Nikon D850 DSLR Camera (Body only)

**Product Specification**

1. **Effective Pixels (Megapixels)**
   45.7 million

2. **Sensor Size**
   35.9 mm x 23.9 mm

3. **Image Sensor Format**
   FX

4. **Storage Media**
   1 XQD card and 1 Secure Digital (SD) card
   SD
   SDHC (UHS-II compliant)
   SDXC (UHS-II compliant)
   XQD Type Memory

5. **Top Continuous Shooting Speed at full resolution**
   7 frames per second

6. **ISO Sensitivity**
   ISO 64 - 25,600
   Can also be set to approx. 0.3, 0.5, 0.7, or 1 EV (ISO 32 equivalent) below ISO 64 or to approx. 0.3, 0.5, 0.7, 1, or 2 EV (ISO 102,400 equivalent) above ISO 25,600; auto ISO sensitivity control available

7. **Movie**
   4K UHD 3,840x2,160 / 30 fps
   4K UHD 3,840x2,160 / 25 fps
   4K UHD 3,840x2,160 / 24 fps
   Full HD 1,920x1,080 / 60 fps
   Full HD 1,920x1,080 / 50 fps
   Full HD 1,920x1,080 / 30 fps
   Full HD 1,920x1,080 / 25 fps
   Full HD 1,920x1,080 / 24 fps
   HD 1,280x720 / 60 fps
   HD 1,280x720 / 50 fps
   Slow-motion: Full HD 1,920x1,080 30p (x4)
   Slow-motion: Full HD 1,920x1,080 25p (x4)
   Slow-motion: Full HD 1,920x1,080 24p (x5)
   Actual frame rates for 60p, 50p, 30p, 25p, and 24p are 59.94, 50, 29.97, 25, and 23.976 fps respectively
   Quality selection available at all sizes except 3,840 x 2,160 (when quality is fixed at high) and 1,920 x 1,080 slow-motion (when quality is fixed at normal)

8. **Monitor Size**
   3.2 in. diagonal

9. **Monitor Type**
   Tilting TFT touch-sensitive LCD
10. Battery / Batteries
   EN-EL15a Rechargeable Li-ion Battery

11. Approx. Dimensions (Width x Height x Depth)
   5.8 in. (146 mm)  
   x 4.9 in. (124 mm)  
   x 3.1 in. (78.5 mm)

12. Approx. Weight
   32.3 oz. (915 g)
   camera body only

Collapse Type
1. Type
   Single-lens reflex digital camera
2. Lens Mount
   Nikon F bayonet mount

Collapse Image Sensor
1. Effective Pixels (Megapixels)
   45.7 million
2. Sensor Size
   35.9 mm  
   x 23.9 mm
3. Image Sensor Format
   FX
4. Image Sensor Type
   CMOS
5. Total Pixels
   46.89 million
6. Dust-Reduction System
   Image sensor cleaning
   Image Dust Off reference data  
   (optional Capture NX-D software required)
7. Dust-Off Reference Photo
   Yes
8. Image Area (pixels)
   FX-format  
   (L) 8,256 x 5,504 (45.4 million)  
   (M) 6,192 x 4,128 (25.5 million)  
   (S) 4,128 x 2,752 (11.3 million)  
   1:2 format (30 x 20)  
   (L) 6,880 x 4,584 (31.5 million)  
   (M) 5,152 x 3,432 (17.6 million)  
   (S) 3,440 x 2,288 (7.8 million)  
   5:4 format (30 x 24)  
   (L) 6,880 x 5,504 (37.8 million)  
   (M) 5,152 x 4,120 (21.2 million)  
   (S) 3,440 x 2,752 (9.4 million)  
   1:1 format (24 x 24)  
   (L) 5,504 x 5,504 (30.2 million)  
   (M) 4,128 x 4,128 (17.0 million)  
   (S) 2,752 x 2,752 (7.5 million)  
   DX-format  
   (L) 5,408 x 3,600 (19.4 million)  
   (M) 4,048 x 2,696 (10.9 million)  
   (S) 2,704 x 1,800 (4.8 million)  
   FX-format photographs taken during movie recording  
   (L) 8,256 x 4,640 (38.3 million)  
   (M) 6,192 x 3,480 (21.5 million)  
   (S) 4,128 x 2,320 (9.5 million)  
   DX-format photographs taken during movie recording  
   (L) 5,408 x 3,040 (16.4 million)  
   (M) 4,048 x 2,272 (9.1 million)  
   (S) 2,704 x 1,520 (4.1 million)
1. **File Format Still Images**  
   JPEG: JPEG-Baseline compliant with fine (approx 1:4), normal (approx 1:8), or basic (approx 1:16) compression (Size priority); Optimal quality compression available  
   NEF (RAW) + JPEG: Single Photograph Recorded in both NEF (RAW) and JPEG Formats  
   NEF (RAW): 12 or 14 bit, lossless compressed, compressed, or uncompressed; large, medium, and small available (medium and small images are recorded at a bit depth of 12 bits using lossless compression)  
   TIFF (RGB)

