

**Veritas Microplate Luminometer  
Instrument Specifications (9100-000)**

**Detection Modes:** Luminescence  
**Detector:** Photomultiplier tube (PMT)  
**Spectral Range:** 300 - 650 nm  
**Peak Wavelength:** 420 nm  
**Detection Limit:**  $3 \times 10^{-21}$  moles of luciferase  
**Linear Dynamic Range:** >9 logs  
**Crosstalk:**  $3 \times 10^{-5}$   
**Read Type:** Glow, Flash, Kinetic, Repeat  
**Sample Format:** 96-well microplates  
**User Interface:** Connect to PC (not included) via serial cable  
**Data Output:** Software reports data directly to Excel spreadsheet  
**External PC Requirements:** Windows 95 or Windows XP  
**Computer Interface:** RS-232 port  
**Power:** 100 - 240 VAC, 50 - 60 Hz  
**Dimensions:** 19.44" D x 18.75" W x 9.28" H (49.38 cm D x 47.63 cm W x 23.57 cm H)  
**Weight:** ~28 lbs (12.7 kg)  
**Operating Temperature:** 60 - 105 °F (15 - 40 °C)  
**Warranty:** One year  
**Approvals:** CE

**Single Auto Injector System (Optional)  
Order Instrument P/N: 9100-001**

**Number of Injectors:** One injector  
**Dispense Volume Range:** Selectable between 25 - 250  $\mu$ l in 1  $\mu$ l increments  
**Waste Tray Volume:** ~50 ml

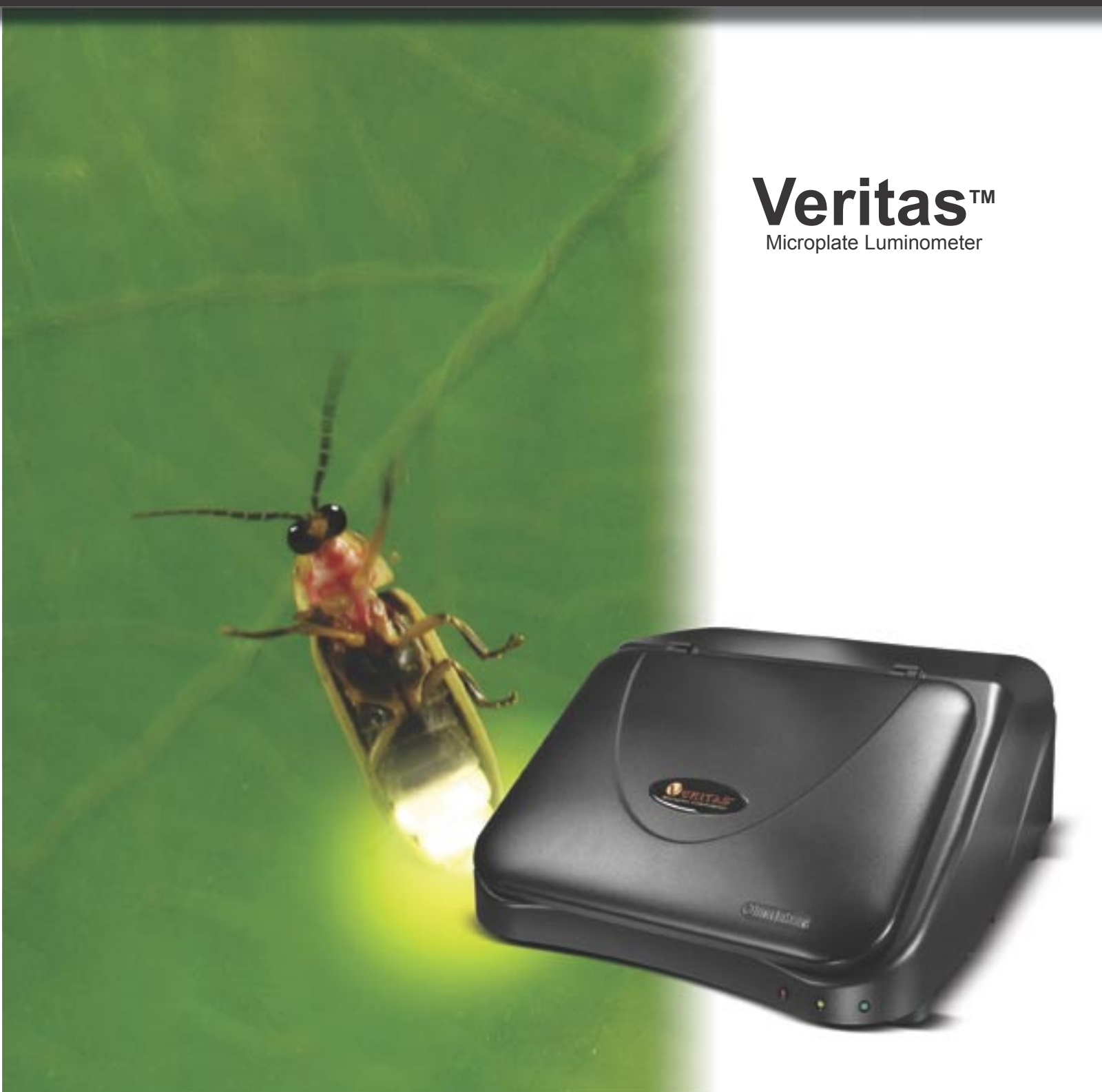
**Dual Auto Injector System (Optional)  
Order Instrument P/N: 9100-002**

