

# ***Crime-lite® ML2***

Bench top magnifier with multi-wavelength illumination  
for general search and fluorescence examinations



- Optimised for the examination of large items in the laboratory
- Choice of UV, Violet, Blue, Blue/Green, Green, Orange, Red & IR LED modules
- For the fast and effective visualisation and magnification of:

Blood Fingerprints Body fluids Gunshot residues Accelerants Fibres etc.

foster + freeman

# Crime-lite<sup>®</sup> ML2

## BENCH TOP MAGNIFIER WITH MULTI-WAVELENGTH ILLUMINATION

The new **Crime-lite ML2** combines the versatility of multi-wavelength, high intensity LED illumination with wide area bi-ocular magnification to provide an effective bench top search and examination tool in the forensic laboratory.

The **Crime-lite ML2** features 8 high intensity white LEDs for general search and a choice of up to 4 additional narrowband LEDs for the examination of fluorescent evidence including:

**UV, Violet, Blue, Blue/Green, Green, Orange, Red & IR**

Designed for the examination and 'marking up' of large items of evidence in the laboratory, the **Crime-lite ML2** head is mounted on an extendable articulated arm with a reach of over 1 metre and includes a 3.5 dioptre lens that provides a nominal magnification of 1.8x.



The optional 5MP UV-Vis-IR camera is rotated into position over the magnifier lens and can be retro-fitted to existing Crime-lite ML light sources as a quick and easy image capture device.

CRIME-LITE ML2 - NOW FEATURES INFRARED ILLUMINATION  
NOW WITH  
**IR**  
ILLUMINATION

## NEW FEATURE

The range of examination wavelengths has now been extended with the addition of a new Infrared module.

Using an UV-Vis IR sensitive camera (pictured left) the new module is capable of detecting blood, trace evidence and fibres on difficult backgrounds through the visualisation of infrared images.

Operation is via a PC or laptop loaded with image capture software.



# Crime-lite<sup>®</sup> ML2 Applications

The Crime-lite ML2 provides forensic examiners with a fast and efficient method of screening articles for the presence of fingerprints, trace evidence or other biological material. Laboratory productivity is greatly increased by quickly 'marking up' areas of interest and eliminating articles devoid of evidence.

Use the look-up tables below to determine the wavelengths required for your chosen applications...

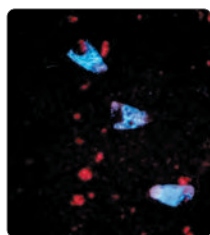
## Biological & Trace Evidence

	W	UV	V	B	BG	G	O	R	IR
Blood	✓		✓	✓					✓
Body Fluids		✓	✓	✓	✓				
Bites & Bruising		✓	✓						
Bone & Tooth				✓	✓	✓			
Hair			✓	✓					

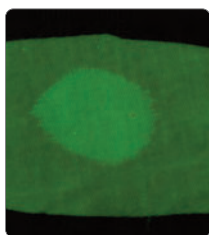
Fibres		✓	✓	✓	✓	✓	✓		✓
GunShot Residues					✓	✓			✓
Drug Residues		✓	✓						
Accelerants				✓	✓	✓			
Shoeprints	✓								
General Debris	✓		✓	✓	✓	✓	✓	✓	

## Fingerprints

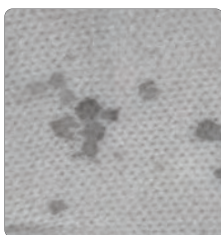
	UV	V	B	BG	G	O	R	IR
Acid Yellow			✓					
Ardrox			✓					
NEW ASP Powder							✓	✓
Basic Yellow		✓	✓					
DFO				✓	✓	✓		
Greenwop				✓				
Magnetic Red			✓					
Nanoparticles	✓	✓	✓	✓	✓			
Ninhydrin				✓		✓	✓	
PolyCyano UV	✓							
Redwop			✓	✓				
Rhodamine 6G				✓				