2. **Storage Media**  
   1 XQD card and 1 Secure Digital (SD) card  
   SD  
   SDHC (UHS-II compliant)  
   SDXC (UHS-II compliant)  
   XQD Type Memory

3. **Card Slot**  
   Either card can be used for primary or backup storage or for separate storage of NEF (RAW) and JPEG images; pictures can be copied between cards.

4. **File System**  
   Compliant with DCF (Design Rule for Camera File System) 2.0  
   EXIF 2.31 (Exchangeable Image File Format for Digital Still Cameras)  
   PictBridge

**Collapse Viewfinder**

1. **Viewfinder**  
   Eye-level Pentaprism Single-Lens Reflex Viewfinder

2. **Viewfinder Frame Coverage**  
   FX (36x24): 100% horizontal and 100% vertical (Approx.)  
   1.2x (30x20): 97% horizontal and 97% vertical (Approx.)  
   DX (24x16): 97% horizontal and 97% vertical (Approx.)  
   5:4 (30x24): 97% horizontal and 100% vertical (Approx.)  
   1:1 (24x24): 97% horizontal and 100% vertical (Approx.)

3. **Viewfinder Magnification**  
   0.75x (50 mm f/1.4 lens at infinity, – 1.0 m⁻¹) (Approx.)

4. **Viewfinder Eyepoint**  
   17 mm (-1.0 m⁻¹)

5. **Viewfinder Diopter Adjustment**  
   -3 to + 1 m⁻¹

6. **Focusing Screen**  
   Type B BriteView Clear Matte Mark VIII with AF Area Brackets (grid lines can be displayed)

7. **Reflex Mirror**  
   Quick-return type

8. **Mirror Lock Up**  
   Yes

**Collapse Lens**

1. **Lens Aperture**  
   Instant-return type  
   Electronically Controlled

2. **Depth-of-field Control**  
   Yes  
   Pressing Pv button stops lens aperture down to value selected by user (A and M modes) or by camera (other modes)

3. **Lens Compatibility at a Glance***  
   AF-S or AF lenses fully compatible  
   Metering with AI lenses

4. **Compatible Lenses**  
   AF NIKKOR lenses, including type G, E, and D lenses (some restrictions apply to PC lenses), and DX lenses (using DX 24 x 16 image area). AI-P NIKKOR lenses, and non-CPU AI lenses (exposure modes A and M only).  
   Electronic rangefinder can be used with lenses that have a maximum aperture of f/5.6 or faster (the electronic rangefinder supports 15 focus points with lenses that have a maximum aperture of f/8 or faster, of which 9 points are available for selection).  
   IX NIKKOR lenses, lenses for the F3AF, and non-AI lenses cannot be used.

**Collapse Shutter**

1. **Shutter Type**  
   Electronically controlled vertical-travel focal-plane mechanical shutter  
   Electronic front-curtain shutter available in quiet shutter-release, quiet continuous shutter-release, and mirror up release modes
2. **Shutter Speed**
   1/8000 to 30 sec. in steps of 1/3, 1/2, or 1 EV, Bulb, Time, X250

3. **Fastest Shutter Speed**
   1/8000 sec.

4. **Slowest Shutter Speed**
   30 sec.

