

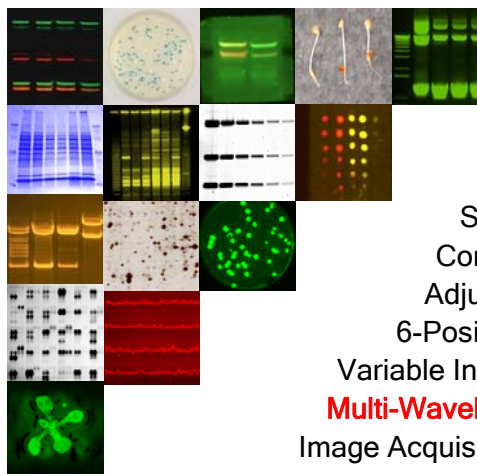


**ULTRA·LUM, INC.**  
Ultraviolet • Imaging • Excellence



# Molecular Imaging OMEGA SYSTEMS

The Omega Family of Molecular Imaging and Analysis Systems is a powerful benchtop imaging instrument. Equipped with either a 10-bit, 12-bit cooled, 14-bit high resolution or 16-bit deeply cooled scientific CCD camera, multi-wavelength LED epi-illumination, variable intensity UV transilluminator and a 6-position, motorized filter wheel, the Omega enables a multitude of research applications. The Omega is self-contained, reliable, completely controlled by a touch pad on the front of the unit and installed with state-of-the-art optics, filters and illumination technology. Two year limited warranty. CE, CSA and FCC approved.

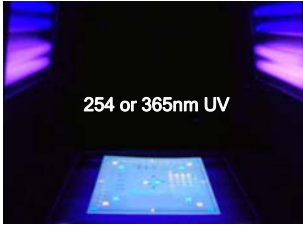


## Features

- Megapixel Resolution
- Touch Pad Control Panel
- Sensitive Auto-Focus Optics
- Compact Bench-Top Footprint
- Adjustable Height Sample Tray
- 6-Position Motorized Filter Wheel
- Variable Intensity UV Transilluminator
- Multi-Wavelength LED Epi-Illumination**
- Image Acquisition and Analysis Software

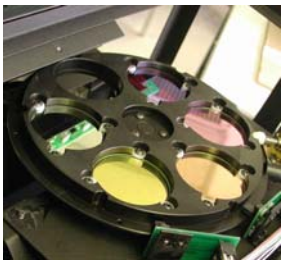
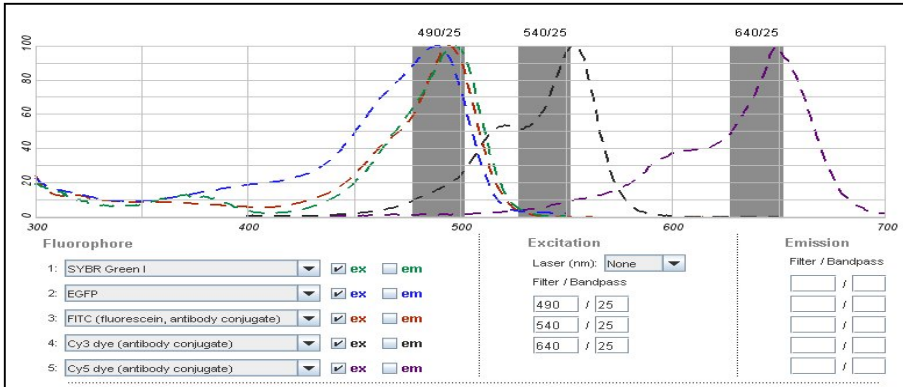
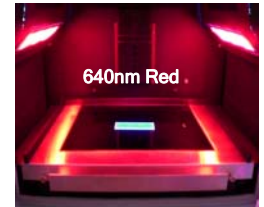
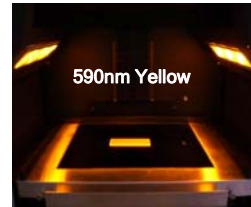
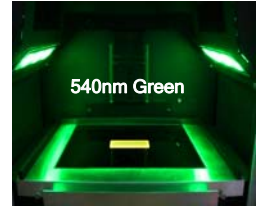
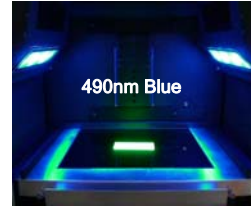
System	Omega 10gD	Omega 12iC	Omega 14vR	Omega 16vS
Applications	Gel Documentation Fluorescence	Gel Documentation Fluorescence Chemiluminescence	Gel Documentation Fluorescence Chemiluminescence	Gel Documentation Fluorescence Chemiluminescence Bioluminescence
CCD Sensor	Sony ICX-205	Hamamatsu ER2	Kodak KAI-4020	E2V 47-10
CCD Type	Progressive Scan Interline	Progressive Scan Interline	Progressive Scan Interline	Full Frame-Back Thinned
Pixel Size	4.65 x 4.65 $\mu\text{m}^2$	6.45 x 6.45 $\mu\text{m}^2$	7.4 x 7.4 $\mu\text{m}^2$	13.0 x 13.0 $\mu\text{m}^2$
Resolution	1360 x 1024	1344 x 1024	2048 x 2048	1024 x 1024
Megapixels	1.40	1.40	4.20	1.00
Full Well Capacity	9,700 e <sup>-</sup>	15,000 e <sup>-</sup>	40,000 e <sup>-</sup>	100,000 e <sup>-</sup>
Readout Noise	15 e <sup>-</sup> rms	6 e <sup>-</sup> rms	10 e <sup>-</sup> rms	2 e <sup>-</sup> rms
Signal to Noise Ratio	650:1	2500:1	4000:1	50000:1
Dynamic Range	9.4 bits	11.3 bits	12.0 bits	15.6 bits
A/D	10 bits	12 bits	16 bits	16 bits
Peltier Cooling	N/A	-35 °C	-50 °C	-90 °C
QE @ 400nm	27%	52%	44%	77%
QE @ 500nm	45%	70%	55%	93%
QE @ 600nm	30%	63%	35%	97%
Interface	IEEE-1394 FireWire™	IEEE-1394 FireWire™	IEEE-1394 FireWire™	USB2
Motorized Zoom Lens	F1.2, 12.5x75mm	F1.2, 12.5x75mm	F1.2, 12.5x75mm	F1.2, 12.5x75mm

