Day 1   Day 15   Day 30   Day 45   Day 60

X-Cite® Optical Power Measurement System

Maximize repeatability for data integrity – measure power where it matters most!

Designed with fluorescence microscopy in mind

Compatible with arc lamps, lasers and LEDs

Encompasses a wide dynamic range in a single detector

Easily captures settings and data via PC interface

X-Cite®
XR2100 Power Meter

74.9 mW

RELATIVE/ABSOLUTE   X-CITE CAL   λ (nm)

EXTERNAL   STORE

POWER

Is illumination consistency important to your image data?

Measure your power.

The ability to measure optical power is the first step to keeping it consistent. The X-Cite® XR2100 Power Meter and X-Cite® XP750 Objective Plane Power Sensor are designed especially for measuring power at the specimen level for fluorescence microscopy applications. By integrating features essential to this application, we have made it easier than ever to obtain this critical information.

Designed with Microscopy in Mind

Engineered to fit in standard microscope slide clips, the low profile of the X-Cite® XP750 Objective Plane Power Sensor makes it ideal for use in the limited space between the objectives and stage on upright microscopes. On inverted microscopes, simply center the transmission light from above on the printed target to center the detection area over the objective lens. Working with dim ambient lighting? The backlit display on the X-Cite® XR2100 Power Meter ensures that readings are always legible.

Broad Dynamic Range

Calibrated for use at any wavelength between 320nm and 750nm, the X-Cite® XP750 is compatible with a full range of filters. With sensitivity to power levels from 5µW to 500mW, it is appropriate for applications using both low and high intensity illumination. This makes it suitable for use on standard, confocal, DSU and other microscope configurations.

Versatile & Convenient

Since the X-Cite® XP750 measures light right on the stage, it can be used with any epi-fluorescence light source including: HBO / mercury, metal halide or xenon lamps, lasers and LEDs. With hundreds of wavelength choices, the X-Cite® XR2100 allows you to define 'favorite wavelengths' to correspond to your most frequently used sources and filters.
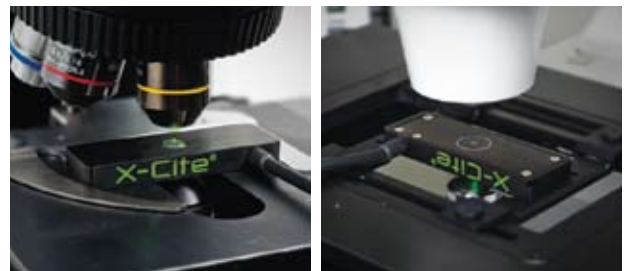
X-Cite® XP750 in use on upright and inverted microscopes

Certified & Traceable

X-Cite® XR2100 and X-Cite® XP750 are calibrated according to a strict protocol using transfer standards traceable to NIST* and NRC**. For your records, certificates of calibration accompany each unit.

Repeatable – Take Control!

Consistency is essential for data integrity. By measuring and recording power output in absolute units (watts) with X-Cite®, you ensure that illumination levels used in an experiment can always be repeated, no matter how light sources, light guides, filters and other optical components change over time. This unique capability is critical for reducing post-experiment image processing time; making accurate, quantitative image comparisons; and compiling complete, experiment documentation.

"Much of our research depends on quantitative fluorescence microscopy analysis over lo
design makes it easy to routinely measure the exact amount of excitation light delivered

Compatibility with Other X-Cite® Systems

Have an X-Cite® illuminator? Measure power output on the stage with the X-Cite® XP750, or via the light guide port on the X-Cite® XR2100, compatible with all X-Cite® light guides. Calibrate the X-Cite® *exacte* using power data measured at either the light guide or objective plane. Combining the X-Cite® XP750 with the calibration feature of the X-Cite® *exacte* gives you the added advantages of being able to adjust intensity level while imaging and obtain the power in watts without stopping to take a new measurement.

PC Communication

Enjoy the option of paperless record keeping. With the X-Cite® XR2100, you can store power measurements for downloading or logging them directly in the X-Cite® PC interface. Created especially for X-Cite® XP750, the 'power snapshot' tool allows you to collect and save data by wavelength, objective, and intensity. This ensures that you have a complete record of illuminating power for whichever combination of settings used when optimizing and acquiring images.

