



Light Engines and Multispectral Solutions for Medical Imaging

THEIA UNITS & LED ILLUMINATORS

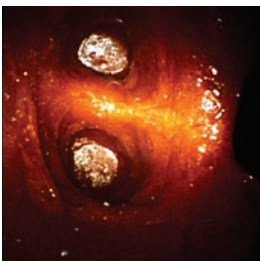
- High power LED output
- Small fiber coupling
- Enables endoscopes as small as 1.1mm OD
- Optional 40k and 160k pixel video processor

HYPERION UNITS & LASER LIGHT ENGINES

- High power laser output
- Small fiber coupling
- Customizable color mix
- High-speed pulsing
- Low jitter driver
- Precise thermal management
- Optional video processor

LASER & LED CAPABILITIES

- Wide range of wavelengths (UV, Pure RGB, IR)
- Specialty wavelengths:
 - Green (520nm - 555nm)
 - Yellow (577nm)
- Up to 8 wavelengths in a single fiber output
- Dichroic and knife-edge combining
- Small fiber coupling (170 - 400µm)



Images taken with Theia 160

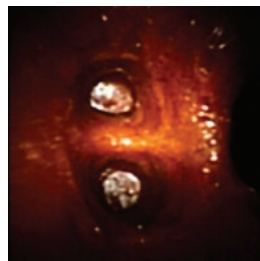
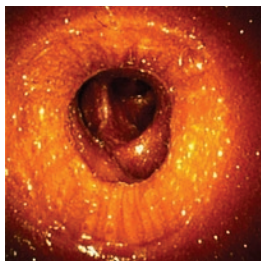
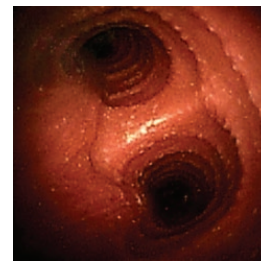
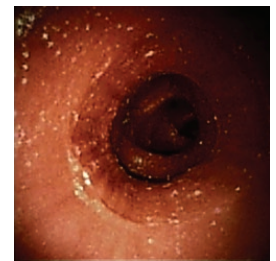


Image taken with Theia 40



Images taken with Hyperion 200LV



Theia 160



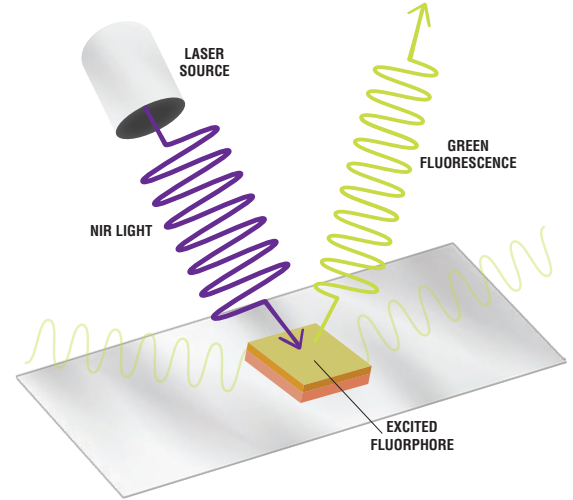
Hyperion 200LV

SPECIFICATIONS

MEDICAL APPLICATIONS

Necsel is capable of designing and manufacturing laser devices used to develop applications such as:

- Multi-spectral imaging
- Photocoagulation
- Identification of cancerous cells using fluorophores
- Fluorescence guided surgery
- Simultaneous multiple fluorophore imaging
- IR wavelengths for deep tissue penetration
- Sentinel Lymph Node (SLN) mapping
- Chromoendoscopy - narrow band imaging for improved imaging
- Highlighting and identification of blood vessels and other structures
- Photoactivation of drugs
- Auto fluorescence
- Selective band imaging
- Tissue differentiation



FACILITY CAPABILITIES

- ISO 13485 certified
- ISO 14971 risk management
- FDA registered, 21 CFR 820 compliant
- Precision electromechanical assembly
- Product certification available (UL, ETL, etc.)
- USA vertical integrated operations of product development, design and manufacturing
- Multi-discipline engineering team
- Vertical supply chain

Powered by:



Laser Description	
UV	375nm
Violet	405nm
Short Blue	445nm
Long Blue	465nm
Cyan	488nm
Emerald	515nm
Green-1	525nm
Green-2	532nm
Green-3	550nm
Green-4	555nm
Yellow	577nm
Short Red	637/640nm
Long Red	660/690nm
IR-1	730nm
IR-2	750/760nm
IR-3	780/792nm
IR-4	808/885 900/980nm



Necsel Lasers

