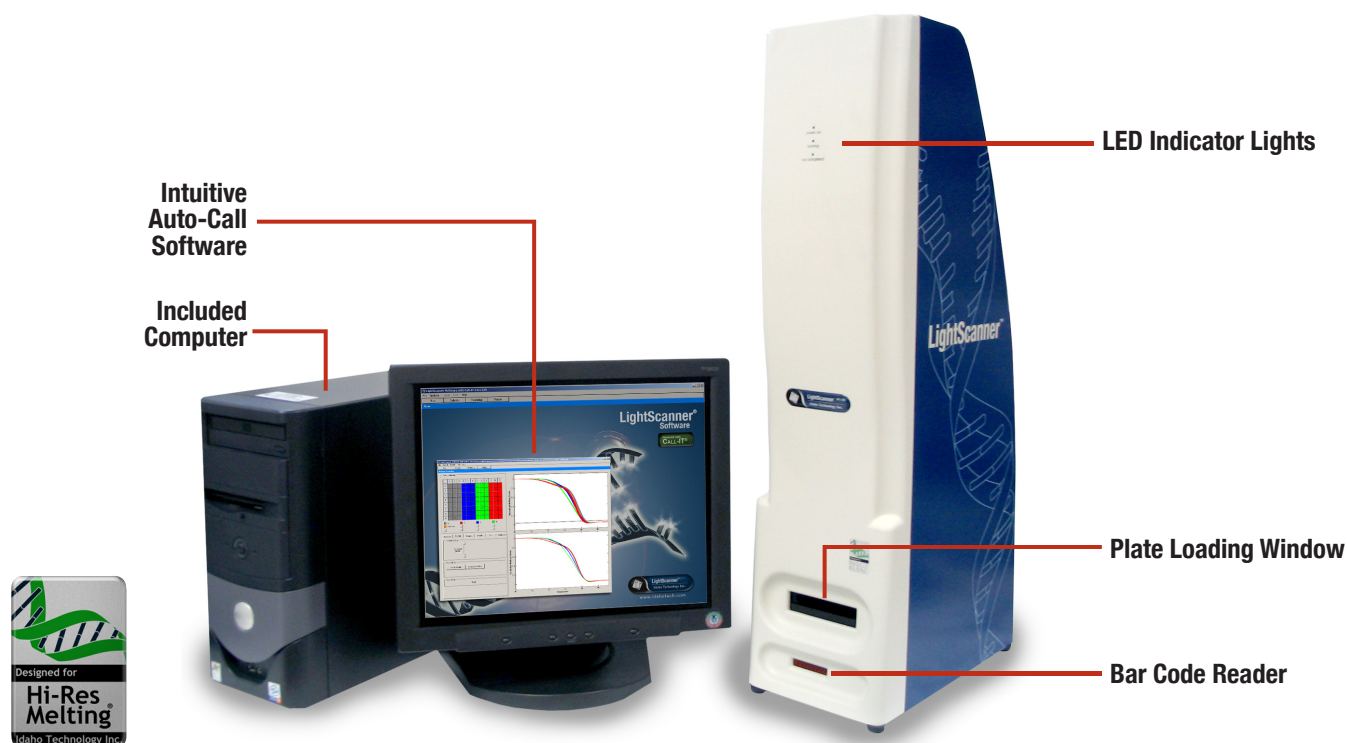


LightScanner® Instrument

Information Sheet



Mutation Discovery, Gene Scanning and Genotyping

The LightScanner is the first system to use Hi-Res Melting® (also known as High Resolution Melting, or HRM) analysis for mutation scanning and genotyping in 96- or 384-well plate system. Standardization is important for research, making the plate format preferable in many settings. It is compatible with nearly all thermal cyclers and qPCR machines.

The LightScanner is unsurpassed in its temperature control for plate-based systems. It also has the highest data quality. With **superb sensitivity and specificity**, this instrument is designed to meet the needs of high-throughput scanning projects. Simply add LCGreen® Plus dye to the initial PCR reaction— then transfer the PCR plate to the LightScanner for melting. Intuitive analysis software groups the results and provides **automatic results**.

Idaho Technology is now



Benefits of a Complete Solution:

Instrument

- Results in less than five minutes
- Hi-Res Melting is non-destructive allowing samples to be recovered for further analysis

Chemistry

- Optimized Master Mix for superior PCR performance for Hi-Res Melting applications

Software

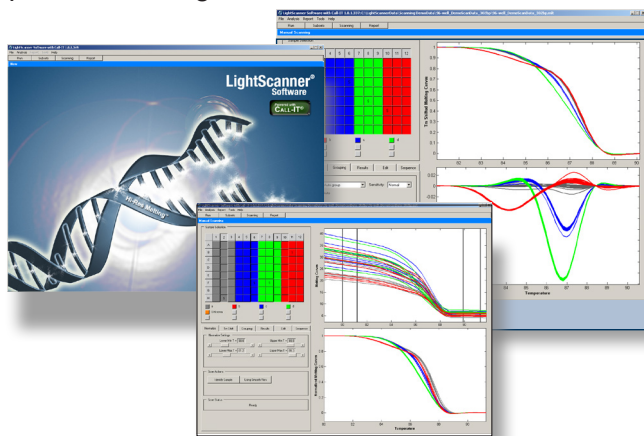
- Automatic analyses of sample defines the standards and variants
- Simple data management tools and primer design software

Support

- Obtain quick assistance through phone and online help desks
- Work directly with experienced scientists

LightScanner Software

Our comprehensive software package provides both assay design and data analysis modules. The primer design module streamlines assay design for Hi-Res Melting. The analysis software features Call-IT®, a patented scientific method where the software critically analyses each sample, defines and groups wild-types and variants. This software also provides users with simple data management tools.



