible)

Security options Encryption — WEP or TKIP/AES
Authentication — Open system, WPA-PSK, or WPA2-PSK

USB "host" capability Plug compatible USB devices into WFT-E2A, for use with the EOS 40D
- GPS devices (write GPS time, coordinates and altitude info into each file's EXIF info)
- External Hard Drive (connect compact external USB hard drive, and write files
directly from camera to the hard drive — as if it's an additional memory card)

LCD monitor

LCD monitor 3.0-inch (diagonal) TFT color; approx. 100% coverage
- Approx. 230,000 pixels on monitor
- Approx. 140° viewing angle

LCD monitor brightness Adjustable in 7 levels (via Menu)

Video-out Yes (to standard TV monitor); NTSC or PAL — selectable on Menu

Autofocus

Number of AF points
Nine — <u>all cross-type AF points</u>

Center AF point
<u>Unique hybrid cross-type AF point</u>
- World's first high-precision AF point *with both horizontal and vertical* high-precision
- Additional standard precision, cross-type sensors for lenses from $f2.8 \sim f5.6$

AF point selection
1. Manual AF point selection via 9-way multi-controller on back of camera
2. Automatic AF point selection

AF activation
Shutter button, <u>or new AF On button at back of camera</u>

AF modes
- One-Shot AF (for stationary subjects)
- AI Servo AF (for tracking moving subjects)
- AI Focus AF (auto selection of One-Shot or AI Servo AF)

AF sensor
<u>Entirely new Canon CMOS AF sensor</u>

AF sensitivity range
EV $^{-}0.5 \sim 18$ (at 73°F / 23°C, ISO 100)

Exposure Control

Shutter speeds
30 seconds $\sim \frac{1}{8000}$, plus Bulb ($\frac{1}{3}$ or $\frac{1}{2}$-step increments); x-sync at $\frac{1}{250}$

ISO range
$100 \sim 1600$, in $\frac{1}{3}$-step or full-stop increments
- ISO can be expanded to 3200 via C.Fn I-3-1

Auto ISO
Can be set in any exposure mode, <u>including P, Tv, Av, and M</u>
- ISO usually based at 400; <u>typical auto range is $100 \sim 800$</u>, depending on conditions
- Manual exposure mode: Auto ISO fixed at 400

Exposure modes
Manual, Aperture-priority (Av), Shutter-priority (Tv), Program AE

Full-auto modes
Green Zone, Portrait, Landscape, Close-up, Action, Night Portrait, Flash Off

Metering
35-zone metering sensor
- Evaluative metering (linked to all AF points)
- Center-weighted metering
- Partial metering
- Spot metering at center of picture (approx. 3.5% of picture area)

Metering range
EV $0 \sim 20$ (all patterns, at normal temperatures)

Exposure compensation
Possible in P, Tv, Av and A-DEP exposure modes
- $^{+}\!\!/\!\!_{-}$ up to two stops, in $\frac{1}{2}$ or $\frac{1}{3}$-stop increments (via Quick Control Dial)

Auto Exposure Bracketing
Possible in P, Tv, Av, M and A-DEP exposure modes
- $^{+}\!\!/\!\!_{-}$ up to two stops, in $\frac{1}{2}$ or $\frac{1}{3}$-stop increments

Flash

Compatible flashes
All Canon EX-series Speedlites, including new Speedlite 580EX II

Camera menu sets flash
<u>Yes</u> (580EX II only, as of August 2007)

E-TTL II flash metering
- Flash metering not linked to active AF point
- Distance from compatible EF lenses now used
- Entire metering area can be averaged using Custom Function 14-1

Modeling flash
1-sec. burst of flash possible at 70Hz when depth-of-field preview button is pressed
(580EX/EX II, 550EX, 420EX, MR-14EX, MT-24EX and Speedlite Transmitter only)

Wireless E-TTL
Fully compatible, including ratio setting over six-stop range

Flash Exposure Compensation
Up to $^{+}\!\!/\!\!_{-}$ 2 stops can be set on camera body (can also be set on compatible speedlites)

Built-in flash
Covers lenses as wide as 17mm (27mm equivalent); Guide Number 43 (ft)/13 (m), ISO 100

