The Navigated Retina Laser
All-digital | Effective | Comfortable
Navilas® 577s

All-digital retinal laser therapy

Navilas® is the first all-digital system for navigated focal and peripheral laser treatments. The key elements of laser therapy are effectively integrated into one smart solution.
Retina Navigation

Effective and comfortable treatment

Navilas® delivers precise treatment planning and comfortable performance for doctors and patients.

Comprehensive treatment
Plan your laser therapy based on color fundus and external diagnostic images to ensure comprehensive care.

Precision
Attain precision through the pre-positioning and stabilization of the laser beam on the retina, even in challenging treatment situations.

Comfort
Perform focal treatments optionally under infrared light and without a contact lens.

Intuitive use
Navigate intuitively with the joystick and a high-resolution touchscreen that concisely displays live images, treatment plans, and parameters.

Speed
Treat the peripheral region faster than with conventional pattern scan lasers via the large field-of-view and assisted pattern placement.
Ultra-Wide-Field PRP

Fast and complete PRP treatment

Navilas® simplifies and accelerates peripheral laser coagulation with flexible and automated pattern positioning via touchscreen and joystick.

Optimal overview
The Navilas® PRP optics provide a large field of view for rapid targeting of treatment locations in both PRP and laser retinopexy treatments.

Fast pattern placement
Patterns of up to 25 spots can be placed via touchscreen or joystick and rapidly delivered. Navilas® stabilizes the aiming beam and positions the pattern automatically on the next location.

Designed for patient comfort
To reduce glare and increase patient comfort, the infrared illumination with digital documentation function can be activated at any time.
"I am very impressed with the new Navilas 577s PRP. To me as the physician it feels ergonomic and straightforward - the system literally lets me paint the peripheral retina with uniform spots in a very short amount of time. It was very well tolerated by the patients, with only topical anesthesia. Navilas now has an industry leading PRP tool to complement its incomparable focal laser capability."

David Brown, MD, Houston, Texas
Navilas® uniquely provides retinal specialists with an all-digital treatment workflow, enabling precise, comprehensive care and bringing back confidence in laser therapy.
Digital fundus imaging
A high-resolution Navilas® color fundus image can be obtained at the touch of a button.

Target-assisted laser treatment
The physician’s pre-defined treatment plan is automatically overlaid onto the live infrared image, while the Navilas pre-positions the aiming beam onto the treatment locations.

Digital treatment planning
Automated import of external diagnostic images and various plan elements provide for exact, indication-focused treatment planning.

Digital treatment report
Navilas® generates a transparent digital treatment report for storage and printing.
Navigated microsecond pulsing

Navigated microsecond pulsing treatment applies the advantages of precision and comfort to microsecond treatments.

How it works

Laser energy is applied in a series of brief pulses in the range of 100–300 µs with the aim of repeatedly heating retinal tissue. By balancing heating and cooling phases, the tissue temperature can be kept below the photocoagulation threshold.

<table>
<thead>
<tr>
<th>Laser coagulation with CW laser</th>
<th>Microsecond pulsing treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>Temperature</td>
</tr>
<tr>
<td>continuous-wave laser (CW)</td>
<td>microsecond pulses</td>
</tr>
<tr>
<td>tissue temperature</td>
<td>tissue temperature</td>
</tr>
<tr>
<td>Time</td>
<td>Time</td>
</tr>
</tbody>
</table>
The unique, all-digital approach enables a predictable microsecond pulsing treatment.

"Navilas is the first microsecond pulsed laser with the ability to reliably document the applied laser spots, which provides us with a valuable treatment alternative for our patients today and a reproducible method for continuing clinical advancement."

David Callanan, MD, Arlington, Texas
Smart design

Comfortable laser treatment

The unique ergonomics of Navilas® 577s provide treatment comfort for patient and doctor alike.
Contact-free focal treatment

Infrared illumination

Intuitive use

Smart controls
# Navilas® Laser System 577s

## Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser wavelength</td>
<td>577 nm (yellow)</td>
</tr>
<tr>
<td>Laser type</td>
<td>Optically Pumped Semiconductor (OPSL), Class IV</td>
</tr>
<tr>
<td>Aiming beam</td>
<td>diode laser, 635 nm, &lt; 1 mW, Class II</td>
</tr>
<tr>
<td>Laser power</td>
<td>50-2000 mW</td>
</tr>
<tr>
<td>Pulse duration</td>
<td>10–4000 ms</td>
</tr>
<tr>
<td>Microsecond pulsing</td>
<td>50-500 µs; 5, 10, 15 %, variable duty cycle</td>
</tr>
<tr>
<td>Digital fundus imaging</td>
<td>True-color and infrared (complemented by automated/manual image import)</td>
</tr>
<tr>
<td>Optics and field of view</td>
<td>Non-contact objective (focal): 50° static (+ dynamic extension)</td>
</tr>
<tr>
<td></td>
<td>Contact objective (focal/peripheral): up to 165°/180° dynamic, analogous to contact lens used</td>
</tr>
<tr>
<td>Spot size on retina</td>
<td>Non-contact objective (focal): 50-500 µm</td>
</tr>
<tr>
<td></td>
<td>Contact objective (focal/peripheral): 50-1000 µm (w/magnification)</td>
</tr>
<tr>
<td>Network access</td>
<td>RJ45 ethernet connector, sharing of images/data/treatment plans, network printing, remote service</td>
</tr>
<tr>
<td>Footprint (LxDxH)</td>
<td>44” x 28” x 50”–91” / 110 cm x 70 cm x 127-230 cm</td>
</tr>
<tr>
<td>Power supply</td>
<td>115-230 VAC, 50-60 Hz</td>
</tr>
<tr>
<td>Conformity</td>
<td>US FDA 510(k) clearance and CE conformity in accordance with the Medical Device Directive 93/42/EEC</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>OD-OS GmbH, Teltow, Germany</td>
</tr>
</tbody>
</table>

**The Navilas Laser System 577s is indicated for use:**

- In Retinal Photocoagulation for the treatment of Clinically Significant Diabetic Macular Edema (Focal or Grid Laser), Proliferative Diabetic Retinopathy (Panretinal Photocoagulation), Sub-retinal (Choroidal) Neovascularization (Focal Laser), Central and Branch Retinal Vein Occlusion (Scatter Laser Photocoagulation, Focal or Grid Laser), Lattice Degeneration, Retinal Tears and Detachments (Laser Retinopexy).
- For the imaging (capture, display, storage and manipulation) of the retina of the eye, including via color and infrared imaging, and for aiding in the diagnosis and treatment of ocular pathology in the posterior segment of the eye.

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