



The **KETA ML** system complete with the capability for Blot both Chemiluminescence/Fluorescence and Gel Image widely used for Molecular Biology laboratory with high sensitivity affordable price in the market. **KETA M** is dedicated for ECL blot and gel documentation capabilities, can be upgraded to KETA ML but requires factory retrofitting. **KETA ME** is dedicated for ECL blot optional for gel image and auto focus. All equipped with unique darkroom calibration function to maintain outstanding image quality. One-click auto exposure, auto quant exposure are all included. Large chip size with gray level 65536 paltrier cooling camera brings amazing performance.



COMPACT DESIGN

Small footprint that saves space in the cluttered lab environment



SMART IMAGING

Reduce the time waiting for your faint signal to appear



SUPERIOR SENSITIVITY

Reduce the time waiting for your faint signal to appear



EASY IMAGE EXPORT

Export your images in a batch to your USB drive instantly or Wi-Fi



GOOD LABORATORY

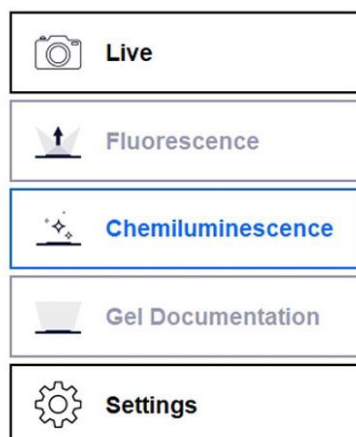
Good Laboratory program Comply



ANALYZE AND REPORT

1D analysis software package

What Makes KETA ME/M/ML the Ideal Fluorescent / Chemiluminescent Imaging Solution



Compact Design with Maximum Flexibility

The **KETA ME/M/ML** saves space and trouble even when you have to share the instrument with others. It consists of an integrated computer, a 12-inch touchscreen display, a tightly sealed darkroom, and a scientific grade camera in a small footprint. The simple sample tray placement minimizes the lens adjustment process. Needless to say, the highly sensitive camera can even capture the sample blot in a container without sacrificing the performance thanks to the tightly sealed darkroom and the excellent calibration process.

When push in the sample tray or transilluminator inside the darkroom, the **KETA M/ML** will automatically switch to the corresponding application mode.

Detection Module with Lens and Filter Wheel

1 inch chip size & 9.1 M Pixels, 16-bit camera is the core of the **KETA ME/M/ML**, Peltier cooling down to -40°C below ambient to keep the highest signal to noise ratio for low Chemiluminescence signal detect, binning 2x2,4X4,8X8, f/0.95.

The preset focus, iris lens, emission filter and LED excitation light source was driven by Magic Blot preset program. Operator just choose capture mode, place correct sample tray, excitation wavelength or fluorescence dye, this intelligent module will go to correct optimum position and be ready for image capture. This design will help operator easy to get excellent result.



Excitation Light Source

MC 300 consists two sets of full-spectrum LED with BP filter, covering fluorescence dye from 400nm to 640nm, providing a high-intensity excitation light source, MC 30 consists two sets of single-piece full-spectrum LED with broad range BP filter for gel image only for KETA M. MC 30 can be easily upgraded to MC 300.

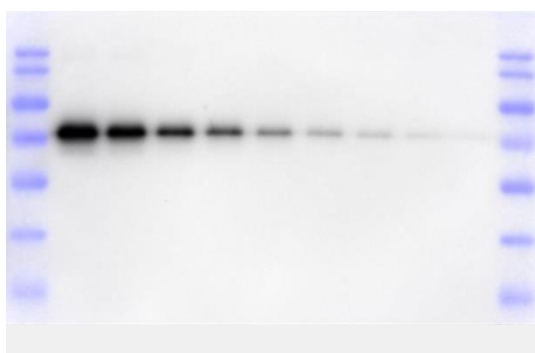
MC 300 and MC 30 are all controlled with Magic Blot software package during the image capture was selected.

