

LUNA II™

Automated Cell Counter



LUNA-II™ Automated Cell Counter

The LUNA-II™ automated cell counter is the most advanced cell counter today with unmatched speed, accuracy, and consistency of measurement. It is a stand-alone instrument integrating precision microscopy optics, onboard computer, image analysis software, autofocus system, and built-in printer. The LUNA-II™ automated cell counter accurately detects total/live/dead cells at concentrations ranging from 5×10^4 to 1×10^7 cells/ml and cell sizes between 3 and 60 μ m.

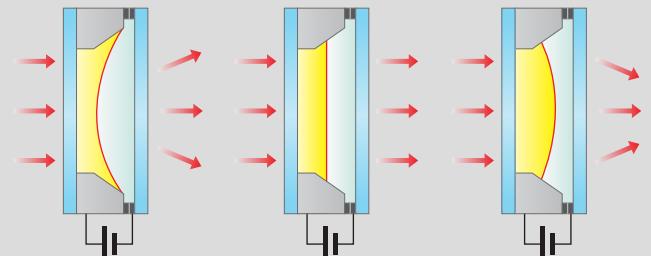
New Autofocusing Technology

The LUNA-II™ automated cell counter has integrated a novel focusing mechanism based on liquid lens technology.

The liquid lens does not use any mechanical moving parts to change the Z stage.

Instead, the Z position of the sample is rapidly obtained by the application of a small voltage to the liquid lens. The elimination of moving parts removes noise and significantly reduces the need for servicing. Even after multi-million cycles of focusing, the liquid lens does not require repair or service.

In combination with this novel focusing mechanism, the LUNA-II™ has integrated a new autofocus algorithm optimized for cell counting.



Reduced Running Cost: Cell Counting Slide

Automated cell counters utilize disposable counting slides to eliminate the washing step of manual cell counting with a glass hemocytometer. Although disposable cell counting slides have several advantages, the increased running cost has been a substantial concern.

Logos Biosystems developed a patented T-BOND technology to manufacture precision cell counting slides more efficiently. Therefore, the unit price of counting slides became much more affordable, providing significant cost savings.



Built-in printer

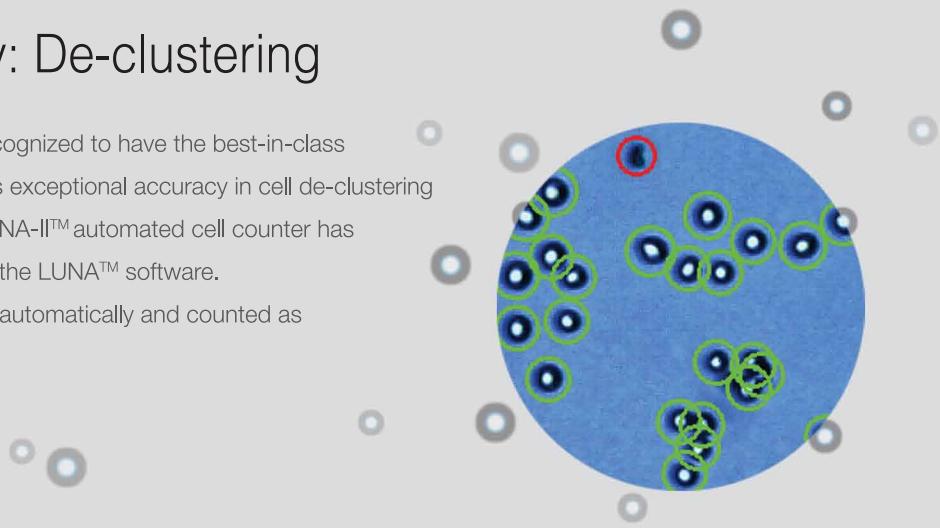
A thermal printer is integrated in the LUNA-II™ automated cell counter, and the counting results can be printed immediately for record keeping purposes. Because the printer is already integrated in the LUNA-II™ automated cell counter, an additional cable connection is not required.



