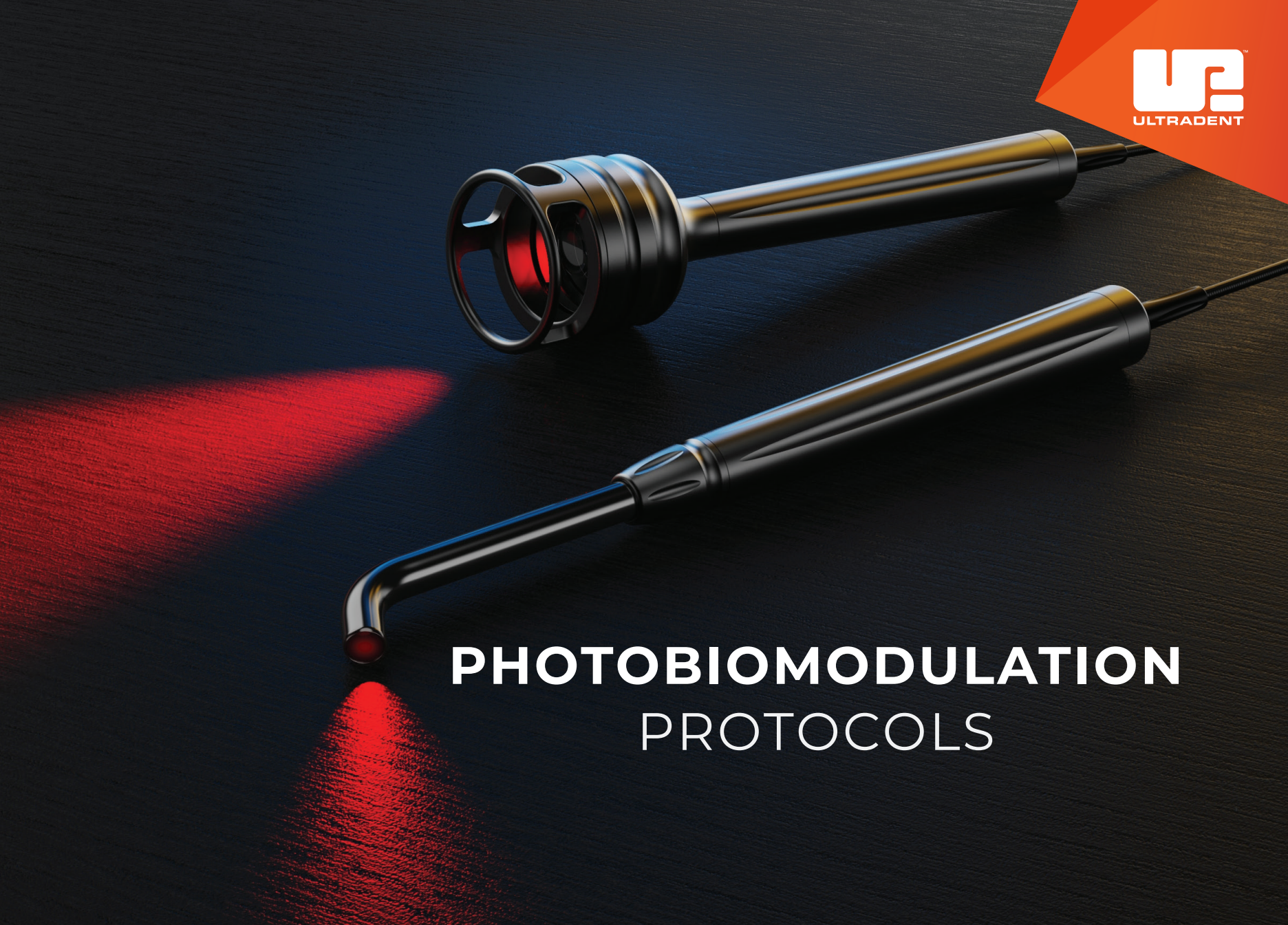
