

NEW

PDE[®]-GEN3

Near infrared fluorescence imager
C13999-30



Third Generation PDE[®]

HAMAMATSU
PHOTON IS OUR BUSINESS

PDE[®] evolved for convenience in clinical practice

The PDE[®]-GEN3 is the third generation Hamamatsu Near infrared fluorescence imaging system designed to observe ICG fluorescence. It is a simple and compact product design with convenient functions to meet various needs in the medical field.

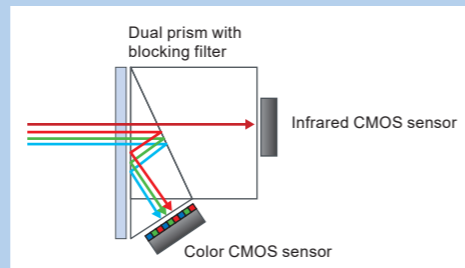


One Shot Auto Focus

Auto Focus with TOF (Time-Of-Flight) distance sensor enables user to focus to the right spot quickly and easily without any manual handling. This is especially helpful in a surgical setting where it is difficult to focus on the subject.

Two CMOS Sensors Heighten Visualization

Light from the lenses of the camera is split by a prism and travels to two CMOS sensor chips, one for color images, and one specially tuned for near-infrared (NIR) wavelengths. This allows the entire area of each sensor chip to be fully utilized and enables users to make observations in fluorescence mode and color mode simultaneously without losing detection sensitivity.



Improved detection sensitivity and Full HD output delivers a clear and crisp wide-screen image to a larger monitor.

Lightweight, Compact Design Camera Unit

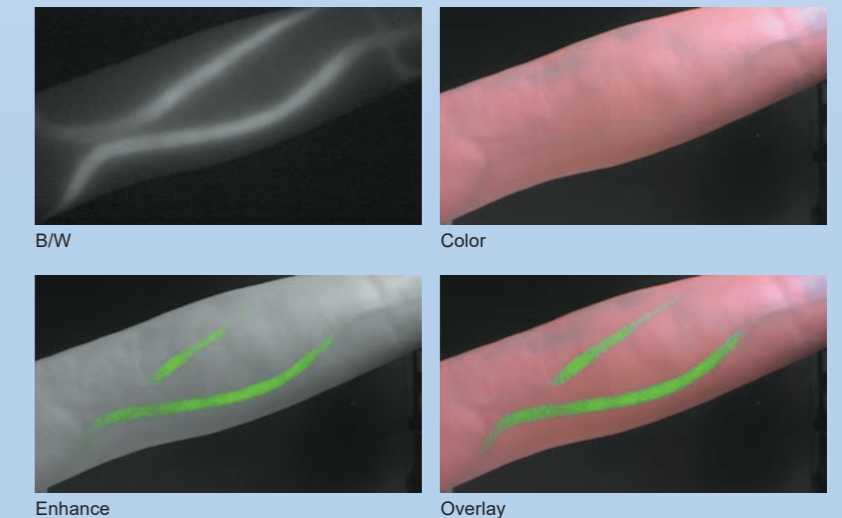
Easy-to-use, handheld unit allows you to shoot close to the area of interest on the surgical field.



* The standard configuration of the PDE[®]-GEN3 does not include a monitor and cart.

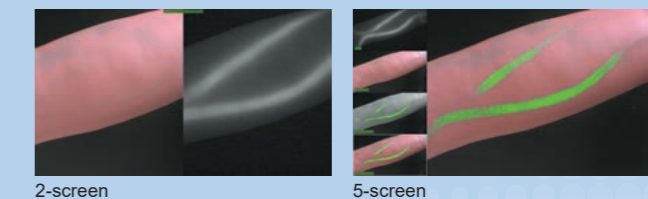
Four Image Modes and Multi-view Monitoring

Two CMOS sensors simultaneously capture visible and fluorescent images in the same field of view, enabling an immediate switch to Enhance / Overlay mode, in which pseudo-color ICG fluorescence is superimposed on monochrome or color images.



* A dummy arm is used in these images.

It is possible to view the four image modes in either a 2-screen or 5-screen picture-in-picture display. This allows users to make comparison to the various image modes in real time and use traditional black-and-white fluorescence clinically while showing color images to patients or in presentations.



1 Video / Still Image

Videos and still images can be saved in a USB memory stick. They can also be played and displayed.

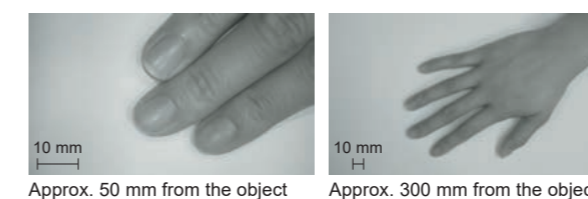
2 User Setting

Profile settings for contrast, excitation light intensity, etc. can be saved and recalled easily depending on procedure and surgeon's preference.