# Molecular Imaging OMEGA SYSTEMS



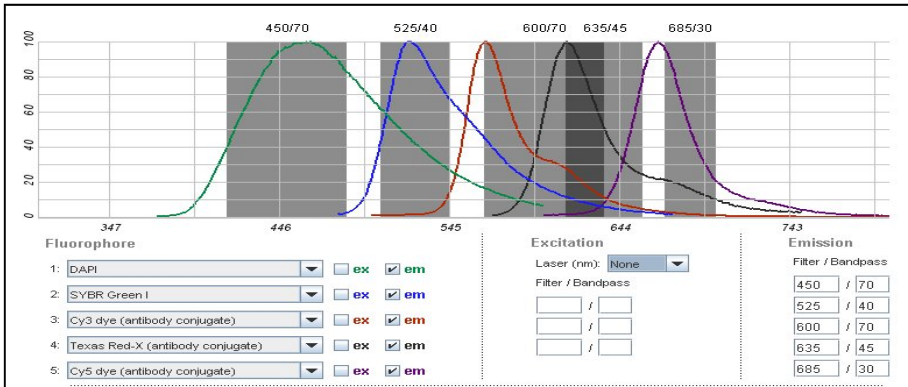
## ILLUMINATION

Having the ability to excite the constantly growing list of fluorescent labels encountered in a typical laboratory is critical to being flexible for future protocols. The Omega System includes a wide array of epi and transillumination sources for excitation of most fluorescent labels used in molecular research.



## FILTERS

Five very carefully specific emission interference filters have been selected for the Omega and are included as standard on all units. Easily selectable from the touch pad controller, these filters allow detection of only the fluorescent label desired. Because the filters are installed in the motorized filter wheel, this further enables multiple image acquisition of multiplexed gels and blots.



## Illumination Spectrum

Epi UV Illumination	365nm or 254nm
Epi Blue Illumination	490nm (470-510)
Epi Green Illumination	550nm (530-570)
Epi Yellow Illumination	590nm (575-605)
Epi Red Illumination	640nm (625-655)
Epi White Illumination	Visible White Light
UV Transillumination	300nm, 21x25cm
White Transillumination	Light Pad, 20x30cm

## Motorized Filter Wheel

Empty	Clear
Blue (Hoechst-DAPI)	450nm (415-485)
Green (SYBR-FITC-eGFP)	525nm (505-545)
Orange (EthBr-Cy3-QD605)	600nm (565-635)
Red (Texas Red-QD655)	635nm (615-660)
Dark Red (Cy5-Cy5.5-QD705)	685nm (670-700)
Optional Qdot Filters	565 and 800nm

## System Information

Dimensions	18"W x 24"D x 23"H 46cm x 60cm x 59cm
Weight	120 lbs (55 kgs)
Electrical	100-240V/50-60Hz
Windows	2000, XP, XP-x64
Certification	CE, CSA and FCC

## COMMITMENT

UltraLum designs and manufactures instrumentation for Molecular Research to meet or exceed the highest industry standards. All systems are fully tested in Claremont, California before shipment, including a 72-hour burn-in for all electrical circuitry and boards to insure maximum safety and reliability. Every system is warranted to be free from defects for two years.

[www.ultralum.com](http://www.ultralum.com)

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