The LightScanner Hi-Res Melting system has been used for over five years and has resulted in approximately 200 peer-reviewed publications, making it the most highly published Hi-Res Melting instrument.

Selected References

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2. Rolf H.A.M. Vossen, Emmelien Aten, Anja Roos, Johan T. den Dunnen. (2009). High-Resolution Melting Analysis (HRMA) - More than just sequence variant screening *Human Mut.* 30, 860-866.
3. Parant JM, George SA, Pryor R, Wittwer CT, Yost HJ. (2009). A rapid and efficient method of genotyping zebrafish mutants. *Dev Dyn*. 238,3168-74.
4. van der Stoep N, van Paridon CDM, Janssens T, Krenkova P, Stambergova A, Macek M, Matthijs G, Bakker E. (2009). Diagnostic guidelines for high-resolution melting curve (HRM) analysis: An interlaboratory validation of BRCA1 mutation scanning using the 96-well LightScanner. *Human Mut.* 30, 899-909.
5. Aten E, White SJ, Kalf ME, Vossen RH, Thygesen HH, Ruivenkamp CA, Kriek M, Breuning MH, den Dunnen JT.(2008). Methods to detect CNVs in the human genome. *Cytogenet Genome Res.* 123, 313-21.
6. Audrezet MP, Dabiriot A, Le Marechal C, Ferec C. (2008). Validation of high-resolution DNA melting analysis for mutation scanning of the cystic fibrosis transmembrane conductance regulator (CFTR) gene. *J Mol Diagn.* 10, 424-34.
7. C. Voegelé, S.V. Tavtigian, D. de Silva, Cuber Thomas, F. Le Calvez-Kelm. (2007). A Laboratory Information Management System (LIMS) for a high throughput genetic platform aimed at candidate gene mutation screening. *Bioinformatics.* 23, 2504-2506.

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Ordering Information

Catalog No.	Instrument Options
LSCN-ASY-0040	96-Well LightScanner Instrument
LSCN-ASY-0050	384-Well LightScanner Instrument
HRLS-ASY-0002	100 Reaction LightScanner Master Mix*
HRLS-ASY-0003	500 Reaction LightScanner Master Mix*
BCHM-ASY-0005	1,000 Rxns LCGreen® Plus Melting Dye*
BCHM-ASY-0006	10,000 Rxns LCGreen® Plus Melting Dye*
HRLS-ASY-0008	100 Reactions High Sensitive Master Mix
HRLS-ASY-0009	500 Reactions High Sensitive Master Mix
LSCN-MAC-0139	Half skirt plate adapter (Eppendorf)
SP01-MAC-0139	Half skirt plate adapter (4titude and BioRad)

*Inquire about larger quantities

Instrument Specifications

Instrument Dimensions and Weight (w x d x h)

- Size: 20 x 42 x 81 cm (7.8 x 16.5 x 31.8 in.)
- Weight: 25 kg (55 lb.)

Sample Format

- Standard 96- or 384-well tray
- Reaction volume 5-100 µl

LightScanner Software

- Accurately performs mutation scanning and genotyping by Hi-Res Melting curve analysis

Computer

- Pentium-based PC with Windows® XP Professional
- 17" - 1280 x 1024 graphics monitor

Connectivity

- Ethernet connection allows export of data in standard spreadsheet format compatible with LIMS software

Power Supply

- 100-240 VAC, +/-10%, 50-60 Hz with automatic detection and configuration, 2.5 A
- 800 W maximum including computer and monitor

Filters

- Excitation filter: 470 +/- 20 nm
- Emission filter: 510 and 600 nm

Temperature Control

- Sample temperature range: 40° to 100 °C
- Cooling time 95° to 60 °C (non linear): ~ 180 sec. at ambient temperature 25 °C
- Heating rate: 0.1 °C per second

Single Run Time

- 15 minutes (including cool down)

The purchase of the LightScanner instrument includes a limited, nontransferable instrument license under specific claims of one or more U.S. patents as listed on BioFire Diagnostics, Inc.'s Web site (<http://www.biofire.com/LegalNotices/>) (the "Web Site") and owned by the University of Utah Research Foundation and/or BioFire Diagnostics, Inc. Any kits sold with this product and/or discussed herein (i) may be covered by one or more of the U.S. patents, as listed on the Web Site for the product and (ii) include a limited, nontransferable license to use the enclosed amount(s) in such kits according to the specified protocols. Purchase of the LightScanner Master Mix does not convey any PCR license. The LightScanner Master Mix is licensed under U.S. Patent Nos. 5,338,671 and 5,587,287. The purchase of the LightScanner Master Mix and/or the LightScanner instrument includes a limited, non-transferable license for all fields other than human or veterinary in vitro diagnostics under U.S. Patent No. 5,871,908, owned by Evotec Biosystems GmbH and licensed to Roche Diagnostics GmbH, to use only the enclosed amount of product according to the specified protocols. No right is conveyed, expressly, by implication, or by estoppel, to use any instrument or system under any claim of U.S. Patent No. 5,871,908, other than for the amount of product contained herein. LCGreen, Hi-Res Melting, LightScanner, Call-IT are trademarks of BioFire Diagnostics, Inc. LightCycler is a trademark of a member of the Roche Group. Windows is a trademark of Microsoft Corporation in the United States and other countries.