Essential Diagnostic Tool for Imaging Facilities

The X-Cite® Optical Power Meter System can service multiple microscopes and their light sources. In addition to standardizing illumination levels for experiments, the X-Cite® XR2100 is a vital diagnostic tool for imaging facilities, technical sales representatives and service centers, providing helpful optical output data for:

- Setting up imaging systems – determining baseline performance
- Troubleshooting imaging systems by quantifying the effect of adjusting settings and servicing individual components
- Preventative maintenance – monitoring optical output over time to determine when components, such as lamps and light guides, require replacement

X-Cite® - A Trusted Product Family

Whether you are observing fixed or live cells, the X-Cite® fluorescence illuminator technology will simplify your imaging procedures and provide outstanding results.

The X-Cite® pre-aligned Intelli-Lamp® technology provides extended lamp life, convenient set-up, ease of use, and superior illumination uniformity.

From our basic X-Cite® 120Q model for routine assays, to our most advanced X-Cite® *exacte* computer-controlled system delivering ultra-stable and repeatable illumination for live cell and quantitative imaging, there is an X-Cite® solution that is right for you.

For further details on the full range of X-Cite® products, visit our website at www.LDGI-XCite.com.

*NIST – National Institute of Standards and Technology **NRC – National Research Council

ng time periods. The X-Cite® XP750's
d to the specimen at any time point.

FEATURES	BENEFITS
X-Cite® XP750	
Microscope slide dimensions with a low profile	Fits in a standard microscope clip for convenient measuring of light directly from the objective, without removing or reconfiguring equipment
Compatible with lamps, laser and LED light sources	Economically use one system to service multiple microscopes, regardless of illumination technology
Large detection surface area – 10mm	Appropriate for use with both low and high magnification objectives
No focusing required	Obtain accurate measurements quickly
Wide range of wavelengths and power	Suitable for use with full range of applications and microscope configurations
X-Cite® XP750 & XR2100	
LCD display with backlight	View data clearly, even in the dim lighting conditions of a microscopy imaging suite
Two input ports for measuring power via objective plane sensor or light guide	Selectively monitor light source performance of entire microscope system or individual components
Calibration traceable to NIST* / NRC** standards	Achieve quality assurance and confidence in accuracy of results
One-button / click for data collection, storage and exporting	Keep data organized with accurate, paperless record keeping
PC interface	Manage settings and data conveniently via PC; automatable for convenience and OEM use
Compatibility with X-Cite® *exacte* calibration feature	Easily calibrate X-Cite® *exacte* via light guide or objective plane sensor to display and set power in watts

SPECIFICATIONS	X-Cite® XR2100	X-Cite® XP750
Includes	Handheld power meter, adapter for 3mm light guide, software CD, cables, user manual	Objective plane power sensor with cable / connector for X-Cite® XR2100
Power Range	50mW-10W	5µW-500mW
Measurement Resolution	0.1mW-0.01W	0.01µW-1mW
Uncertainty***	±5%	±6%
Response Time	1s	600ms (initial), 3s (to ensure stable reading)
Calibration	Traceable to NIST*	Traceable to NRC**
Wavelength Range	340nm-675nm	320nm-750nm
Lamp Type / Light Source Compatibility	X-Cite® *exacte*, X-Cite® 120 Series (using 3mm light guide input port)	X-Cite® *exacte*, X-Cite® 120 Series, Mercury / HBO, Metal Halide, Xenon, LED, Laser
Objective Compatibility	Not applicable	4X-63X; air coupled, with FOV diameters less than 10mm
Display	3 digit LCD, backlight	Via X-Cite® XR2100
Wavelength Selection	Not Applicable	1nm increments using up / down buttons on X-Cite® XR2100 or PC interface
Data Capacity	Store 100+ readings on handheld unit, or record directly into PC interface; export in spreadsheet compatible format	Via X-Cite® XR2100
PC Controls	View / change settings, download / export stored data	View / change settings, define favorite wavelengths, record data for multiple objectives / filters / intensity settings, download / export stored data
Command Protocol	RS232 via USB virtual COM port	Via X-Cite® XR2100
Power Supply	2 x 3.6V Lithium Battery	Via X-Cite® XR2100
Weight	1lb (450g)	2.9oz (82g)
Dimensions (without cover)	7.5"x 4.5"x 2' (19cm x 11.5cm x 5cm)	3"x 1"x 0.35" (75mm x 25mm x 9mm)
Worldwide Certifications	CE marked	Via X-Cite® XR2100
Warranty	1 year	1 year
Patents	X-Cite® Optical Power Measurement System incorporates technology protected by the following patents: US#6,437,861; US#7,335,901	

*NIST – National Institute of Standards and Technology **NRC – National Research Council
***Calibration of X-Cite® XR2100 and X-Cite® XP750 is recommended every twelve months. Contact Lumen Dynamics Group Inc. for further information.