

Thermo Scientific Luminoskan Ascent

The Thermo Scientific Luminoskan Ascent is a microplate luminometer for luminometric research applications, such as reporter gene, immuno and cell based assays, enzyme studies, molecular interactions, nucleic acid quantification and microbiological assays.

The Luminoskan Ascent is a compact and robust instrument with excellent optical performance for a variety of luminometric research applications, offering versatile plate formats, fast reading speeds, up to three dispensers, and top/bottom reading of plates.

Fast reading speed

The fast reading time, just 15 seconds for a 96-well plate, is essential for kinetic applications, such as enzyme kinetics and phagocytosis assays.

Onboard dispensers for exact follow-up of kinetic reactions

The Luminoskan Ascent equipped with up to three onboard reagent dispensers enables fast kinetic assays, such as ATP assays. The instrument supports simultaneous dispensing and reading, enabling monitoring of fast kinetic measurements from the very start of the reaction. A very low dead volume and the backflush capability are important issues when using expensive reagents.

High sensitivity for both top and bottom reading

Fiberless direct illumination optics for both top and bottom reading ensures high sensitivity, a wide dynamic range, low crosstalk and accurate and precise results in all luminometric assays.

Specially designed for automation

To increase assay throughput, the Luminoskan Ascent can read up to 384-well plates and easily be integrated with automated systems.

Ordering information and technical specification, see page 13.

Luminoskan Ascent Applications:

- Reporter gene assays
- Immunoassays with luminescent substrates
- Cytotoxicity and cell proliferation assays
- Intracellular Ca²⁺ assays
- ATP assays
- Phagocytosis assays
- Reactive oxygen assays
- Microbiological assays
- Enzyme assays
- BRET assays
- ADMEtox



A compact and robust microplate reader with excellent optical performance for a variety of luminometric research applications.



**Compatible with
Thermo Scientific RapidStak**

Technical Specifications and Ordering Information

Thermo Scientific Fluoroskan Ascent, Luminoskan Ascent and Fluoroskan Ascent FL			
	Fluoroskan Ascent	Luminoskan Ascent	Fluoroskan Ascent FL
Fluorometry			
Excitation wavelength range	320 - 700 nm		320 - 700 nm
Emission wavelength range	360 - 800 nm		360 - 670 nm
Excitation filters	Up to eight filters in the excitation filter wheel. 355 nm and 485 nm filters included as standard. Other filters available upon request.		Up to eight filters in the excitation filter wheel. 355 nm and 485 nm filters included as standard. Other filters available upon request.
Emission filters	Up to eight filters in the emission filter wheel. 460 nm and 538 nm filters included as standard. Other filters available upon request.	Up to six filters in the filter wheel. Filters available upon request.	Up to six filters in the emission filter wheel. 460 nm and 538 nm filters included as standard. Other filters available upon request.
Sensitivity	2 fmol fluorescein/well in a black 96-well plate		2 fmol fluorescein/well in a black 96-well plate
Dynamic range	> 6 decades		> 6 decades
Luminometry			
Spectral range		270 - 670 nm	270 - 670 nm
Sensitivity		10 amol ATP/well using flash reaction, white 384-well plate	40 amol ATP/well using flash reaction, white 384-well plate
Dynamic range		> 9 decades over whole gain setting area	> 9 decades over whole gain setting area
Dispensing			
No of dispensers	Up to 3	Up to 3	Up to 3
Dispensing volume	1 - 1000 µl in 1 µl increments	1 - 1000 µl in 1 µl increments	1 - 1000 µl in 1 µl increments
Dispensing speed	25 s, 96-well plate, 5 µl/well	25 s, 96-well plate, 5 µl/well	25 s, 96-well plate, 5 µl/well
General Features			
Plate types	1 - 384-well plates	1 - 384-well plates	1 - 384-well plates
Measurement speed	15 s, 96-well plate	15 s, 96-well plate	15 s, 96-well plate
Wavelength selection	Filters	Filters	Filters
Light source	Quartz-halogen lamp		Quartz-halogen lamp
Detector	Photomultiplier tube	Photomultiplier tube	Photomultiplier tube
Incubator	From ambient + 3°C to 45°C, at ambient 25°C	From ambient + 3°C to 45°C, at ambient 25°C	From ambient + 3°C to 45°C, at ambient 25°C
Shaking	Orbital shaker	Orbital shaker	Orbital shaker
User interface	Requires , but does not include a personal computer	Requires , but does not include a personal computer	Requires , but does not include a personal computer
Computer interface	Serial RS-232C port	Serial RS-232C port	Serial RS-232C port
Dimensions (H x W x D)	340 x 420 x 420 mm 13.4 x 16.5 x 16.5 in. options included	340 x 420 x 420 mm 13.4 x 16.5 x 16.5 in. options included	340 x 420 x 420 mm 13.4 x 16.5 x 16.5 in. options included
Weight	Basic unit 21 kg (46 lbs.). 3 optional dispensers add 3.5 kg to the weight	Basic unit 21 kg (46 lbs.). 3 optional dispensers add 3.5 kg to the weight	Basic unit 21 kg (46 lbs.). 3 optional dispensers add 3.5 kg to the weight

Ordering Information

Cat. No	Description
Thermo Scientific Fluoroskan Ascent	
5210470	Fluoroskan Ascent 100 - 240 V, 50/60 Hz *)
5210480	Fluoroskan Ascent 100 - 240 V, 50/60 Hz, with one dispenser *)
5210482	Fluoroskan Ascent 100 - 240 V, 50/60 Hz, with two dispensers *)
5210483	Fluoroskan Ascent 100 - 240 V, 50/60 Hz, with three dispensers *)
*) Includes PC Software and filter pairs: Ex 355 nm / Em 460 nm, Ex 485 nm / Em 538 nm. Other filters available upon request.	
Thermo Scientific Luminoskan Ascent	
5300160	Luminoskan Ascent 100 - 240 V, 50/60 Hz**)
5300170	Luminoskan Ascent 100 - 240 V, 50/60 Hz, with one dispenser***)
5300172	Luminoskan Ascent 100 - 240 V, 50/60 Hz, with two dispensers***)
5300173	Luminoskan Ascent 100 - 240 V, 50/60 Hz, with three dispensers***)
**) Includes PC Software	
Thermo Scientific Fluoroskan Ascent FL	
5210450	Fluoroskan Ascent FL 100 - 240 V, 50/60 Hz ***)
5210460	Fluoroskan Ascent FL 100 - 240 V, 50/60 Hz with one dispenser***)
5210462	Fluoroskan Ascent FL 100 - 240 V, 50/60 Hz with two dispensers***)
5210463	Fluoroskan Ascent FL 100 - 240 V, 50/60 Hz, with three dispensers ***)
***) Includes PC Software and filter pairs: Ex 355 nm / Em 460 nm, Ex 485 nm / Em 538 nm. Other filters available upon request.	