

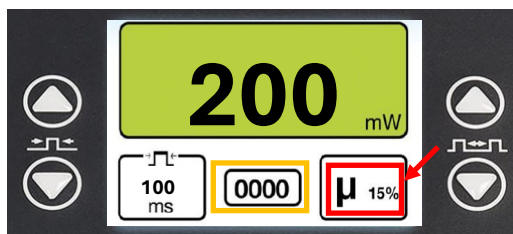


Treatment parameters:

To determine the subthreshold power, titrate the power and pulse duration in coagulation mode by applying test spots in the peripheral retina until a visible coagulation effect is achieved. When switching to microsecond pulse mode (APL mode), double or triple the titrated power (subthreshold power to be used).

The duty cycle determines the fraction of laser energy delivered to the tissue: at a 5% duty cycle, only 5% of the set power is effectively applied during each micropulse sequence, with the remaining time allowing the tissue to cool. Available duty cycle settings are 5%, 10%, and 15%. A low duty cycle reduces the thermal load on the retina and increases the safety margin.

User Interface Classic 514:



Duty cycle of APL mode (use right arrows)

Counter for number of spots

Slit lamp (PCL5 SH)

Accessories:



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).

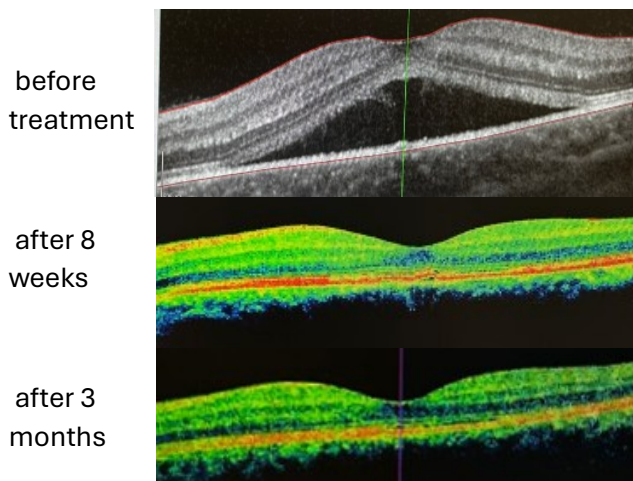
Patient preparation:

OCT imaging and angiography for diagnosis and follow-up, Mydriasis (dilation of the pupil) & topical anesthesia (e.g. Conjuncain).

Treatment preparation:

Application of sufficient viscoelastic to the contact lens.

OCTs of a patient suffering from CCS (Central Serous Chorioretinopathy).



Application:

Titration process in coagulation mode:

- Set power level and pulse duration of Classic 514 at low setting
- Apply some exposures at the peripheral area of the retina, gradually increasing power and pulse duration until a minimal coagulation effect becomes visible.

Set Classic 514 in APL mode* (refer to the next page, to see how to set up this mode):

- Double or triple the titrated power and set the duty cycle
- Apply some test exposures at peripheral area – no visible effect should occur
- Start treatment at intended region by applying single spots to cover the entire area of the leakage sites

Post-treatment (exemplarily):

Follow-up appointments with OCT imaging and angiography



Treatment effect:

Subthreshold microsecond pulse laser photothermal stimulation induces heat shock protein expression in retinal pigment epithelium cells without cellular damage, thereby rejuvenating RPE function, enhancing metabolic and protective activity, and ultimately promoting retinal reattachment and resolves the edema. The repeated short laser pulses prevent overheating/coagulation.

Effectiveness and Safety:

- ✓ safe and non-damaging therapeutic method
- ✓ minor side effects and mostly pain free
- ✓ precise and fast treatment method
- ✓ well tolerated by patients
- ✓ immediate treatment possible after diagnosis

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.

*Set up the APL mode:

It can be chosen after the SP settings. With the left arrow keys, the total pulse duration can be chosen as 50ms, 100ms, 150ms, 200ms and 250ms. Using the right arrow keys the specific APL mode, μ 15%, μ 10% and μ 5%, can be chosen.

When switching to APL mode, the laser energy is split into a series of short micropulses. The duty cycle determines the duration of each micropulse and the share of power delivered to the tissue:

- 5% duty cycle $\rightarrow$ 100 μ s micropulse duration $\rightarrow$ 5% of set power (e.g., 10 mW at 200 mW)
- 10% duty cycle $\rightarrow$ 200 μ s micropulse duration $\rightarrow$ 10% of set power (e.g., 20 mW at 200 mW)
- 15% duty cycle $\rightarrow$ 300 μ s micropulse duration $\rightarrow$ 15% of set power (e.g., 30 mW at 200 mW)