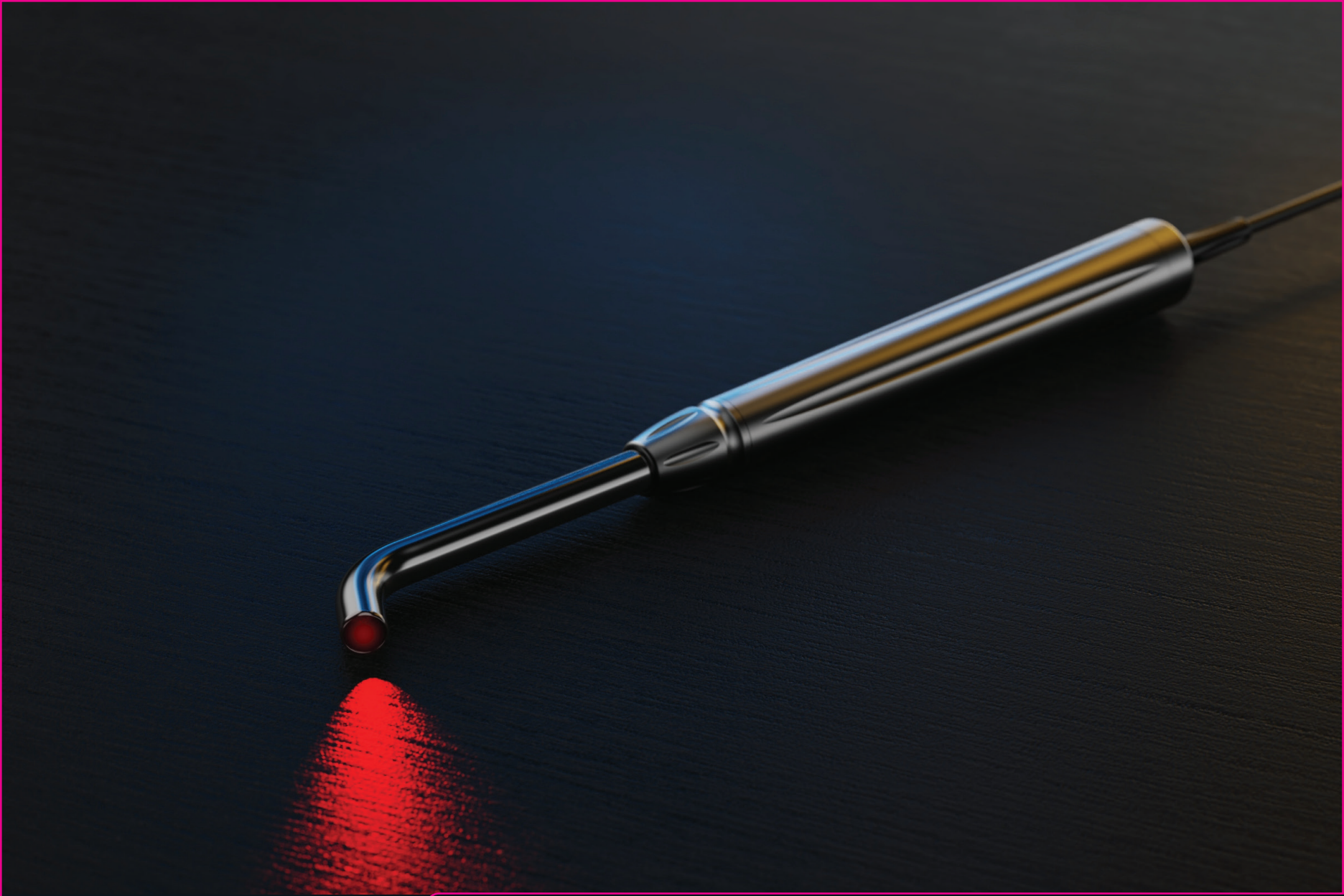