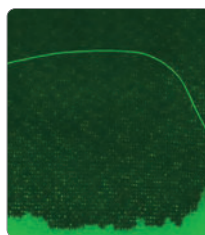
Human teeth



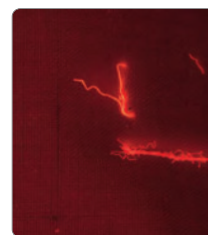
Petrol/Gasoline



Blood on black fabric



Hair



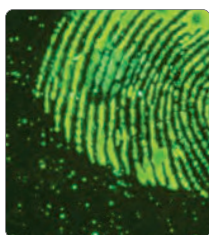
Fibres



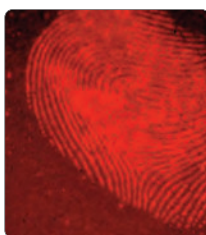
Semen



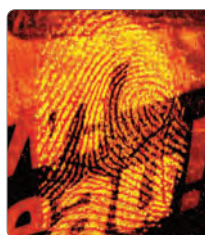
Fingerprints in blood



Acid yellow



DFO



Redwop



Ninhydrin



PolyCyano UV

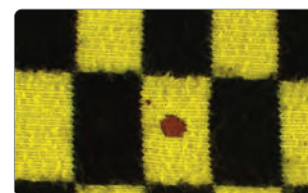
## ✓ Searching Beyond the Visible

The addition of a new Infrared LED module and UV-Vis-IR camera has further increased the functionality of the Crime-lite ML2 by allowing investigators to conduct examinations beyond the limits of the visible spectrum.

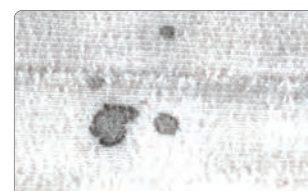
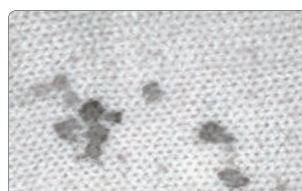
Previously hard to detect evidence, such as blood or GSR on dark or densely patterned fabrics, becomes clearly visible under IR illumination when viewed in the infrared waveband.



Blood on black wool



Blood on multi-coloured cotton



# Crime-lite<sup>®</sup> ML2 Specifications

The versatility of the design allows up to 4 narrow band LED modules to be fitted, in addition to a white light LED module.

## CRIME-LITE ML2 Standard Features

<b>White LED Module</b> <ul style="list-style-type: none"> <li>8 x High efficiency White LEDs</li> <li>400-700nm (nominal)</li> <li>Adjustable output intensity</li> <li>Homogenous light beam</li> </ul>	<b>ML2 Body</b> <ul style="list-style-type: none"> <li>Large 3.5 dioptr magnifying lens</li> <li>Easy clean touch panel controls</li> <li>Dust cover</li> <li>Power input 100-240V, 80W</li> <li>Built-in thermal protection</li> <li>Heavy duty articulated arm</li> <li>Reach 132cm</li> <li>Bench or wall mounted</li> <li>3-axis adjustable head mount</li> <li>Internal cables (no trailing wires)</li> </ul>	<b>Laboratory Arm</b> <ul style="list-style-type: none"> <li>Heavy duty articulated arm</li> <li>Reach 132cm</li> <li>Bench or wall mounted</li> <li>3-axis adjustable head mount</li> <li>Internal cables (no trailing wires)</li> </ul>
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## Narrow band LED Options

	UV module	Violet module	Blue module	Blue/Green module	Green module	Orange module	Red module	IR module
Number of LEDs	16 X	4 X	16 X	16 X	16 X	16 X	16 X	16 X
Peak bandwidth	365nm	405nm	445nm	475nm	520nm	590nm	640nm	860nm
10% bandwidth	350-380nm	395-425nm	420-470nm	445-510nm	480-560nm	570-610nm	600-660nm	800-900nm
Viewing filter	GG420	GG455nm	GG495nm	OG550nm	OG590nm	RG645nm	IR/Vis	IR/Vis

### Custom Configurations

In addition to White LEDs, the Crime-lite ML2 can be fitted with up to four narrowband LED modules. Use the table on the right to select a valid combination.\*

Narrowband LED modules are supplied together with the corresponding fluorescence viewing filters.

IR and Red LED modules require the UV-Vis-IR sensitive camera and connection to a PC running the Crime-lite Cam software (see next page for details)

Module 1 Fitted	Module 2 Choose one	Module 3 Choose one	Module 4 Choose one	Module 5 Choose one
<div>W</div> <input checked="" type="checkbox"/>	<div>UV</div> <input type="checkbox"/>	<div>V</div> <input type="checkbox"/> <div>IR</div> <input type="checkbox"/>	<div>B</div> <input type="checkbox"/> <div>BG</div> <input type="checkbox"/> <div>G</div> <input type="checkbox"/>	<div>BG</div> <input type="checkbox"/> <div>G</div> <input type="checkbox"/> <div>O</div> <input type="checkbox"/> <div>R</div> <input type="checkbox"/> <div>IR</div> <input type="checkbox"/>

*Note. It is not possible to select two modules of the same wavelength.*

### Common Configurations

The look-up table below includes details of the most commonly requested combinations.

