



Retina coagulation (coagulation mode) Quick Guide

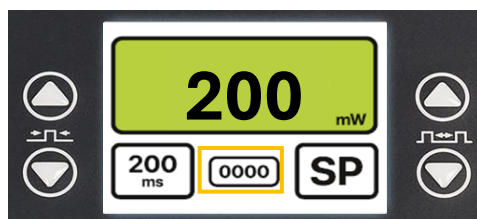
Treatment parameters:

A power of **200 mW**, pulse duration of **200 ms**, and spot size of **200 μm** typically achieves coagulation in a normally pigmented retina. Parameters may be adjusted depending on the condition being treated.

When using a smaller spot size, use lower power (50–80 mW) and/or a shorter pulse duration.

Shorter pulse durations also have the benefit of reduced patient discomfort. In all cases, titrate the power as described below.

User Interface Classic 514:

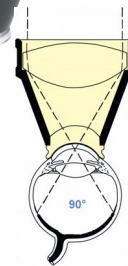
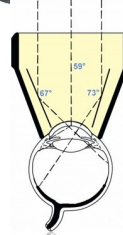


Counter for number of spots

Accessories:



Slit lamp (PCL5 SH)



Patient preparation:

Mydriasis (dilation of the pupil) & topical anesthesia (e.g. Conjunccain).

Treatment preparation:

Application of sufficient viscoelastic to the contact lens.



Coagulation effect

Titration process:

Apply test spots in the peripheral retina where no visual loss can occur. Start at a low power setting and increase stepwise until a visible coagulation effect is achieved.

Note: The 514 nm laser may require slightly higher power levels compared to other green lasers.

Ocular Three Mirror Universal Laser Lens (WE01242) or Ocular Mainster (Standard) Focal/Grid Lens (WE01245) or similar, and laser safety goggles (AS01003) and/or eye safety filter (BG06078).

Application:

- Stepwise adjustment (titration) of power (pulse duration and spot size constant) until coagulation of the retinal tissue is reached (color change to white/grey).
- Apply single spots to the tissue:
the laser energy is absorbed in the RPE, tissue coagulates, retinal area connects with tissue structures underneath
- Size of the laser spots vary depending on the type of disease:
 - ⇒ Holes: small laser spots applied in ring-shape around the hole
 - ⇒ Retinal detachment: relatively large laser spots applied over the detached area
- During diabetic retinopathy treatment: Avoid treatments along the long ciliary nerves!

Post-treatment (exemplarily):

Control examinations



Treatment effect:

Laser photocoagulation depends on a photothermal interaction in which melanin in the retinal pigment epithelium and choroid absorbs the laser energy and produces controlled heat to fuse or destroy target vessels.

Effectiveness and Safety:

- ✓ safe treatment method
- ✓ minor side effects
- ✓ mild/moderate pain level (studies suggest* that 514nm wavelength is less painful compared to 532nm)
- ✓ precise and fast treatment method

Contraindication:

- ✗ The use of laser treatment for pregnant or breastfeeding women or children is NOT recommended because there do not exist clinical studies for these patients.
- ✗ Patients with intrtransparent or partly intrtransparent or scattering media are not intended for the treatment.
- ✗ Treatment may not be feasible when the patient cannot be positioned at the slit lamp or is unable to cooperate during the procedure.

*

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