5. **Flash Sync Speed**
   Up to 1/250 sec.
   Synchronizes with shutter at 1/250s or slower
   Auto FP High-Speed sync supported

6. **Bulb Shutter Setting**
   Yes

7. **Shutter Release Modes**
   Continuous low-speed [CL] mode
   Continuous high-speed [CH] mode
   Mirror-up [Mup] mode
   Quiet Shutter Release
   Quiet Continuous Release
   Self-timer Mode
   Single-frame [S] mode

8. **Continuous Shooting Options**
   FX-format
   CH: Up to 9 frames per second
   With an EN-EL18b Battery inserted in a MB-D18 Power Pack:
   CL: 1-8 frames per second
   CH: 9 frames per second
   Quiet Continuous Mode: 3 frames per second
   Other power sources:
   CL: 1-6 frames per second
   CH: 7 frames per second
   Quiet Continuous Mode: 3 frames per second

9. **Top Continuous Shooting Speed at full resolution**
   7 frames per second

10. **Self-timer**
    2, 5, 10, 20 sec.; 1 to 9 exposures at intervals of 0.5, 1, 2, or 3 sec.
    *Timer duration electronically controlled*

**Collapse Exposure**

1. **Exposure Metering System**
   TTL exposure metering using approximately 180K (180,000) pixels
   RGB sensor

2. **Metering Method**
   Center-weighted: Weight of 75% given to 12 mm circle in center of frame.
   Diameter of circle can be changed to 8, 15, or 20 mm, or weighting can be based on average of entire frame (non-CPU lenses use 12-mm circle)
   Matrix: 3D Color Matrix Metering III (type G, E, and D lenses); Color Matrix Metering III (other CPU lenses); Color Matrix Metering available with non-CPU lenses if user provides lens data
   Spot: Meters 4 mm circle (about 1.5% of frame) centered on selected focus point (on center focus point when non-CPU lens is used)
   Highlight-weighted: Available with type G, E, and D lenses

3. **Metering Range**
   ISO 100, f/1.4 lens, 20 °C/68 °F
   -3 ± 20 EV (Matrix or center-weighted metering)
   2 to 20 EV (spot metering)
   0 to 20 EV (Highlight-weighted metering)

4. **Exposure Meter Coupling**
   Combined CPU and AI

5. **Exposure Modes**
   Aperture-Priority (A)
   Manual (M)
   Programmed auto with flexible program (P)
   Shutter-Priority Auto (S)

6. **Exposure Compensation**
   ±5 EV in increments of 1/3, 1/2 or 1 EV

7. **Exposure Bracketing**
   2 to 9 frames in steps of 1/3, 1/2, 2/3 or 1 EV
   -2 EV in 1/3, 0.7, 1.0, 2.0, 3.0 step increments
   +2 EV in 1/3, 0.7, 1.0, 2.0, 3.0 step increments
   -3 EV in 1/3, 0.7, 1.0, 2.0, 3.0 step increments
   +3 EV in 1/3, 0.7, 1.0, 2.0, 3.0 step increments

8. **Exposure Lock**
   Yes

9. **Picture Control**
   Auto
   Flat
1. **ISO Sensitivity**
   ISO 64 - 25,600
   Can also be set to approx. 0.3, 0.5, 0.7, or 1 EV (ISO 32 equivalent) below ISO 64 or to approx. 0.3, 0.5, 0.7, 1, or 2 EV (ISO 102,400 equivalent) above ISO 25,600; auto ISO sensitivity control available

2. **Lowest Standard ISO Sensitivity**
   64

3. **Highest Standard ISO Sensitivity**
   25,600

4. **Lowest Expanded ISO Sensitivity**
   Lo-1 (ISO 32 equivalent)

5. **Highest Expanded ISO Sensitivity**
   Hi-2 (ISO 102,400 equivalent)

6. **Expanded ISO Sensitivity Options**
   Lo-1 (ISO 32 equivalent)
   Hi-1 (ISO-51,200 equivalent)
   Hi-2 (ISO-102,400 equivalent)

7. **Long Exposure Noise Reduction**
   Yes

8. **High ISO Noise Reduction**
   Low
   Normal
   High
   Off

9. **Active D-Lighting**
   Auto
   Extra High
   High
   Normal
   Low
   Off

10. **D-Lighting Bracketing**
    2 frames using selected value for one frame
    3–5 frames using preset values for all frames

---

**Collapse Focus/Autofocus**

1. **Single-Point AF Mode**
   Yes

2. **Dynamic AF Mode**
   Number of AF points: 9, 25, 72, or 153 point dynamic-area AF, 3D-tracking, group-area AF

