espansione group

A New Paradigm in Ophthalmology and Beyond

> 1 ESPANSIONE GROUP

> 2 DED & BEYOND

> 3 ESPANSIONE ECOSYSTEM

> 4 TREATMENT PROTOCOLS

> 5 SCIENCE COMPENDIUM

Since 1981, Espansione Group delivers the highest standard in the industry—pushed on by expert craftmanship and family-owned values coupled with a global mindset and aspiration.



RODOLFO POMAR

PRESIDENT—CEO



MORENA GOMEDI

HEAD OF SCIENTIFIC MANAGEMENT



ALESSANDRO FIER

HEAD OF BUSINESS DEVELOPMENT



MATTEO CORBELLINO

HEAD OF BRAND & MARKETING



LUCA TRIMIGNO

HEAD OF STRATEGIC PROJECTS

The success of our dry eye solutions have set a global market standard.

1.100+
Devices Installed

50+
Countries

400.000+
Dry Eye Treatments Carried-out with our Devices in 2021

110%+
Increase in Treatments Carried-out with our Devices in 2021

The scientific community already crowned the efficacy of our tech.

10+
Global KOLs in Ophtalmic Surgery Endorsing the Espansione Ecosystem

4+
TFOS Ambassadors Endorsing the Espansione Ecosystem

25+
Research Papers+articles on the Efficacy of Espansione Tech

2000+
Patients Used as Sample by our Research Papers, Worldwide

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Every day, every specialist visits patients affected by:

82% POST-REFRACTIVE SURGERY DRY EYE DISEASE (DED)
32% DRY EYE DISEASE DUE TO MEIBOMIAM GLANDS DISCOMFORT (MGD)
34% DEMODEX
22% BLEPHARITIS (DEMODEX-INDUCED OR OTHER)
21% CONTACT LENS DISCOMFORT (CLD)
12% CHALAZION
12% ECTROPION
10% STYE
3% SJÖGREN'S SYNDROME

All of these pathologies can be treated effectively through Espansione Group's technologies.

SOURCE: TFOS DEW II REPORT

Today though, we'll focus on Dry Eye Disease —i.e., DED.

DED, or dry eye disease, is one of the most underestimated disorders in our society.



Dry Eye Disease (DED) is a disease condition that causes eye irritation and redness, blurred vision and in some cases the scarring of the cornea.

SOURCE: VISION NEEDS MONITOR, 2020, PIPER SANDLER 2021, TECHNAVIO

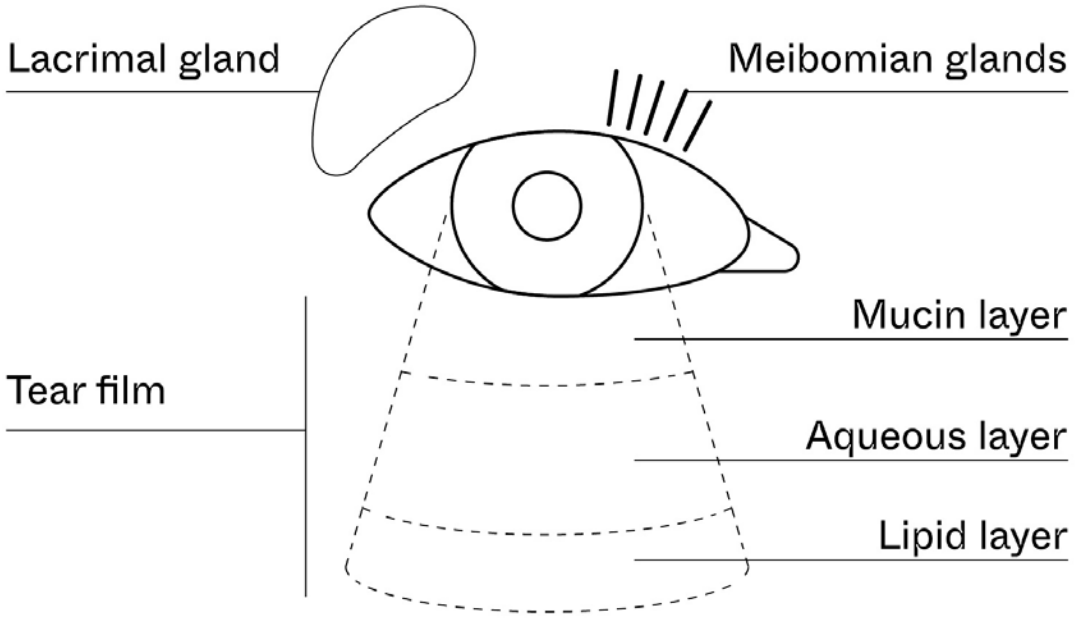
To solve it, we had to target the main root cause of the disease —meibomian glands dysfunction (MGD).