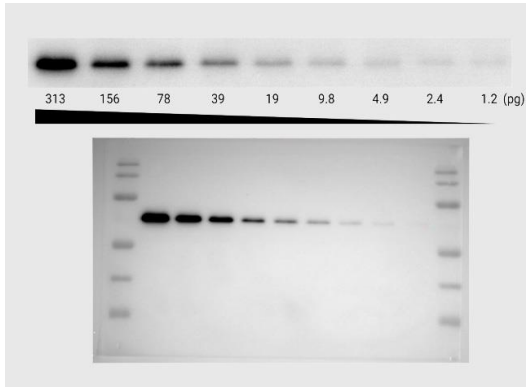


One Click Auto Capture Exposure

The Auto Capture have two selections, Auto capture exposure support one-click exposure. The system will calculate the best exposure time to catch the weakest signal detected with saturation warning, no need any adjustment and operator is easy to get good result of the blended protein marker. The image will be saved on three individual files.

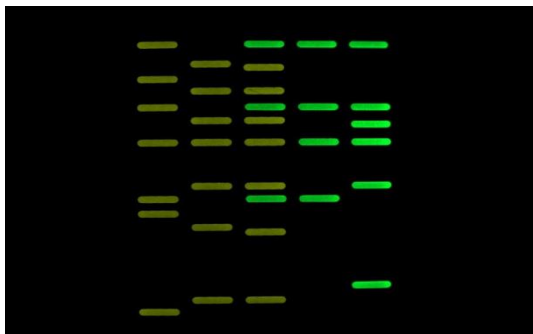
The Auto Quant Capture is exactly the same with Auto Capture. The image capture will stop before any pixel saturation for Quantification purpose.





Picogram Dynamic Range Sensitivity

The **KETA ME/M/ML** is capable of detecting picogram level of protein content within seconds. 16-bit, gray level 65536. Often times users have to wait for the faint signal to appear and sacrifice the resolution with the binning function. The **KETA ME/M/ML** eliminates the waiting time and complicated binning options thanks to the highly sensitive scientific grade camera. The one-inch large size camera chip integrated with the Peltier cooling technology guarantees users to capture images with wide dynamic range and low noise. The system detects <2.4 picogram of purified human transferrin. With these results shown here, you can capture your western blot images with confidence and trust.



Applicable to Chemiluminescence and Fluorescence

The **KETA M/ML** consists of motorized high dynamic range Peltier cooled 9.1 Megapixel camera, motorized adjustable f0.95 lens, six position filter wheels for western blot application with both Chemiluminescence and fluorescent image capture. It is the state of art in the market, bring operator the most convenient and cost-effective system in molecular imaging field.



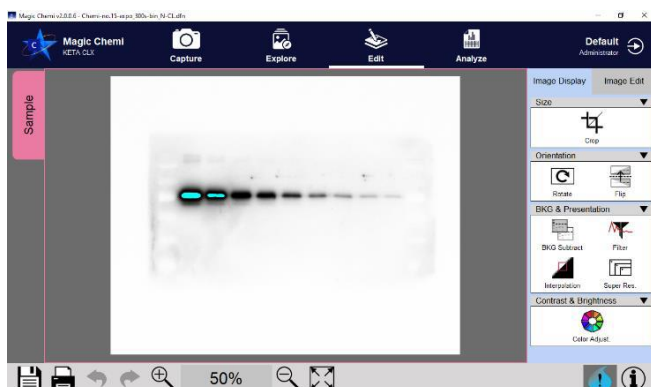
Trans-illuminator for Gel Imaging

Green/Blue/White light trans-illuminator is available, a trans-illuminator auto identified design. When place the transilluminator, the **KETA M/ML** will switch to gel image mode automatically including focus, Iris, and correct emission filter. Mainly application is for Agarose gel, safe dye stain or protein gel imaging capture with 1D software.

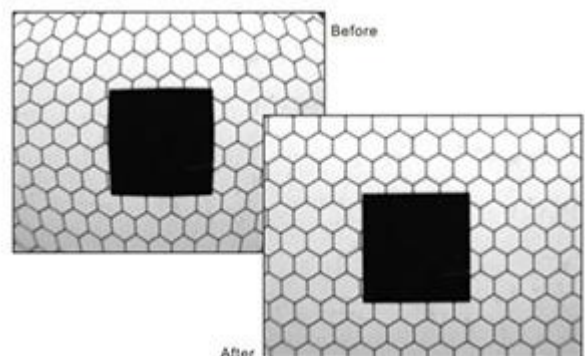
Those trans-illuminators use high power LED long life design and no need any maintained, 495nm green light as standard, 470nm blue light and white light is optional. These three models of trans-illuminator all have 10cm x 8cm working area, door close turn on interlock design.