3. **Auto-Area AF Mode**
   Yes

4. **Autofocus System**
   Nikon Advanced Multi-CAM 20K autofocus sensor module with TTL phase detection and fine-tuning, and 153 focus points (including 99 cross-type sensors and 15 sensors that support f/8), of which 55 (35 cross-type sensors and 9 f/8 sensors) are available for selection

5. **Detection Range**
   -4 to +20 EV (ISO 100, 68°F/20°C)

6. **Lens Servo**
   Autofocus (AF): Single-servo AF (AF-S); Continuous-servo AF (AF-C); auto AF-S/AF-C selection (AF-A); predictive focus tracking activated automatically according to subject status
   Manual focus (MF): Electronic rangefinder can be used

7. **AF-area Mode**
   9, 25, 72, or 153 point Dynamic-area AF
   Auto-area AF
   Single-point AF
   3D-tracking
   Group-area AF

8. **Focus Lock**
   Focus can be locked by pressing shutter-release button halfway (single-servo AF) or by pressing the center of the sub-selector

9. **Focus Modes**
   Continuous-servo (AF-C)
   Face-Priority AF
   Full-time Servo (AF-F)
   Manual (M) with electronic rangefinder
   Normal area AF
   Predictive focus tracking activated automatically according to subject status
   Single-servo AF (AF-S)
Wide area available in Live View and D-Movie only

10. **Maximum Autofocus Areas/Points**
153

11. **Autofocus Sensitivity**
-4 to +20 EV (ISO 100, 20°C/68°F)

12. **Autofocus Fine Tune**
Yes

---

**White Balance**

1. **White Balance**
   - Auto (3 types)
   - Choose color temperature (2500K–10000K)
   - Cloudy
   - Direct Sunlight
   - Fine-tuning
   - Flash
   - Fluorescent (7 types)
   - Incandescent
   - Natural Light Auto
   - Preset manual (up to 6 values can be stored, spot white balance measurement available during live view)
   - Shade

2. **White Balance Bracketing**
   - 2 to 9 exposures in increments of 1, 2 or 3 EV

---

**Live View Shooting**

1. **Live View Shooting**
   - Photography Live View Mode
   - Movie Live View Mode

2. **Live View Lens Servo**
   - Autofocus (AF): Single-servo AF (AF-S); full-time-servo AF (AF-F)
   - Manual focus (MF)

3. **Live View AF-Area Mode**
   - Face-priority AF
   - Wide-area AF
   - Normal-area AF
   - Pinpoint AF
   - Subject-tracking AF

4. **Live View Autofocus**
   - Contrast-detect AF anywhere in frame (camera selects focus point automatically when face-priority AF or subject-tracking AF is selected)

---

**Movie**

1. **Movie Metering**
   - TTL exposure metering using main image sensor

2. **Movie Maximum Recording Time**
   - 29 minutes 59 seconds
   - Each movie will be recorded across up to 8 files of up to 4 GB each. The number of files and the length of each file vary with the options selected for Frame size/frame rate and Movie quality.

3. **Movie File Format**
   - MOV
   - MP4

4. **Movie Video Compression**
   - H.264/MPEG-4 Advanced Video Coding

5. **Movie Audio Recording Format**
   - Linear PCM
   - AAC

6. **Movie**
   - 4K UHD 3,840 x 2,160 / 30 fps
   - 4K UHD 3,840 x 2,160 / 25 fps
   - 4K UHD 3,840 x 2,160 / 24 fps
   - Full HD 1,920 x 1,080 / 60 fps
   - Full HD 1,920 x 1,080 / 50 fps
   - Full HD 1,920 x 1,080 / 30 fps
   - Full HD 1,920 x 1,080 / 25 fps
   - Full HD 1,920 x 1,080 / 24 fps
   - HD 1,280 x 720 / 60 fps
   - HD 1,280 x 720 / 50 fps
   - Slow-motion: Full HD 1,920 x 1,080 30p (x4)
   - Slow-motion: Full HD 1,920 x 1,080 25p (x4)
   - Slow-motion: Full HD 1,920 x 1,080 24p (x5)
   - Actual frame rates for 60p, 50p, 30p, 25p, and 24p are 59.94, 50, 29.97, 25, and 23.976 fps respectively
   - Quality selection available at all sizes except 3,840 x 2,160 (when quality is fixed at high) and 1,920 x 1,080 slow-motion (when quality is fixed at normal)

