

From Eye to Insight



VASCULAR SURGERY. AUGMENTED

GLOW800 Augmented Reality
Fluorescence Application

Experience GLOW800 in 3D
with the evolved ARveo 8!

ONE AUGMENTED VIEW OF CEREBRAL ANATOMY & REAL-TIME BLOOD FLOW

Reflection and shadow differentiation provide depth perception for spatial orientation

Natural color throughout the field of view

Aneurysm viewed with ICG and the GLOW800 AR fluorescence application

Aneurysm viewed in white light

Natural colors & 3D depth perception but no blood flow visible

Aneurysm viewed with ICG and NIR fluorescence

Dark periphery

High contrast blood flow but flat structure with limited depth perception

Observe cerebral anatomy in natural color, augmented by real-time vascular flow, with 2D and 3D depth perception, for confident interventions.

Full visualization of blood flow and anatomy during cerebrovascular procedures is critical for a confident assessment and decisions. In the past you could only view flow by pausing surgery and watching the black and white near infrared (NIR) fluorescence video, which meant losing depth perception and anatomical detail. Now with GLOW800 augmented reality (AR) fluorescence application you have everything in one: Naturally-colored anatomy, vascular flow and 3D depth perception in a single, augmented, real-time view!

One complete picture of the cerebrovascular region

- > No more mental gymnastics to recall and reconcile the black and white blood flow video with the natural anatomical view
- > Crisp delineation helps you limit potential compromise or obstruction of surrounding perforators and small vessels
- > Depth perception without dark peripheries supports clear spatial orientation, aiding manipulation of vessels

View blood flow without interrupting workflow

- > No need to pause surgery to watch a black & white NIR fluorescence video, just activate GLOW800 and continue working
- > AVM, aneurysm, bypass, or microvascular decompression, you always have the full view you need to confidently work with GLOW800, even if there is an unexpected bleed
- > Full integration with your ARveo 8 or M530 OHX microscope means one-touch activation of the GLOW800 application via handgrip or footswitch

Visualization with GLOW800 AR supports each step of a surgery, for example during aneurysm clipping, it helps you:

- > Assess clip placement and aneurysm occlusion
- > Check if all branches proximal and distal to the clipped aneurysm are perfused and whether there is orthograde filling of the blood vessels
- > Confirm the clip has not caused any compromise of surrounding blood vessels, such as kinking or partial obstruction



Select a pseudo color according to your preference and for optimal contrast to the tissue.

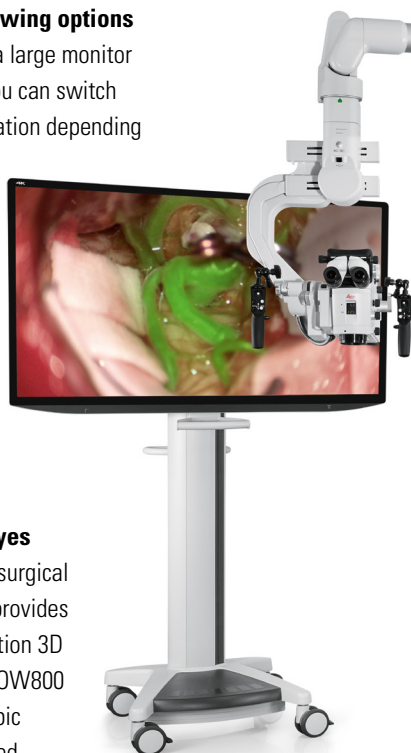
GLOW800 digital viewing options

Display GLOW800 on a large monitor to check blood flow, you can switch from 2D to 3D visualization depending on your needs. *



All in front of your eyes

MyVeo, the all-in-one surgical visualization headset provides you with a high-resolution 3D visualization of the GLOW800 application for exoscopic surgery with the evolved ARveo 8.



Record and review GLOW800 easily

One-touch activation of recordings thanks to full integration with the ARveo 8 and the M530 OHX surgical microscope. *

THE GLOW AR PLATFORM

The technology behind GLOW800

GLOW800 AR is the first clinical application of the GLOW AR platform based on digital spectral detection technology by Leica Microsystems.

- > A sophisticated multispectral imaging sensor can simultaneously capture multiple spectral bands of visible and fluorescent light
- > A real-time algorithm optimizes each spectral band for faithful natural coloring of tissue and accurate representation of fluorescence intensity
- > Images are combined for a single, augmented view of the surgical field

Enhance your OR team collaboration and teaching with 3D

Digital visualization with 3D depth perception and high image quality is particularly important for the training of physicians, as spatial vision aids the understanding of anatomical structures. A shared 3D view of the surgical field also benefits the OR staff, as they can follow the surgical procedure more precisely, which can facilitate collaboration.

*2D visualization is only for observation not for heads-up display surgery. The M530 OHX doesn't provide GLOW800 in 3D; recordings and playbacks can only be initiated via the microscope handles on the OHX.

TECHNICAL SPECIFICATIONS GLOW800

MICROSCOPE COMPATIBILITY

New and existing	ARveo 8 M530 OHX*
------------------	----------------------

TECHNICAL DATA

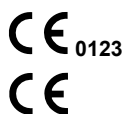
Fluorescence excitation	665 nm - 795 nm
Fluorescence emission	835 nm - 880 nm

* Not all configurations of M530 OHX are available in all regions.
Contact your local Leica representative for availability information.

Images courtesy of Cleopatra Charalampaki, MD, PhD, Professor of Neurosurgery, Department of Neurosurgery, Cologne Medical Center, Germany



Leica Microsystems (Schweiz) AG
Max Schmidheiny-Strasse 201
9435 Heerbrugg, Switzerland



Class IIa GLOW800

Class I ARveo 8, and M530 OHX incl. accessories, such as MyVeo

Not all products or services are approved or offered in every market and approved labeling and instructions may vary between countries.
Please contact your local Leica representative for details.



Leica Microsystems (Schweiz) AG · Max Schmidheiny-Str. 201 · 9435 Heerbrugg ·
Switzerland · T +41 71 726 3333

www.leica-microsystems.com

CONNECT
WITH US!