Powerful Image enhancement functions

Magic Blot software package includes hardware control, image capture, exposure parameter setting in addition the image quality enhancement functions such as darkroom calibration, bright field calibration, distortion correction, image blending, rotation 0-15°. In addition, four analysis functions, Molecular Weight and Mass Determination, Microtiter Plate Assay, Colony Counting, Spot Density Calculation are all included.



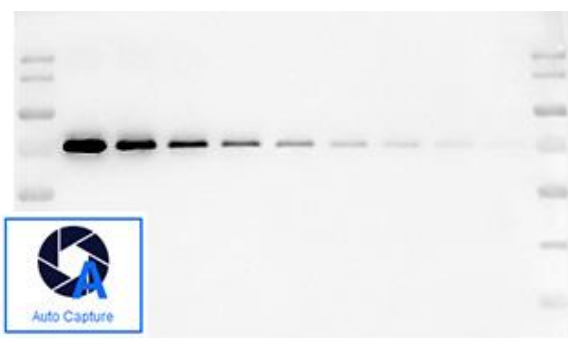
Saturation Warning



Distortion Correction

Capture Function

Auto Capture



Auto Quant Capture

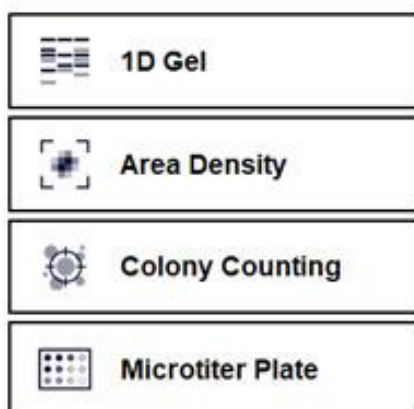


Manual Exposure setting



The **KETA ME/M/ML** through the unique exposure selection to fulfill different demands, including Auto Capture mode, Manual Capture mode, and Programing Capture. The Auto capture mode will get excellent image by just one click. The Manual capture mode is for professional operator to use DynaView and Batch capture which is easy to set exposure time, number of picture or simulate the X-ray film exposure. All modes get saturation warning. The picture includes protein marker, target protein, and blended picture saved on three individual files. Easy recall, edit, quantitation, reporting.

Powerful analysis software and professional reporting



Analyze Software Function

The Magic Blot software package includes powerful analysis tools. It offers 1D Gel analysis including Spot Density Calculation, Microtiter Plate Imaging, MW and Mass determination and Colony Counting. The user-friendly human-machine interface for both routine and core facilities allow the operator management function to directly record and control usage information. It efficiently generates professional reports and exports Excel files under just a few clicks. In the image acquisition process, the software automatically blends the marker Image with the Chemiluminescence sample image and generates a combined image for users to export. It supports various file formats, including PCX, TGA, DFN (GEL), PNG, IMG, TIFF, BMP, JPG, GIF etc., with high-speed image transmission via USB 3.0, Wi-Fi, and Ethernet.

Good Laboratory Program Comply

The optional GLP software package based on Magic Blot package, for multi-user good laboratory management comply with 21CFR part11, all images will be saved in computer by operator file automatically, tracking all results by using authorize password, while the images are saved in operator file, it will record all hardware parameters and messages which couldn't be modified or post-produced unless it's approved by authorization. The parameters include Application, sample ID, operator, time, exposure mode, exposure detail, picture detail, enhancement detail, detector detail, type of sample tray, Light Source and emission Filter etc.