7. **Movie Audio**
   - Built-in microphone, stereo
   - External stereo microphone (optional)
Microphone sensitivity can be adjusted

**Collapse Monitor**

1. **Monitor Size**
   3.2 in. diagonal
2. **Monitor Resolution**
   2,359,000 Dots
3. **Monitor Type**
   Tilting TFT touch-sensitive LCD
4. **Monitor Angle of View**
   170-degree wide-viewing angle
5. **Monitor Adjustments**
   Brightness, 5 levels
6. **Virtual Horizon Camera Indicator**
   Yes
   Also visible in LiveView Modes
   Also visible in Viewfinder

**Collapse Playback**

1. **Playback Functions**
   Auto Image Rotation
   Full-frame and thumbnail (4, 9, or 72 images)
   Highlights
   Histogram Display
   Location Display
   Movie Playback
   Movie Slideshow
   Photo Information
   Photo Slideshow
   Picture Rating
   Playback with Zoom
   Playback Zoom Cropping
2. **In-Camera Image Editing**
   D-Lighting
   Distortion Control
   Filter Effects
   Image Overlay
   Monochrome
   NEF (RAW) Processing
   Perspective Control
   Red-Eye Correction
   Resize
   Side-by-Side Comparison
   Straighten
   Trim
   Trim Movie
3. **Image Comment**
   Yes

**Collapse Interface**

1. **Interface**
   Audio input: Stereo mini-pin jack (3.5 mm diameter; plug-in power supported)
   HDMI output: Type C mini-pin HDMI connector
   Headphone Connector
   SuperSpeed USB (USB 3.0 Micro-B connector); connection to built-in USB port is recommended
   Ten-pin remote terminal: Can be used to connect optional MC-30A/ MC-36A remote cords, ML-3 modulite remote control sets, WR-R10 (requires WR-A10 adapter) or WR-1 wireless remote controllers, or GP-1/ GP-1A GPS units
2. **Wi-Fi Functionality**
   Standards: IEEE 802.11b, IEEE 802.11g
   Operating frequency: 2412–2462 MHz (channels 1–11)
   Maximum output power: 8.5 dBm (EIRP)
   Authentication: Open system, WPA2-PSK
3. **Smart Device App Connectivity**
   SnapBridge
4. **Bluetooth**
   Yes
   Communication protocols: Bluetooth Specification Version 4.1
   Operating frequency: Bluetooth: 2402–2480 MHz
   Bluetooth Low Energy: 2402–2480 MHz
5. **GPS**
   GP-1 GPS unit
   GP-1A GPS unit
6. **Save/Load Camera settings**
   Yes

**Collapse Menus**

1. **Total Custom Settings**
   55
2. **My Menu**
   Yes with customization
3. **Recent Settings**
   Yes
4. Supported Languages
Arabic
Bengali
Brazilian Portuguese
Bulgarian
Chinese (Simplified and Traditional)
Czech
Danish
Dutch
English
Finnish
French
German
Greek
Hindi
Hungarian
Indonesian
Italian
Japanese
Korean
Marathi
Norwegian
Persian
Polish
Portuguese
Romanian
Russian
Serbian
Spanish
Swedish
Telugu
Thai
Turkish
Ukrainian
Vietnamese

5. Date, Time and Daylight Savings
Time Settings
Yes

6. World Time Setting
Yes

Collapse Miscellaneous

1. Tripod Socket
1/4 in.

2. Approx. Dimensions (Width x Height x Depth)
5.8 in.
(146 mm)
x 4.9 in.
(124 mm)
x 3.1 in.
(78.5 mm)

3. Approx. Weight
32.3 oz.
(915 g)
camera body only

4. Operating Environment
Temperature: 32 to 104°F (0 to 40°C)
Humidity: Less than 85% (no condensation)

Collapse Power

1. Battery / Batteries
EN-EL15a Rechargeable Li-ion Battery

2. Battery Life (shots per charge)
1,840 shots (CIPA)
Movies: Approx. 70 minutes of HD footage

3. AC Adapter