Near and Far Observation from 50 mm to 300 mm

The camera unit can be placed as close as 50 mm from the affected area, allowing for detailed observation of the affected area. It can be placed as far as 300 mm for a broad field of view when required. Automatic focus makes switching between broad and close field of a view simple and easy.



White LED

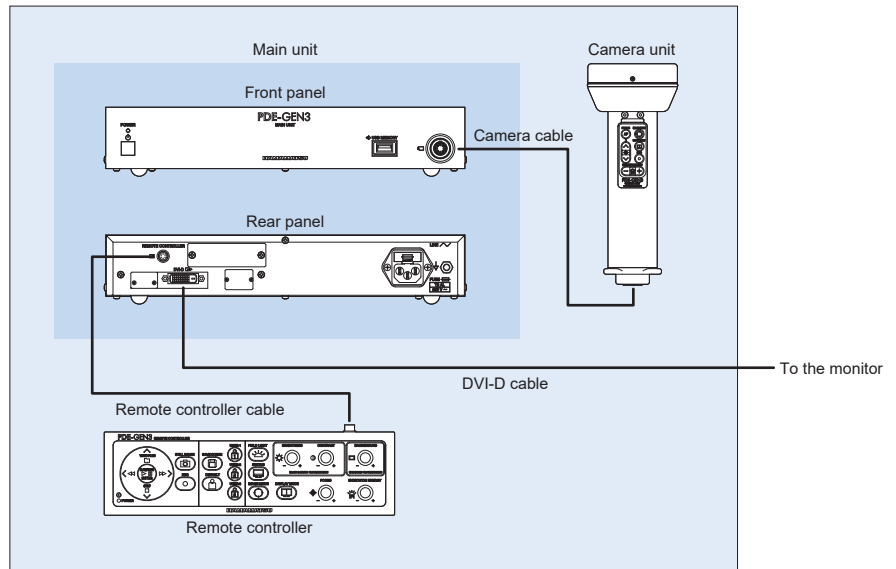
The white LED light feature illuminates the surgical field without compromising the fluorescent image. This is particularly helpful when surgical lights have been turned off to prevent interference with the fluorescent image.



Configuration



| | |
|-------------------------------|---|
| Main unit | 1 |
| Camera unit | 1 |
| Remote controller | 1 |
| Camera cable (5 m) | 1 |
| Remote controller cable (2 m) | 1 |
| DVI-D cable (1 m) | 1 |
| Power supply cord | 1 |
| Spare fuse 2 A | 2 |
| PDE-GEN3 Operator's Manual | 1 |



* The standard configuration of the PDE®-GEN3 does not include a monitor and cart. For details, please contact your local distributor.

Specifications

| | |
|--------------------------------------|-------------------------------------|
| Product number | C13999-30 |
| Output signal (Digital) | 1080 / 50 p, 1080 / 60 p |
| Video output | DVI-D |
| Power supply | AC 100 V to AC 240 V, 50 Hz / 60 Hz |
| Power consumption | Max. 60 VA |
| Ambient operating temperature | +10 °C to +30 °C |
| Ambient operating humidity | 20 % to 70 % (with no condensation) |
| Ambient storage temperature | -10 °C to +50 °C |
| Ambient storage humidity | 20 % to 90 % (with no condensation) |

Dimensions / weight

| | |
|--------------------------|--|
| Main unit | 325 mm (W) × 55 mm (H) × 285 mm (D) *1 |
| | Approx. 2.7 kg *2 |
| Camera unit | 80 mm (W) × 80 mm (H) × 200 mm (D) *1 |
| | Approx. 0.55 kg *2 |
| Remote controller | 260 mm (W) × 25 mm (H) × 75 mm (D) *1 |
| | Approx. 0.55 kg *2 |

*1: Not including projections

*2: Not including cables and accessories

LED SAFETY

The excitation light used in PDE®-GEN3 is classified as an Exempt Group. (Evaluation based on IEC 62471:2006, EN 62471:2008)

LASER SAFETY

The laser for distance measurement used in PDE®-GEN3 is classified as a Class 1. (Evaluation based on IEC 60825-1:2007, EN 60825-1:2007)

Regulatory compliant

MDR(EU) / UKCA(UK) / MedDO(CH)

Intended Use

PDE®-GEN3 is a camera system that displays near-infrared fluorescence in real time.

With the use of indocyanine green fluorescence, lymphangiography (identification of sentinel nodes during breast, skin, head and neck cancer surgery, diagnosis of lymphedema, lymphangiography during lymphatic-venous anastomosis, etc.), and angiography (evaluation of blood flow during skin flap reconstruction, organ reconstruction, coronary artery bypass surgery, etc.) can be performed.

It can also identify the parathyroid glands during thyroid and parathyroid surgery using the autofluorescence properties of the parathyroid glands (without ICG).

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- The product and software package names noted in this brochure are trademarks or registered trademarks of their respective manufacturers.
- Subject to local technical requirements and regulations, availability of products included in this brochure may vary. Please consult your local sales representative.
- The product described in this brochure is designed to meet the written specifications, when used strictly in accordance with all instructions.
- The measurement examples in this brochure are not guaranteed.

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