- Fully automated cell counting and cell viability analysis
- Autofocus technology for fast and reliable cell counting
- Trypan blue stained cell counting or non-stained cell counting methods
- Various histograms and cell-size gating
- Unmatched counting accuracy and speed
- Built-in computer and printer
- The most affordable running cost currently on the market

Cell Counting Accuracy: De-clustering

The LUNA™ cell counting algorithm has been recognized to have the best-in-class cell counting accuracy. The LUNA™ software has exceptional accuracy in cell de-clustering and can successfully count clumpy cells. The LUNA-II™ automated cell counter has inherited this well-known performance aspect of the LUNA™ software. Clumpy cells are de-clustered quickly, as well as automatically and counted as individual cells.



Interactive Software



► Options for staining methods

The LUNA-II™ automated cell counter can count samples with or without trypan blue dye. The selection of trypan blue presence or absence can be easily chosen in the settings menu.

► Cell size histogram and cell size based gating

After counting, cells can be gated based on their size information provided by the LUNA-II™. The specific size of cell populations can be easily included or excluded on histograms.

► Cell cluster map

Counted cells are identified using the cell cluster map, which displays the percentage of single cells, doublets, or triplets. The cell cluster map can be used to monitor changes in culture conditions or cell isolation/preparation protocols.

► Review and Re-analysis option

The LUNA-II™ automated cell counter provides a powerful review and re-analysis option. To open and review the saved image, a separate PC is not necessary. Users can open the cell images directly on the LUNA-II™ automated cell counter, and can count cells again using the different parameters.

► Various file save options

The LUNA-II™ has an on-board memory to store up to 1,000 counts. After counting, the result is automatically saved in the memory, and the previous count results can be exported via the USB port as a .CSV file for further analysis. The results and image data can be saved as three different file formats such as a TIF, an annotated TIF, or a PDF report file. The PDF report file contains all the data generated during/after the cell counting, i.e., the protocol used, cell counting results, date, raw/analyzed cell image(s), and histograms are included in the PDF report file.



Specifications

Cell Counting Time	less than 15 sec (manual focusing), less than 22 sec (autofocusing)
Cell Concentration Range	5x10 ⁴ - 1x10 ⁷ cells/ml
Cell Size Range	3~60µm (optimal : 8~30µm)
Cell Viability Range	0~100 %
Image Resolution	5MP
Image Type	TIF, annotated TIF
Report	PDF format
Dimensions (WxDxH)	16 x 18 x 28 cm (6.3x7.0x11.0 inch)
Weight	1.6 kg (3.5 lb) *without the external power adaptor
Operating Power	100~240 VAC, 1.2A
Frequency	50/60 Hz
Electrical Input	12VDC, 3.3A

Ordering Information

Cat#	Product	Size
L40001	Luna II™ Automated Cell Counter (with printer)	each
L40002	Luna II™ Automated Cell Counter (without printer)	each
L12001	Cell counting slides, 50 slides (100 counts)	1 box
L12002	Cell counting slides, 500 slides (1,000 counts)	10 boxes
L12003	Cell counting slides, 1,000 slides (2,000 counts)	20 boxes
T13001	Trypan blue stain 0.4% for use with Luna™ automated cell counter	2 x 1 mL
B13001	Luna™ Standard Bead	2 x 1 mL
U10004	Luna™ USB Drive 4 Gigabytes	each
P12002	Luna II™Printer Paper (10/pk) - min 700 prints	each

Cell Line Validated

Cell Type	Animal	Organ
A375-c5	Human	Skin
A431	Human	Skin
A549	Monkey	Lung
CHO	Chinese Hamster	Ovary
CHSE	Fish	Embryo
COLO-205	Human	Colon
Cos-7	Human	Kidney
DAUDI	Human	Blood
ESC	Mouse	Embryo
HEK-293	Human	Kidney
HeLa	Human	Cervix
HepG2	Human	Liver
HESC	Human	Embryo
HL-60	Human	Blood
HS578T	Human	Breast
Jurkat	Human	Blood
MCF7	Human	Breast
MDA-MB-231	Human	Breast
MIA PaCa-2	Human	Pancreas
MOLT-4	Human	Blood
MRC-5	Human	Lung
Neuro 2A	Mouse	Brain
NIH/3T3	Mouse	Embryo
NSC	Rat	Brain
PLC/PRF/5	Human	Liver
RKO	Human	Colon
SUM149PT	Human	Breast
THP-1	Human	Blood
UWB1-289	Human	Ovary
U-2 OS	Human	Bone



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