PHOTOBIOMODULATION
PROTOCOLS



INTRAORAL – 7 mm

DENTIN HYPERSENSITIVITY (PAIN RELIEF)

INCISORS, CANINES, PREMOLARS

INTRAORAL





1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (3 TOTAL SESSIONS / CONSECUTIVE OR IN 72-HOUR INTERVALS)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **4 SECONDS**.

4 TREATMENT TECHNIQUE

Position the tip perpendicular to and in direct contact with the treatment area. Hold the 7 mm tip steady, in a fixed position, while activating the laser for the recommended treatment duration. For incisors, canines, and premolars, ensure application at two distinct locations: one at the cervical region and the other in the apical region.

KEY METRICS PER TREATMENT SPOT

Dose	**3.1** J/cm²
Power Density	**0.8** W/cm²
Energy	**1.2** J

DENTIN HYPERSENSITIVITY (PAIN RELIEF)
MOLARS

INTRAORAL



1 WAVELENGTH MODE
Select **DUAL wavelength** mode.

2 TIP SELECTION
Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (3 TOTAL SESSIONS / CONSECUTIVE OR IN 72-HOUR INTERVALS)
For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **4 SECONDS**.

4 TREATMENT TECHNIQUE
Ensure that the tip is positioned perpendicular to and in contact with the treatment area. Hold the 7 mm tip steady, in a fixed position, while activating the laser for the recommended treatment duration. When treating molars, it is important to apply the laser at four distinct locations: the mesial cervical, distal cervical, mesial apical, and distal apical regions.

KEY METRICS PER TREATMENT SPOT

Dose	**3.1** J/cm²
Power Density	**0.8** W/cm²
Energy	**1.2** J

THIRD MOLAR EXTRACTION

PAIN RELIEF

7 secs. spot



INTRAORAL — 7 mm

+

EXTRAORAL — 25 mm

1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (3 TOTAL SESSIONS / 3X/WEEK FOR 1 WEEK)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **7 SECONDS**.

4 TREATMENT TECHNIQUE

Ensure the tip is placed directly in contact with the treatment area. Steadily hold the 7 mm tip in one position while activating the laser for the recommended treatment duration. Apply the first treatment spot on the vestibular gingiva in the vicinity of the extraction site, and the second treatment spot at the retromolar area on the upper portion of the gingiva. This procedure is strongly recommended for immediate post-surgery care on the first and second days following the surgical procedure. For optimal pain relief, it is recommended to also apply the 25 mm protocol treatment for third molar extraction.

KEY METRICS PER TREATMENT SPOT

Dose	**5.5** J/cm²
Power Density	**0.8** W/cm²
Energy	**2.1** J

CANKER SORE

PAIN RELIEF

INTRAORAL

7 mm

15 secs.
spot



1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (3 TOTAL SESSIONS / 3X/WEEK FOR 1 WEEK)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **15 SECONDS**.

4 TREATMENT TECHNIQUE

For optimal results, it is advisable to apply photobiomodulation treatment 2 to 3 times a week, if feasible. The best outcomes are typically attained when treatments commence on the 1st and 2nd days upon the onset of the lesion. The quantity of spot treatments required may vary depending on the size and number of ulcers. It is recommended to administer photobiomodulation around the entire ulcer and its margins during the treatment process.

KEY METRICS PER TREATMENT SPOT

Dose	**11.7** J/cm²
Power Density	**0.8** W/cm²
Energy	**4.5** J

ORAL LICHEN PLANUS

PAIN RELIEF

INTRAORAL

7 mm

4 secs.
spot



1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (12 TOTAL SESSIONS / 3X/WEEK FOR 4 WEEKS)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **4 SECONDS**.

4 TREATMENT TECHNIQUE

When treating pain from erosive or ulcerative lesions, it is important to apply the treatment to each lesion, ensuring comprehensive coverage of both the lesion itself and its margins within the oral cavity. Optimal results are obtained when the entire ulcer and the surrounding margin area are thoroughly covered during the treatment.

KEY METRICS PER TREATMENT SPOT

Dose	**3.1** J/cm²
Power Density	**0.8** W/cm²
Energy	**1.2** J

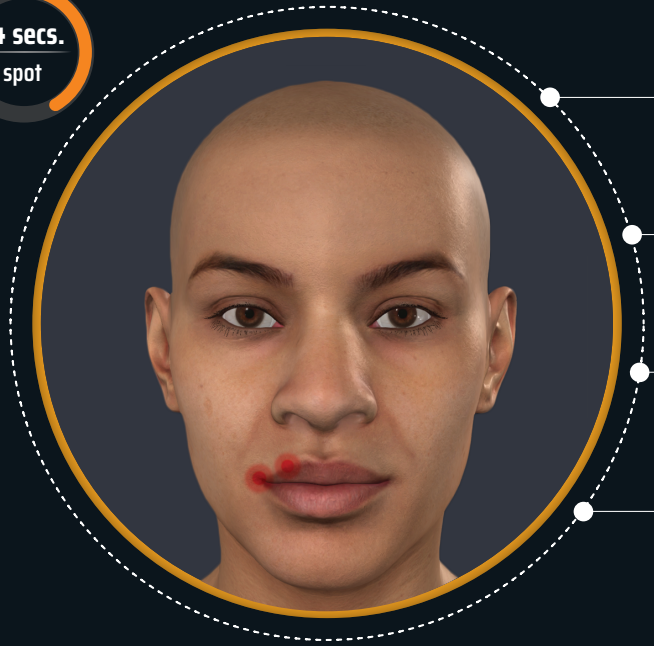
HERPES LABIALIS

ACTIVE LESION

INTRAORAL

7 mm

4 secs.
spot



1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (2 TOTAL SESSIONS / 2X/WEEK FOR 1 WEEK)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **4 SECONDS**.

