

89 NORTH

heliophor™

pumped phosphor light engine

for quantitative live cell
fluorescence imaging

user exchangeable modules

Up to 6 modules can be
installed per system
ideal for core facilities

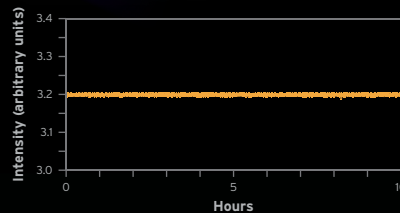
Easy field installation/exchange
of modules by user
easily reconfigure system for
different experimental protocols

9 wavelengths to choose from
covers nearly all commonly
used fluorochromes

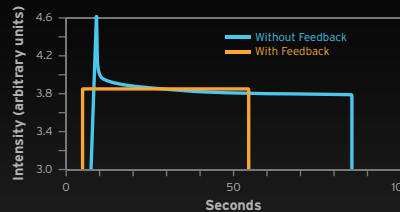
Each module comes with a
limited lifetime warranty
peace of mind and lower
overall cost of ownership

stability

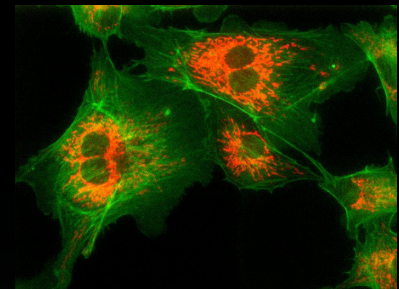
Better than 0.1% stability
constant illumination intensity



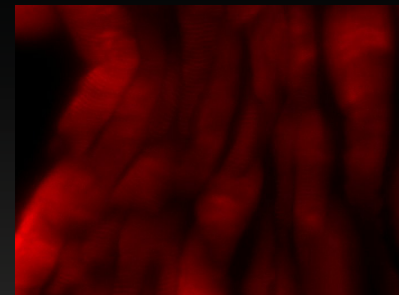
Real time intensity feedback built into
each module ensures consistent output
over lifetime
essential for both short term and long
term quantitative imaging experiments



more than enough photons



BPAE cells, Molecular Expressions™
test slides. Heliophor 480 and 555 modules,
each at 50% power.



Trachea section, Chroma test slide.
Heliophor 555 module at 10% power.

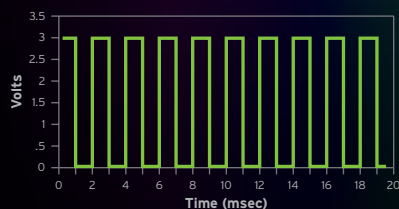


Module	405	430	480	500	530	555	580	640	670
Bandwidth	402/15	430/40	475/50	500/40	530/50	560/50	580/50	635/60	670/60
Fluorophor	DAPI	CFP	GFP	YFP	TRITC	dsRed	mCherry	Cy5	Cy5.5
Power (mW)	175	200	450	425	350	365	350	240	225

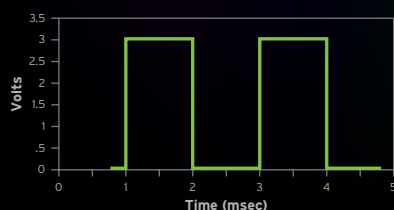
*Power measured out of 5mm liquid light guide.

high speed digital control

Enables high speed imaging



<10 μ sec rise and fall times



flexible control options

Standard USB interface available for basic control options

Programmable input TTL for each channel enables triggering for high speed acquisition

Analog voltage control enables both intensity control with TTL shuttering or complete analog control

Programmable output TTL for each channel enables external devices to be synchronized to the Heliophor

Program mode allows for complex experiments to be performed without host computer interaction

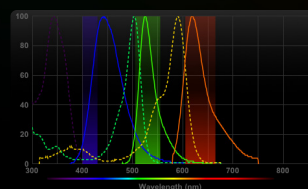
calibration port



systemwide calibration

On demand, global intensity calibration ensures consistent output from LLG if system is reconfigured

Convenient calibration port located in hand controller unit



configuration tools

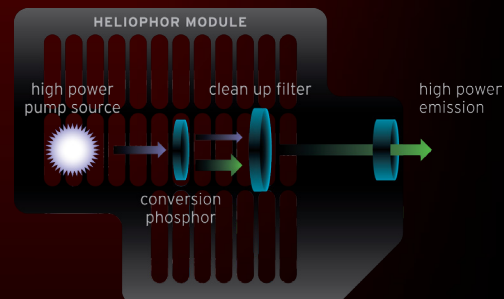
Web and mobile tools available to help you configure a complete Heliophor system

Complete fluorescent probe spectral database

Ability to choose from any Chroma multiband filter set or define individual filters

Save and print your results

Heliophor for iPhone, iPod touch and iPad is available on the App Store



pumped phosphor design

All benefits expected for solid state systems including:

- high speed digital switching
- stable output
- long lifetime

Flexible wavelength selection many more phosphor wavelengths available

Power at wavelengths at which other systems are not as efficient, such as in the red part of the spectrum

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All specifications are subject to change.

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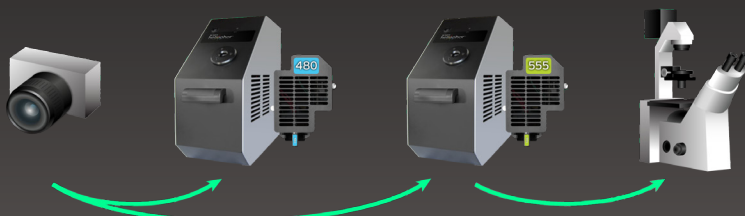


Camera TTL out high on expose

First TTL turns on 480 module

Second TTL turns on 555 module

Then, send TTL high to move piezo stage



Example program: Trigger 2 modules sequentially off camera expose out then trigger external stage.