The DED is
a multi-factorial disease.

A number of factors
indeed contribute
to the arising of one
specific condition:
meibomian glands
disease—i.e., MGD.

Age
Hormonal Imbalances
Menopause
Contact Lens Usage
Demodex
Refractive Surgery
Surgical Masks Usage
Blue Light Exposure
Air Pollution

Over 85% of DED cases are caused by a dysfuncion of Meibomian Glands (MGD), which can cause lower tear production and higher tear evaporation (i.e. evaporative dry eye).



[1] VISION NEEDS MONITOR, 2020, PIPER SANDLER 2021, TECHNAVIO

Most importantly, majority of people do not recognize the symptoms and/or do not know they are suffering from DED.

>740M

Patients Are Affected by DED, Worldwide

1 out of 5 people in western countries claims to have symptoms attributable to DED.

>55%

of Patients in the USA Suffering from DED Are Not Diagnosed

 SOURCE: VISION NEEDS MONITOR, 2020, PIPER SANDLER 2021, TECHNAVIO

DED is also responsible for suboptimal refractive power measurements, leading to errors in lens power calculation as well as for refractive surgery.

>80%

of Patients Wish There Was Something
Effective to Treat Their Dry Eye Conditions

 SOURCE: VISION NEEDS MONITOR, 2020, PIPER SANDLER 2021, TECHNAVIO

However, only 20% of DED patients follow appropriate therapeutic treatment—the remaining 80% live with the disease, without managing it.

+/-1.0 D

Variation in Lens Power Calculation
With People with Unstable Tear Film

>$6B

Total Dry Eye Market Size (2020)

+20%

CAGR 2020-2023 in the Device Segment

>$10B

Potential Market Opportunity
for MGD Treatment

The Dry Eye Market is already a sizeable market and one of the fastest growing segments in Ophthalmology and Optometry.

SOURCE: VISION NEEDS MONITOR, 2020, PIPER SANDLER 2021, TECHNAVIO

Current practices mainly target symptoms instead of the root causes, being often unsatisfactory and ineffective.

PRESCRIPTION+OTC DRUGS
> Artificial Tears, Food Supplements

1. Targets symptoms
2. Limited effectiveness
3. Potentially severe side-effects
4. Needs patient's compliance
5. Limited revenues for practitioner

MGX TREATMENTS
> Meibomian Glands Expression

1. Target symptoms
2. Limited effectiveness
3. Uncomfortable and invasive
4. Potentially needs anesthesia
5. Expensive procedure
6. Limited revenues for practitioner

IPL TREATMENTS
> Intense Pulsed Light, BBL

1. Indirectly target root causes
2. Limited effectiveness
3. Treats only lower eyelid
4. Needs gel and patient protection
5. Limited revenues for practitioner

Current tech solutions are outdated and have limited effectiveness.

> No Action on Root Causes
> Partial Treatment of MGD
> Long, Invasive, Difficult Procedures
> No Systemic Approach to Effectively Screen DED

 SOURCE: VISION NEEDS MONITOR, 2020, PIPER SANDLER 2021, TECHNAVIO

Espansione has set a new medical standard with its patented, cutting-edge technologies and devices—everything built in what we call the Espansione Ecosystem.

> 1 ESPANSIONE GROUP
> 2 DED & BEYOND
> 3 ESPANSIONE ECOSYSTEM
> 4 TREATMENT PROTOCOLS
> 5 SCIENCE COMPENDIUM

Ecosystem is the term we use to describe the synergy between our technologies and the solutions that leverage on them.