4 TREATMENT TECHNIQUE

Photobiomodulation should be administered over the treatment area.
For optimal efficacy, this treatment should be conducted on two consecutive days.
The quantity of treatment spots required may vary based on the size of the lesion.

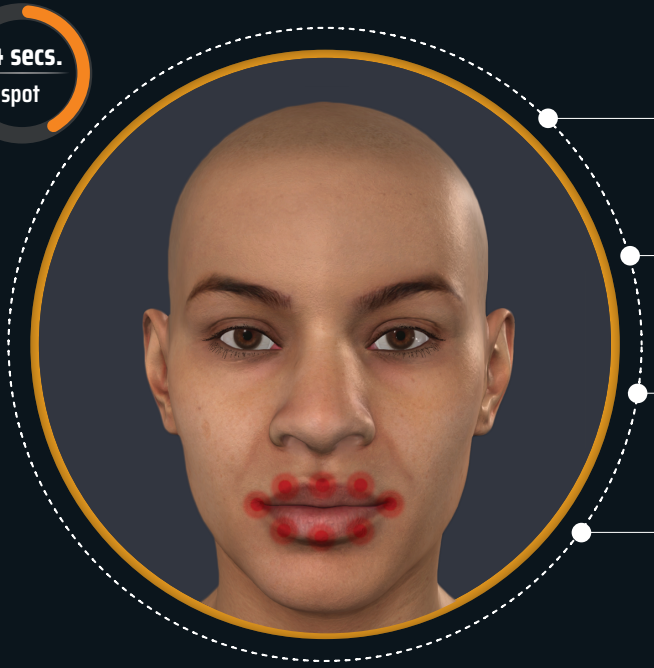
KEY METRICS PER TREATMENT SPOT

Dose	**3.1** J/cm²
Power Density	**0.8** W/cm²
Energy	**1.2** J

HERPES LABIALIS

LATENT LESION

INTRAORAL



1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (10 TOTAL SESSIONS / 2X/WEEK FOR 5 WEEKS)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **4 SECONDS**.

4 TREATMENT TECHNIQUE

This protocol is designed for latent lesions. Photobiomodulation treatment should be applied precisely over the upper labial area, covering a total of 3 spots. Subsequently, the lower labial area should also be treated, encompassing an additional 3 spots. Additionally, ensure coverage of 2 spots at the commissures, including the transition to the dermis and the labial area.

KEY METRICS PER TREATMENT SPOT

Dose	**3.1** J/cm²
Power Density	**0.8** W/cm²
Energy	**1.2** J

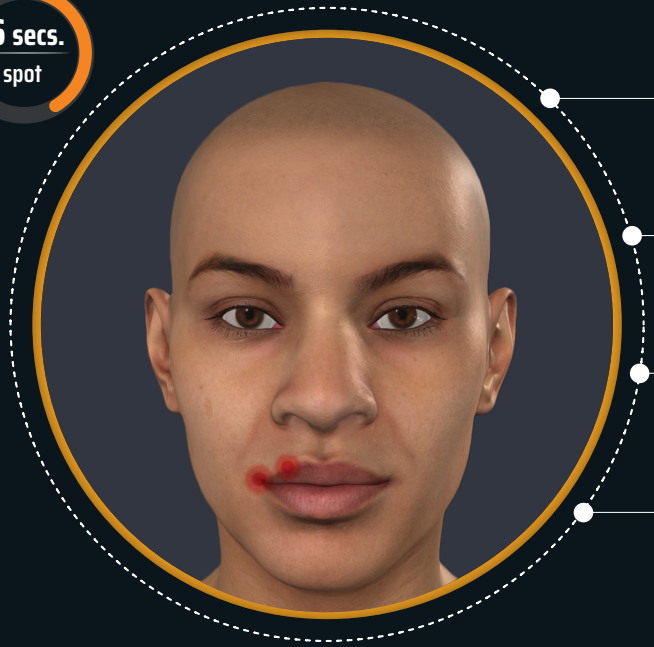
HERPES LABIALIS

PRODROME / EARLY STAGES

INTRAORAL

7 mm

6 secs.
spot



1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (1 TOTAL SESSION / 1X IN THE PRODROMAL PHASE)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **6 SECONDS**.

