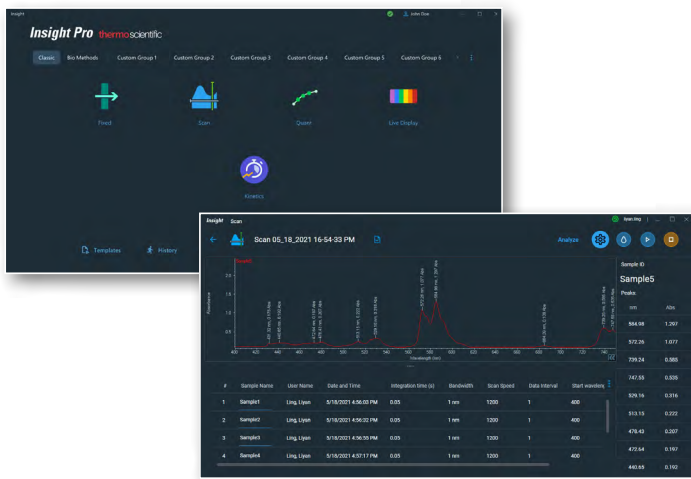


# Evolution One and One Plus UV-Visible Spectrophotometers

## Typical performance specifications



The Thermo Scientific™ Evolution™ One Series UV-Visible (UV-Vis) Spectrophotometers offer unrivaled features and performance with a modern, double-beam design; large, room-light resistant sample compartment; and complete line of accessories. Thermo Scientific™ Insight™ Pro Software streamlines your workflows and provides maximum support for all your analytical needs with comprehensive and versatile Fixed, Scan, Quant and Rate applications.

**Evolution One** features a 1.0 nm spectral bandwidth for high-resolution data in routine quality control and basic research applications.

**Evolution One Plus** increases the versatility of your system with a selectable bandwidth option for a wider variety of applications. Use with fiber optic probes and integrating spheres for optimal performance with these accessories.



Typical performance specifications

|                        |                       | EVOLUTION One<br>UV-Vis Spectrophotometer   | EVOLUTION One Plus<br>UV-Vis Spectrophotometer   |
|------------------------|-----------------------|---|--|
| Optical design         |                       | Double-beam with sample and reference cuvette positions<br>Czerny-Turner Monochromator                | Double-beam with sample and reference cuvette positions;<br>Application Focused Beam Geometry; Czerny-Turner Monochromator |
| Spectral bandwidth(s)  |                       | 1.0 nm  | Variable: 1.0 nm; 2.0 nm;<br>AFBG Microcell optimized;<br>AFBG Fiber optic optimized;<br>AFBG Materials optimized          |
| Light source           |                       | Xenon Flash Lamp, 3-year warranty (7 years typical lifetime)  |  |
| Detector               |                       | Dual Silicon Photodiodes  |  |
| Scan ordinate modes    |                       | Absorbance, % Transmittance, % Reflectance, Kubelka-Munk, log (1/R), log (Abs), Abs*Factor, Intensity |  |
| Wavelength             | Range                 | 190–1100 nm   |  |
|                        | Accuracy              | ±0.2 nm (541.9, 546.1 nm mercury lines)<br>±0.5 nm (full range 190–1100 nm)                           |  |
|                        | Repeatability         | ≤0.01 nm (546.1 nm mercury line, SD of 10 measurements)   |  |
| Scanning speed         |                       | <1 to 6000 nm/min; variable   |  |
| Data intervals         |                       | 10, 5, 2, 1.0, 0.5, 0.2, 0.1 nm   |  |
| Photometric            | Range                 | >3.5 A  |  |
|                        | Display Range         | -0.3 to 4.0 A   |  |
|                        | Accuracy – Instrument | 1A: ±0.002 A<br>2A: ±0.004 A  |  |
|                        |                       | Measured at 440 nm using neutral density filters traceable to NIST                                    |  |
|                        | Repeatability         | ±0.0002 A   |  |
|                        | Noise                 | 0A: ≤0.00015 A<br>1A: ≤0.00010 A<br>2A: ≤0.00025 A  |  |
|                        |                       | 260 nm, 1.0 nm SBW, RMS   |  |
| Drift (Stability)      |                       | <0.0005 A/hr  |  |
|                        |                       | 500 nm, 1.0 nm SBW, 1 hour warm-up  |  |
| Stray light            |                       | KCl, 198 nm: ≤0.40% T<br>NaI, 220 nm: ≤0.027% T<br>NaNO <sub>2</sub> , 340 nm: <0.025% T              |  |
| Baseline flatness      |                       | ±0.0006 A<br>200–800 nm, 1.0 nm SBW, smoothing  |  |
| Keypad                 |                       | Sealed Membrane   |  |
| Dimensions (W × D × H) |                       | 593 × 475 × 266 mm (23.3" × 18.7" × 10.6")  |  |
| Weight                 |                       | 14.5 kg (32 lb)   |  |
| Electrical supply      |                       | 100–240 V, 50–60 Hz, selected automatically<br>150 W maximum  |  |

For pharmacopeia specifications and more, please visit

[thermofisher.com/evolution](http://thermofisher.com/evolution)