**Number of Injectors:** Two injectors  
**Dispense Volume Range:** Selectable between 25 - 250  $\mu$ l in 1  $\mu$ l increments  
**Waste Tray Volume:** ~50 ml

For the most up-to-date specifications, visit [www.turnerbiosystems.com](http://www.turnerbiosystems.com)



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**Veritas™**  
Microplate Luminometer

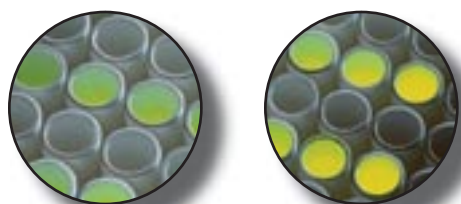
**Overview**

The Veritas™ Microplate Luminometer is a state-of-the-art microplate luminometer that meets the requirement for high sensitivity and broad dynamic range that is necessary for chemiluminescent and bioluminescent applications. With optional Single or Dual Auto Injectors, the Veritas™ is a versatile luminescence system capable of performing both flash and glow-type luminescent assays.

**Superior Performance**

The Veritas™ Microplate Luminometer provides superior sensitivity and precision for all luminescent assays. Low-noise circuitry and an advanced photon-counting photomultiplier tube (PMT) provide unmatched signal-to-noise ratios. With a detection limit of  $3 \times 10^{-21}$  moles of luciferase, the Veritas™ is the most sensitive microplate luminometer available.

With its innovative detector design, the Veritas™ Microplate Luminometer features a dynamic range of greater than nine logs. This measurement technology spans the full range of virtually all chemiluminescent and bioluminescent assays, eliminating the need to dilute samples or manage detector-driven gain changes. To achieve this extra-large reading range, the Veritas™ is capable of simultaneously measuring samples of varying brightness. The PMT automatically adjusts for the optimum reading of bright or dim samples. This means that the Veritas™ is capable of achieving 2 – 3 logs more reading range than competing luminometers.



Dim Sample

Bright Sample

For further functionality, the Veritas™ is designed to reduce crosstalk. The luminescent light path is isolated through a dual-masking system at both the detector and the well being read. Dual masking eliminates stray light by creating a column in which the light from the sample passes directly to the detector. When using white plates, this dual-masking system effectively results in a crosstalk rejection of  $3 \times 10^{-5}$ .

**Ease of Use**

The Veritas™ Microplate Luminometer is designed to be put into use straight from the box without the need to read a manual or obtain special training. Protocol wizards make setting up assay protocols simple while maintaining the flexibility needed for setting up advanced or custom protocols. After sample readings, the collected data is recorded directly into an Excel spreadsheet for quick and easy data analysis.



**Versatility**

The Veritas™ Microplate Luminometer has an extra large reading range that spans the full range of virtually all chemiluminescent and bioluminescent assays. The addition of optional injectors allows the Veritas™ to perform both flash and glow-type luminescent assays. The combination of high sensitivity, large dynamic range, and optional injectors makes the Veritas™ a luminescence workhorse that easily meets the needs of a variety of luminescence applications.

**Injectors**

Both Single and Dual Auto Injectors are available for the Veritas™ Luminometer. Each injector has a volume range of 25 – 250 µl in 1-µl increments. Installed injectors are automatically recognized by the instrument and controlled using the PC software. Injectors are recommended for labs running experiments with flash-based luminescence applications or two-reporter assays.

Veritas™ has an open architecture that enables the user to inspect all tubing and tips during flushing and priming. All reagent plumbing parts are clearly visible and easy to change or clean. With this design, problems can be seen and eliminated before a run is started to save valuable time, reagents, and samples.

Injector operation is integrated into the Veritas™ software. The software provides Prime and Flush commands for easy maintenance and a Reverse Purge command to save valuable reagents.

**Luminescence Light Plate**

Some labs require use of a light plate as an additional verification procedure. Reading the light plate before taking measurements is a quick and easy way to ensure quality control over both the linearity and consistency of readings. The optional Luminescence Light Plate provides an external control to confirm that the Veritas™ Luminometer is functioning properly.

**Internal Auto-Injection System**

Both single and dual injectors are available for the Veritas™ Luminometer. Installed injectors are automatically recognized by the instrument and controlled using the PC software.

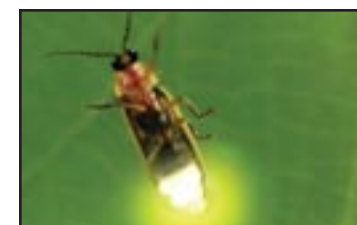


**Visible Plumbing**

Veritas™ visible plumbing enables the user to inspect all tubing and tips during flushing and priming. With this design, problems can be seen and eliminated before a run is started to save valuable time, reagents, and samples.



**Luminescence**



**Luminescence Applications**

- Dual Reporter Assays
- Cell Viability/ATP Assays
- Kinetics Assays
- Intercellular Ca<sup>+2</sup> Assays
- Immunoassays

**Injector/Application Chart**

Injectors*	Applications
2	Dual Reporter Assays
0	Steady-Glo® Luciferase Assays
1	Flash Glow Luciferase Assays
1	Cell Viability/ATP Assays
1	Kinetics Assays
1	Calcium (Aequorin)

\*Recommended

**Data Handling**

Data generated by the Veritas™ is saved directly into an Excel Spreadsheet for easy data analysis. Analyze data when and where it is most convenient for you.

**Software Setup Wizards**

Software setup wizards provide an easy way to get started using the instrument without a steep learning curve. The wizards make setting up a run fast and simple while maintaining the flexibility needed for advanced or custom protocols.