4 TREATMENT TECHNIQUE

The photobiomodulation treatment should be precisely applied to the area exhibiting tingling or redness. This is a one-time treatment. The quantity of treatment spots required may vary depending on the size of the affected area. If blisters develop in the area, it is imperative not to apply photobiomodulation, as it could stimulate virus growth. In the event of blister rupture, the recommended course of action is to apply the Herpes Labialis - Active Lesion protocol.

KEY METRICS PER TREATMENT SPOT

Dose	**4.7** J/cm²
Power Density	**0.8** W/cm²
Energy	**1.8** J

IMPLANTS
POST-SURGICAL

INTRAORAL



1 WAVELENGTH MODE
Select **DUAL wavelength** mode.

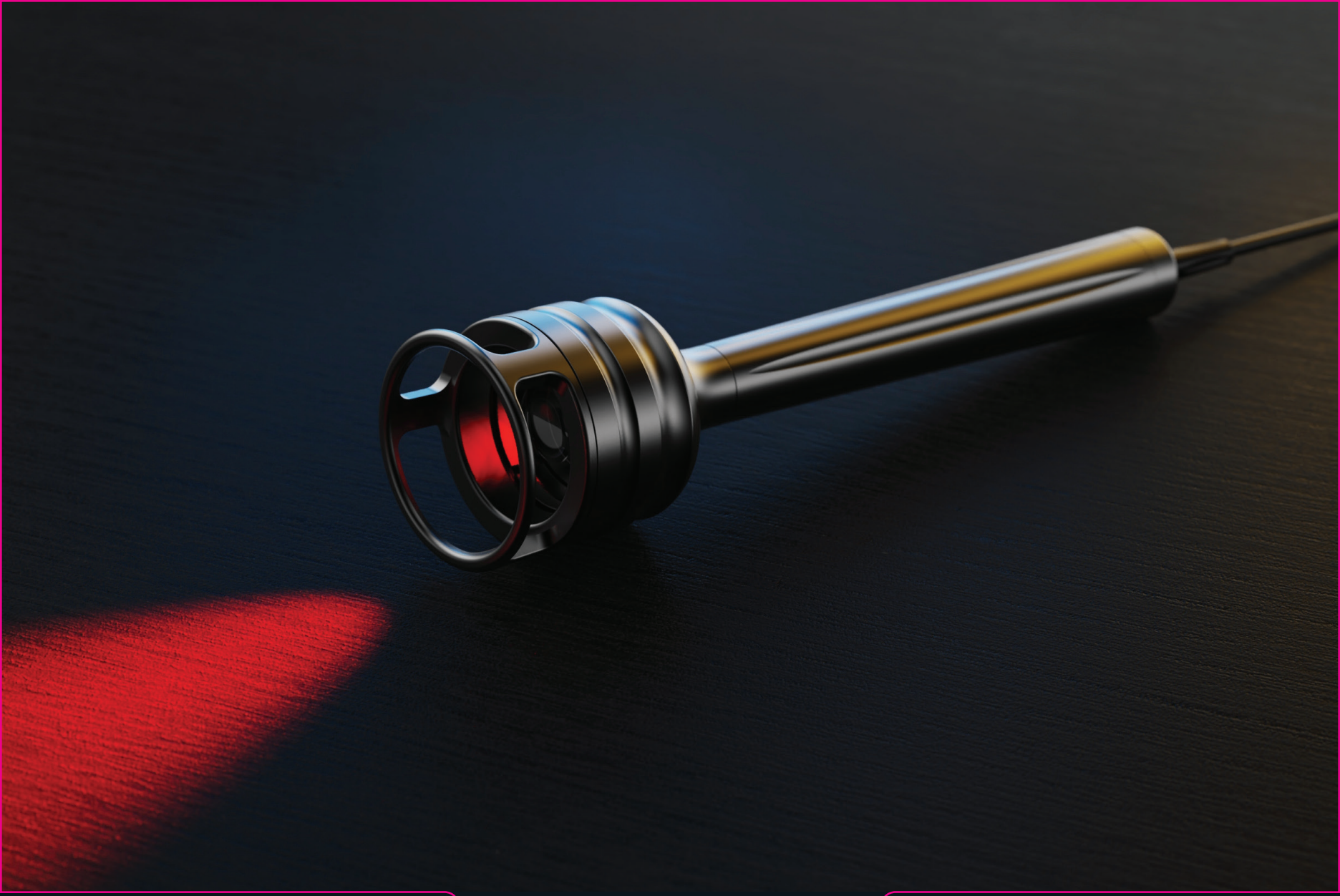
2 TIP SELECTION
Attach **7 mm** (0.3 W / 0.38 cm² spot size) PBM tip to laser handpiece.