Professional Reporting

Institute:

Laboratory:

Creator:

Print date: 2025/01/02 11:46:01



KETA ML Chemiluminescent Imaging System

Imaging System Information

System		Software	DEMO Image Maker
Serial Number		Software Version	

Image Information

File Name	Demo - Quantify.dfn		
Image Depth	8-bit	Operator	
Pixel Count	94,604	Capture Date	
Image Display	Original	Image Size (pixel)	706 x 134
Capture Method		Exposure Method	
Binning		Exposure Time	
File Location	C:\Program Files\Wealtec\Magic Blot DEMO\Demo Image		

Image Name: Demo - Quantify

1000

500

250

125

62.5

31.25 ng

1

2

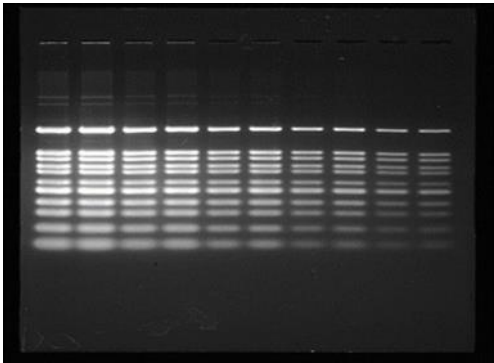
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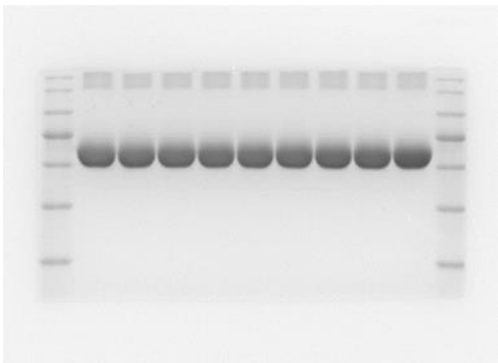
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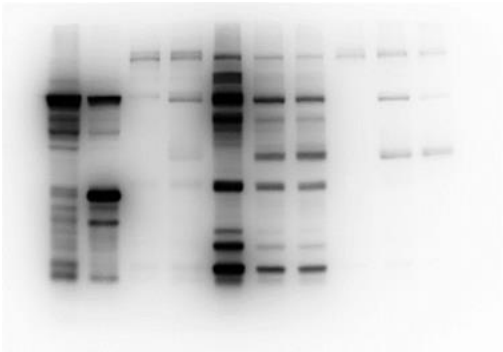
Typical Application



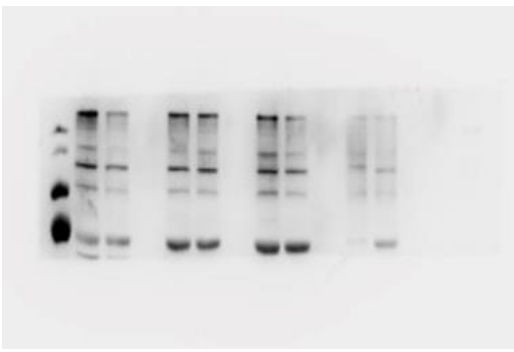
Agarose gel SYBR green excitation By Green light



Coomassie Blue excitation by White Light



High Resolution 12 sec exposure



Auto Capture exposure

Specification

Model	KETA ME	KETA M	KETA ML
Image depth	16-bit		
Dynamic Range	>4.0		
Operation temperature	0-40°C		
Chip size	1”		
Resolution	9.1M pixels		
Transmission	Wi-Fi, USB		
Binning	2X2, 4X4, 8X8		
Pixel Size	2.4um x 2.4um		
Cooling	Peltier, 40°C below ambient		
Lens	Manual Adjust f0.95 Optional auto focus f0.95	Auto focus f0.95	
Filter Wheel M46	N/A	Six positions	
Excitation light source	U6	MC 30	MC 300
Filter	N/A	WK 301/302	WK 301-WK 305
White Sample Tray	Yes	Yes	Yes
Black Sample Tray	N/A	N/A	Yes
Trans Green light Sample Tray	Option	Yes	Yes
Trans White light Sample Tray	Option	option	Yes
Software	Magic Blot C	Magic Blot C	Magic Blot
Single Board computer	Core 4 i3 CPU with five parallel USB port, 4.3GHz, 500G SSD, HDMI port, Wi-Fi		
OS system	MS windows11		
Physical dimensions and Weight	400 x 330 x 580mm (W x D x H), 30 kg		
Power	100 – 240V, 50 – 60Hz, 200 W		
Optional			
GLP software option	Yes		
External Touch Screen	20” LCD Screen with touch panel		
NIR Excitation Package	N/A	N/A	Yes
Thermal printer	Digital		