<div>UV V B</div> <div>DNA System A</div> <div>QCL/ML2/SYS/B1a</div>	<div>UV V B IR</div> <div>Serology System A</div> <div>QCL/ML2/SYS/B3a</div>	<div>B G</div> <div>Fingerprint System A</div> <div>QCL/ML2/SYS/F1</div>
<div>V B</div> <div>DNA System B</div> <div>QCL/ML2/SYS/B2</div>	<div>UV B IR</div> <div>Serology System B</div> <div>QCL/ML2/SYS/B4a</div>	<div>UV B G</div> <div>Fingerprint System B</div> <div>QCL/ML2/SYS/F4A</div>

\* Illumination module options must be specified and fitted during the equipments manufacture and cannot be retro-fitted to an existing unit.

If you have any questions regarding module selection or the Crime-lite ML2 please contact [sales@fosterfreeman.com](mailto:sales@fosterfreeman.com) for further guidance.

# Crime-lite<sup>®</sup> ML2 Accessories

## UV-VIS-IR Camera

Attaches to Crime-lite ML2 for and enables image capture

- 5MP CMOS auto-focus camera
- Essential for the visualisation of IR images
- 7.6mm f/3.0 high resolution lens
- Sensitive from 350nm to 1100nm
- Swings into position over viewing lens
- USB 2.0 interface
- Wireless remote control
- 4-position filter wheel with UV, Vis & IR filters
- Image capture software

QCL/ML2/CAM



## Computer systems

For use with VIS/IR Camera module.

### PENTIUM COMPUTER

- High specification PC
- 22" Flat screen TFT monitor

QCL/ML2/PENT

### LAPTOP COMPUTER

- High specification laptop PC
- 17" monitor

QCL/ML2/PENT/LT

### PROGRAMMABLE USB FOOT PEDAL

- Plug-and-Play compatible with ML2 computer systems
- Dimensions - (H)1.25" x (D)7" x (W)10.75"

QCL/ML2/PED

Contact Foster+Freeman for current specifications



## Contrast enhancing filters

For use with White LEDs

- BLUE for blood search
- GREEN for viewing exhibits treated with Ninhydrin

QCL/ML/CONT/B  
QCL/ML/CONT/G



## Bandpass viewing filters

Tailored for the examination of specific evidence types

- |       |  |                |
|-------|--|----------------|
| 415nm | visualisation of blood spatter (centered at 415nm) | QCL/ML/VFBP415 |
| 530nm | visualisation of body fluids (centered at 530nm)   | QCL/ML/VFBP530 |
| 550nm | visualisation of body fluids (centered at 550nm)   | QCL/ML/VFBP550 |

## Laboratory Cart

For easy positioning and high mobility

### LABORATORY CART

- Wheeled cart with mounting plate for the articulated arm plus UPS storage space

QCL/245

### ADJUSTABLE LAPTOP MOUNT

- For use with Laboratory Cart

QCL/247

### UPS (not shown)

- Run time 4 hours

QCL/246

## Consumables

### PARTICULATE AIR FILTER

- Replacements for the ML2, Pack of 50

QCL/ML/FILTPACK



\* All specified LED wavelengths are nominal.

Foster + Freeman reserve the right to alter the specification of the Crime-lite ML2 and its accessories without prior notice.

# Crime-lite<sup>®</sup>

complete range of LED forensic light sources  
for crime scene and laboratory examination

## Crime-lite XL

The worlds most powerful handheld LED forensic light source, the Crime-lite XL features 96 surface mount LEDs providing up to 115 Watts of radiant power capable of revealing the minutest traces of evidence.

## Crime-lite 82S

Where serious crime demands intensive crime scene investigation, the 16 LED Crime-lite 82S offers levels of illumination that will almost certainly increase the detection of evidence.

## Crime-lite 82L

16 high intensity white LEDs mounted behind a cylindrical lens give a wide, thin light sheet that is ideal for detecting surface debris and shoe prints in dust.

## Crime-lite 42S

Designed around the needs of the forensic examiner the Crime-lite 42S provides three illumination wavelengths in a single high specification light source.

## WHY CHOOSE CRIME-LITE<sup>®</sup>?

- High quality of design and construction
- LEDs selected for peak performance and wavelength
- 100% light output throughout battery charge
- Worldwide product support
- High power to weight ratios
- Compact and energy efficient



Crime-lite products are classified to EU safety standard EN62471:2008



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