3 TREATMENT TIME - (3X/WEEK FOR 2–6 WEEKS)
For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **35 SECONDS**.

4 TREATMENT TECHNIQUE
The irradiations should be applied precisely over the implant region, both vestibular and lingual, covering the bone tissue. The PBM treatment has been shown to increase blood flow, reduce inflammation, and provide pain relief which can promote osseointegration of the implant.

KEY METRICS PER TREATMENT SPOT

Dose	**27.3** J/cm²
Power Density	**0.8** W/cm²
Energy	**10.5** J



EXTRAORAL – 25 mm

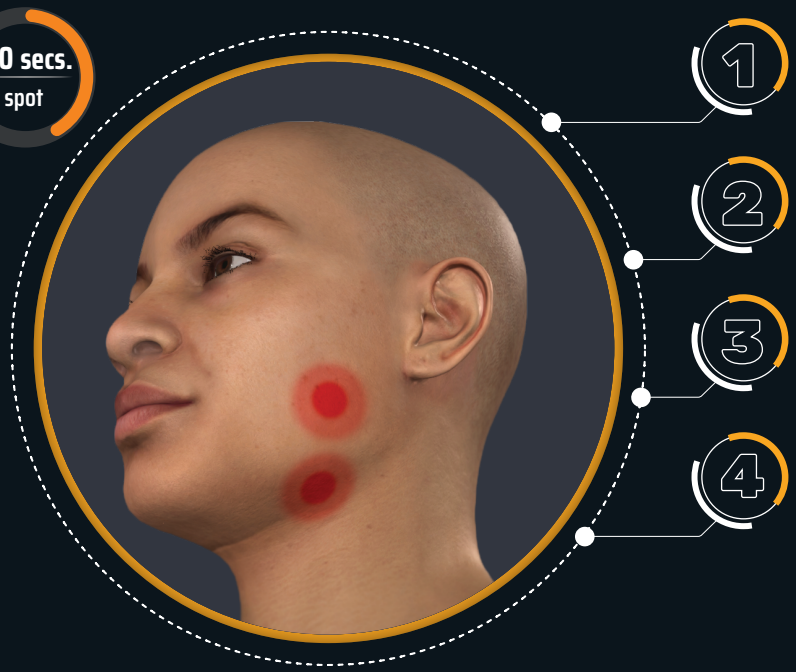
THIRD MOLAR EXTRACTION

PAIN RELIEF

EXTRAORAL 25 mm

+

INTRAORAL 7 mm



1

WAVELENGTH MODE

Select **DUAL wavelength** mode.

2

TIP SELECTION

Attach **25 mm** (1 W / 4.91 cm^2 spot size) PBM tip to laser handpiece.
To ensure proper use, apply PBM spacer to the **25 mm** tip.

3

TREATMENT TIME - (3 TOTAL SESSIONS / 3X/WEEK FOR 1 WEEK)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **20 SECONDS**.

4

TREATMENT TECHNIQUE

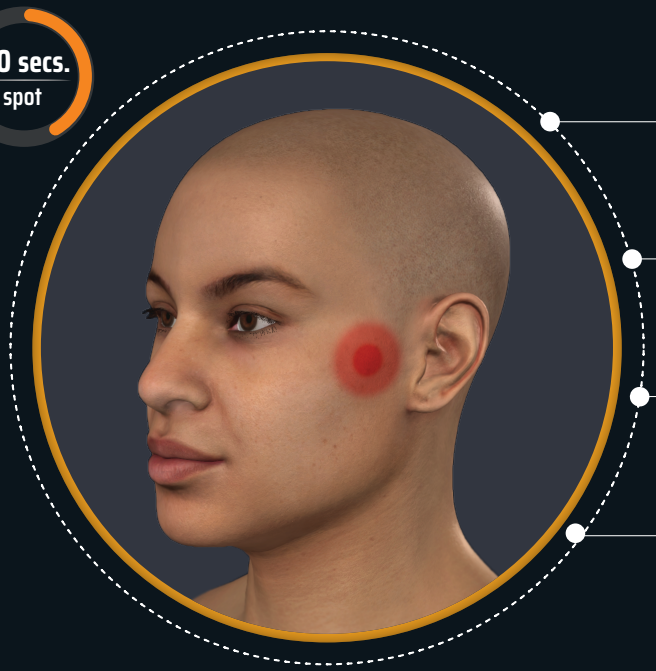
Position the tip in direct contact with the treatment area. Steadily hold the 25 mm tip at the emergence of the masseter muscle as your first treatment spot, and then at the submandibular area for the second treatment spot. For optimal pain relief, it is recommended to also apply the 7 mm protocol treatment for third molar extraction.