Emission Filter Selection Guide

Filter type	Em (nm)	Commercial fluorescence dye
WK301	540-630	Coomassie Blue, SYBR Green, SYBR Gold, SYPRO Ruby, SYPRO Orange
WK 302	515-531	Alexa Fluor 488, Alexa Fluor Plus 488
WK 303	564-618	Alexa Fluor 546, Alexa Fluor Plus 555
WK 304	675-719	Alexa Fluor 647, Alexa Fluor Plus 647
WK 305	706-727	Alexa Fluor 680, Alexa Fluor Plus 680
WK 306	800-850	Filter for Alexa Fluor 790, Alexa Fluor Plus 800 optional

Ordering Information

Catalog Number	Description
1150050	KETA ME system complete include light tight darkroom 9.1 M pixels Peltier cooled camera, f0.95 manual adjust focus lens, in-built SBC, 12" LCD with touch panel, U6 epi light, Magic Blot C software package, single user key, Wi-Fi and a set of keyboard and mouse. 100-240V, 50/60 Hz. Optional green light Transilluminator with emission filter. Optional white light Transilluminator and Auto focus lens.
1150051	KETA M system complete include light tight darkroom 9.1 M pixels Peltier cooled camera, f0.95 auto-focus lens, in-built SBC, 12" LCD with touch panel, six position filter wheels, green light Transilluminator, WK 301/302 filter, MC 30 epi light, Magic Blot C software package, single user key, Wi-Fi and a set of keyboard and mouse. 100-240V, 50/60 Hz. Optional white light Transilluminator.
1150052	KETA ML system complete include light tight darkroom 9.1 M pixels Peltier cooled camera, f0.95 auto-focus lens, in-built SBC, 12" LCD with touch panel, six position filter wheels, green light / white light Transilluminator, white and black sample tray, WK 301 to 305 filter, MC 300 epi light, Magic Blot software package, single user key, Wi-Fi and a set of keyboard and mouse. 100-240V, 50/60 Hz.
1155011	KETA M to KETA ML upgrade package This package includes WK 302 to WK305 filter set, MC 300 epi source in lieu of MC 30 Epi Source, Magic Blot software upgrade, white light Transilluminator. Requires factory installation.
1153034	GLP Software package option to comply CFR 21 Part11
1153035	Magic Blot C for KETA ME/M, one user key
1153036	Magic Blot C for KETA ME/M, three user keys
1153037	Magic Blot for KETA ML, one user key
1153038	Magic Blot for KETA ML, three user keys
1151271	Trans Green light transilluminator for KETA ME/M/ML
1151272	Trans White light transilluminator for KETA ME/M/ML
1151273	Trans Blue light transilluminator for KETA ME/M/ML
1151221	WK 301 540-630nm H-T Filter perform protein and DNA gel and blot imaging, 46mm
1151222	WK 302 515-531nm Filter for Alexa Fluor 488, Alexa Fluor Plus 488, 46mm
1151223	WK 303 564-618nm Filter for Alexa Fluor 546, Alexa Fluor Plus 555, 46mm
1151224	WK 304 675-719nm Filter for Alexa Fluor 647, Alexa Fluor Plus 647, 46mm
1151225	WK 305 706-727nm Filter for Alexa Fluor 680, Alexa Fluor Plus 680, 46mm
1151226	WK 306 800-850nm Filter for Alexa Fluor 790, Alexa Fluor Plus 800, 46mm
1151231	WK 001 568-617nm emission filter 40.5mm
1151232	WK 002 515-531nm emission filter 40.5 mm
1151315	Coded Black sample tray for KETA M/ML
1151316	Coded White sample tray for KETA M/ML
1151321	Coded White sample tray for KETA ME
1146003	Digital Thermal printer



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