Viewfinder

Focus screen
New interchangeable "Ef" series focusing screens
- Standard screen: Ef-A — precision matte screen very similar to EOS 30D
- Optional Ef-D screen — precision matte with grid lines
- Optional Ef-S screen — Super precision matte
  (superior manual focusing with fast lenses, ƒ1.8~ƒ2.8)

Viewfinder display
Similar to EOS 30D
- New: ISO is always displayed
- New: B/W shooting mode icon
- New: Maximum burst available now two digits

Dioptric adjustment
User-set from -3.0~+1.0
(range can be extended using optional Canon Dioptric Lens E, plus Rubber Frame Eb)

Mirror lock-up
Possible via Custom Function III-6-1

Eyepiece shutter
None (cover is provided on included strap)

Color control

Color space
Standard sRGB, or Adobe 1998 RGB (separate setting on Menu)

White Balance
- Auto
- Pre-set (Daylight, Shade, Cloudy, Tungsten, Fluorescent, Flash)
- Color Temperature (set by user from 2500K ~ 10,000K in 100K increments)
- Custom (shoot white object or 18% gray card, base WB on that neutral object)

White Balance correction
Fine-tuning of overall color, in any white balance mode
- Amber–Blue correction, in 9 steps
- Magenta–Green correction, in 9 steps
- Set on graph on LCD monitor, using 9-way controller
- Both types of correction can be combined

White Balance bracketing
Three separate files written with a single click of the shutter
- Can be varied in the Amber–Blue direction, or the Magenta–Green direction
- Can be adjusted up to +/- 15 mireds (equivalent to 3 steps on the 9-step adjust scale)
- Can be combined with standard auto exposure bracketing (9 files written to CF card)

Picture Style
Extensive range of settings for user to tailor color, contrast, sharpness, etc. to their preference
- Same characteristics as previous EOS SLRs with Picture Style control

Black & White recording
Set via Monochrome setting within Picture Styles menu

Interface

Computer connection
USB 2.0 Hi-speed, via small "B"-type USB connection

Remote Control
N3-type push-in terminal (same as EOS 20D, EOS-1D Mark II, etc.)

Video-out
Single-pin mini-jack

Direct Printing

Compatibility
PictBridge printing to compatible Canon and other brand printers

Compatible images
JPEG, RAW, or sRAW, if they comply with DCF protocol

Preview effects on camera's LCD
Printing effects can be previewed (includes brightness, levels, contrast, color saturation, color tone, and color balance — Face Brightener and Red-eye Correction cannot be viewed)

Connection to printer
via USB cable included with camera

DPOF image marking
Compatible — images can be "tagged" while reviewing on LCD monitor

Canon

EOS 40D specifications (continued)

Power Supply

Battery   BP-511A, BP-511, or BP-512 (rechargeable Lithium-Ion — same as EOS 30D)
(BP-511/BP-512: 1100mAh; BP-511A: 1390mAh)

Shooting capacity   Approx.1100 shots (at 68°F / 20°C)
Approx. 800 shots (at 32°F / 0°C)

Charger unit   Canon CB-5L or CG-580 (also can be charged with Compact Power Adapter CA-PS400)

AC Adapter   AC Adapter Kit ACK-E2 (optional; consists of Adapter AC-E2, and "dummy battery" DR-400)

Battery Grip   (optional) Battery Grip BG-E2N or BG-E2

Date/Time back-up battery   CR2016 lithium battery — coin-type; user-replaceable (estimated life 5 years)

Body

Exterior material   Magnesium alloy top, front and rear covers

Chassis material   Polycarbonate and stainless steel

Lens mount   EF lens mount; Metal
• Compatible lenses: All Canon lenses for EOS cameras

Compatible with EF-S lenses   Yes

Custom Functions   24 Custom Functions, in four distinct categories
• 9 entirely new Custom Functions

Operating temperature range   32°~104°F, at 85% or lower humidity (0°~40°C)

Dimensions (W x H x D)   5.7 x 4.2 x 2.9 in. (145.5 x 108 x 73.5mm) — very slightly larger than EOS 30D

Weight (without battery or CF card)   26.1 oz. (740g) — approx. 1.4 oz (40g) heavier than EOS 30D

Note: Underlined items are new features, or specs superior to EOS 30D

All specifications are preliminary, and based on Canon Inc.'s standard test methods
All specifications subject to change without prior notice