KEY METRICS PER TREATMENT SPOT

Dose	**4.07** J/cm^2
Power Density	**0.2** W/cm^2
Energy	**20.0** J

TEMPOROMANDIBULAR DISORDERS
ARTHROGENIC

EXTRAORAL
25 mm



1 WAVELENGTH MODE
Select **DUAL wavelength** mode.

2 TIP SELECTION
Attach **25 mm** (1 W / 4.91 cm² spot size) PBM tip to laser handpiece.
To ensure proper use, apply PBM spacer to the **25 mm** tip.

3 TREATMENT TIME - (10 TOTAL SESSIONS / 2X/WEEK FOR 5 WEEKS)
For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **20 SECONDS**.

4 TREATMENT TECHNIQUE
For arthrogenic treatment, position tip directly in contact with the TMJ muscle causing discomfort.

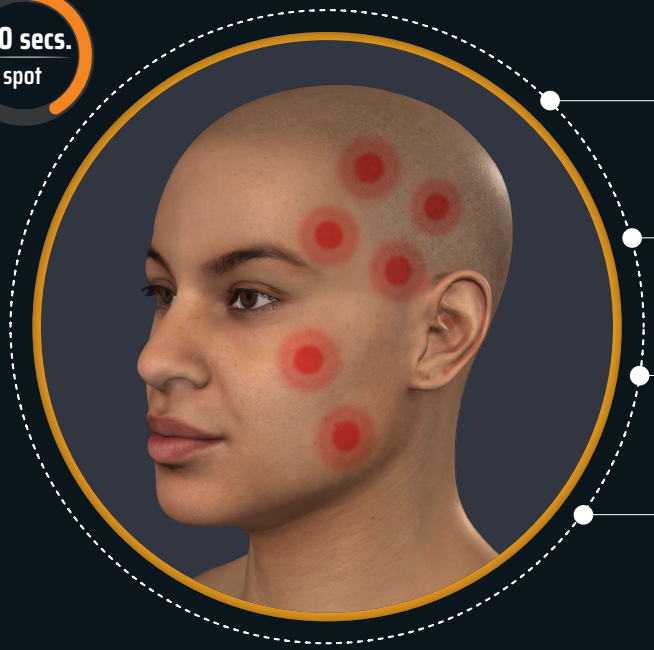
KEY METRICS PER TREATMENT SPOT

Dose	Power Density	Energy
4.1 J/cm²	**0.2** W/cm²	**20.0** J

TEMPOROMANDIBULAR DISORDERS
MYOGENIC

EXTRAORAL
25 mm

20 secs.
spot



1

WAVELENGTH MODE
Select **DUAL wavelength** mode.

2

TIP SELECTION
Attach **25 mm** (1 W / 4.91 cm² spot size) PBM tip to laser handpiece.
To ensure proper use, apply PBM spacer to the **25 mm** tip.

3

TREATMENT TIME - (10 TOTAL SESSIONS / 2X/WEEK FOR 5 WEEKS)
For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **20 SECONDS**.

4

TREATMENT TECHNIQUE
When treating pain from myogenic conditions, it is necessary to apply treatment to four spots on the temporal muscle and two spots on the masseter muscle, totaling six spots.

KEY METRICS PER TREATMENT SPOT

Dose	**4.1** J/cm²
Power Density	**0.2** W/cm²
Energy	**20.0** J

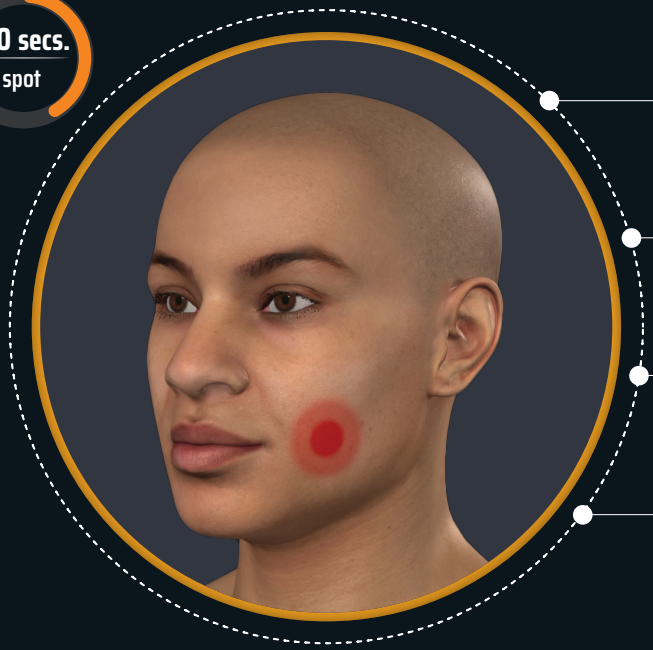
ORAL LICHEN PLANUS

PAIN RELIEF

EXTRAORAL

25 mm

30 secs.
spot



1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **25 mm** (1 W / 4.91 cm^2 spot size) PBM tip to laser handpiece.
To ensure proper use, apply PBM spacer to the **25 mm** tip.

3 TREATMENT TIME - (12 TOTAL SESSIONS / 3X/WEEK FOR 4 WEEKS)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **30 SECONDS**.

4 TREATMENT TECHNIQUE

Administer treatment extraorally on the skin, targeting the area corresponding to the oral lesion. If the lesion is located at the border of the tongue, instruct the patient to touch the tongue against the buccal mucosa. The most favorable outcomes are achieved when the entire lesion area is comprehensively covered during the treatment.

KEY METRICS PER TREATMENT SPOT

Dose	**6.1** J/cm^2
Power Density	**0.2** W/cm^2
Energy	**30.0** J

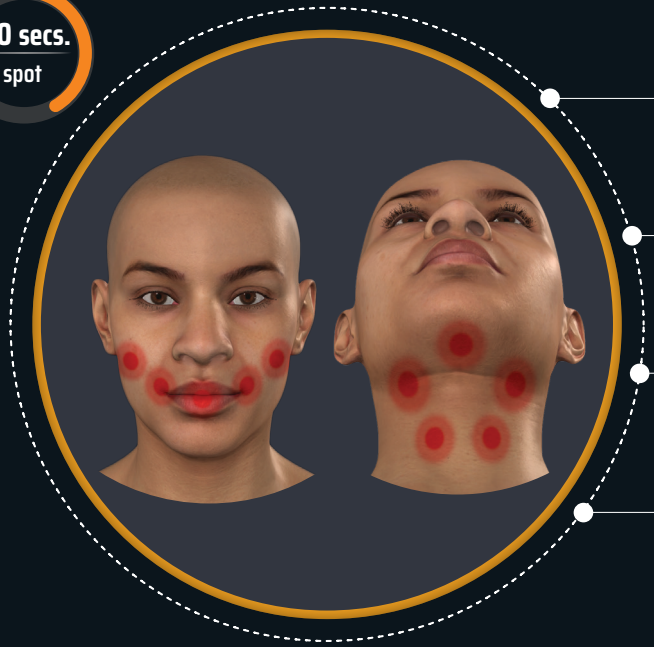
ORAL MUCOSITIS

PAIN RELIEF

EXTRAORAL

25 mm

30 secs.
spot



1 WAVELENGTH MODE

Select **DUAL wavelength** mode.

2 TIP SELECTION

Attach **25 mm** (1 W / 4.91 cm² spot size) PBM tip to laser handpiece.
To ensure proper use, apply PBM spacer to the **25 mm** tip.

3 TREATMENT TIME - (EVERY DAY / 7X/WEEK FOR THE TREATMENT DURATION)

For consistent results, the tip should be applied and not moved during the protocol treatment time. Each spot should be treated for **30 SECONDS**.

4 TREATMENT TECHNIQUE

This treatment should be performed daily for patients undergoing head and neck radiotherapy or cycles of chemotherapy. Research has shown that the protocol is most effective if initiated prior to the development of symptoms.

KEY METRICS PER TREATMENT SPOT

Dose	**6.1** J/cm²
Power Density	**0.2** W/cm²
Energy	**30.0** J

CANKER SORE

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ORAL MUCOSITIS

Antunes HS, Herchenhorn D, Small IA, et al. Phase III trial of low-level laser therapy to prevent oral mucositis in head and neck cancer patients treated with concurrent chemoradiation. *Radiother Oncol*. 2013;109(2):297-302. doi:10.1016/j.radonc.2013.08.010

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TMJ

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