Ecosystem is the term we use to describe the synergy between our technologies and the solutions that leverage on them.

We strongly believe in investing on both ends of the spectrum with care and attention, granting an optimal experience for both operators and patients.

1
Light Modulation®
Low Level Light Therapy
> LLLT

2
Optimal Power Energy®
Intense Pulsed Light
> IPL

1
Light Modulation®
Low Level Light Therapy
> LLLT

2
Optimal Power Energy®
Intense Pulsed Light
> IPL

Stabilizing the tear film is paramount for good ocular health.

SOURCE: TFOS DEWS II TEAR FILM REPORT

LM® LLLT is our patented photobiomodulation technology.

It enables us to optimally treat MGD and many other ocular surface pathologies.

By increasing and stabilizing patients' lacrimal film, LM® LLLT grants us to manage DED long term, better than any other technology[1] currently available on the market.

[1] STONECIPHER ET AL, CLINICAL OPHTHALMOLOGY JOURNAL, 2019, SIGNIFICANT EFFECTIVENESS ON A SAMPLE OF 200 PREVIOUSLY UNSUCCESSFULLY TREATED WITH OTHER TECH

LM® LLLT can be leveraged employing three different light frequencies—each with its own unique benefits and use cases.

Red Light

> USED FOR INFLAMMATION REDUCTION, ATP PROD. STIMULUS

OPHTHALMOLOGY USE: MGD, CHALAZION, SJÖGREN'S SYNDROME, STYE, BLEPHARITIS, PRE-/POST- REFRACTIVE SURGERY

Blue Light

> USED FOR BACTERIA ELIMINATION

OPHTHALMOLOGY USE: DEMODEX, BLEPHARITIS, CHALAZION

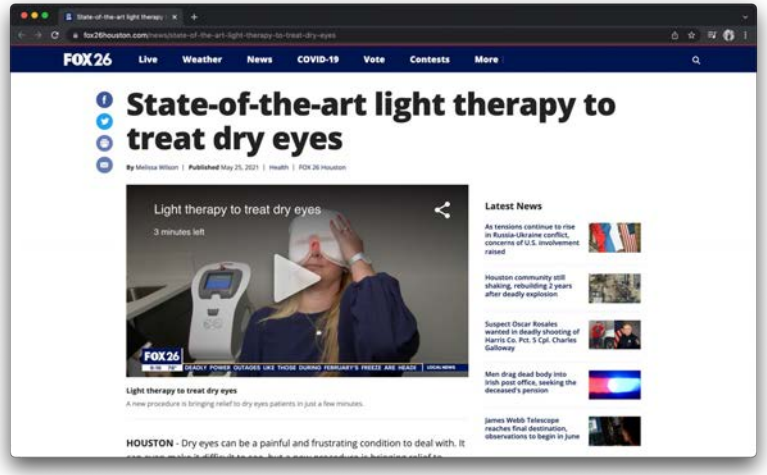
Yellow Light

> USED FOR DRAINAGE + SWELLING REDUCTION

OPHTHALMOLOGY USE: POST-INVASIVE SURGERY (E.G., BLEPHAROPLASTY)

Light Modulation® LLLT triggers endogenous heating of both eyelids, stimulating ATP production, removing blockage from meibomian glands —and it does so with zero discomfort.

We've been featured on Fox News —check it out!



> LINK TO ARTICLE + TV BROADCAST

Thermography studies recently run have shown upper and lower meibomian glands being simultaneously, directly treated at optimal temperature—i.e., 42°C, through LM® LLLT.

Light Modulation® LLLT triggers endogenous heating to both eyelids, stimulating ATP production and removing blockage from meibomian glands preventing proper functioning—and it does so with zero discomfort for the patient

SOURCE: PULT, H. (2020). LOW-LEVEL LIGHT THERAPY IN THE TREATMENT OF MEIBOMIAN GLAND DYSFUNCTION. INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, 61(7), 99-99.



LM® LLLT is powered by custom LED tech, governed by two CPUs that manage its intensity, duration and wavelength via strict medical protocols.

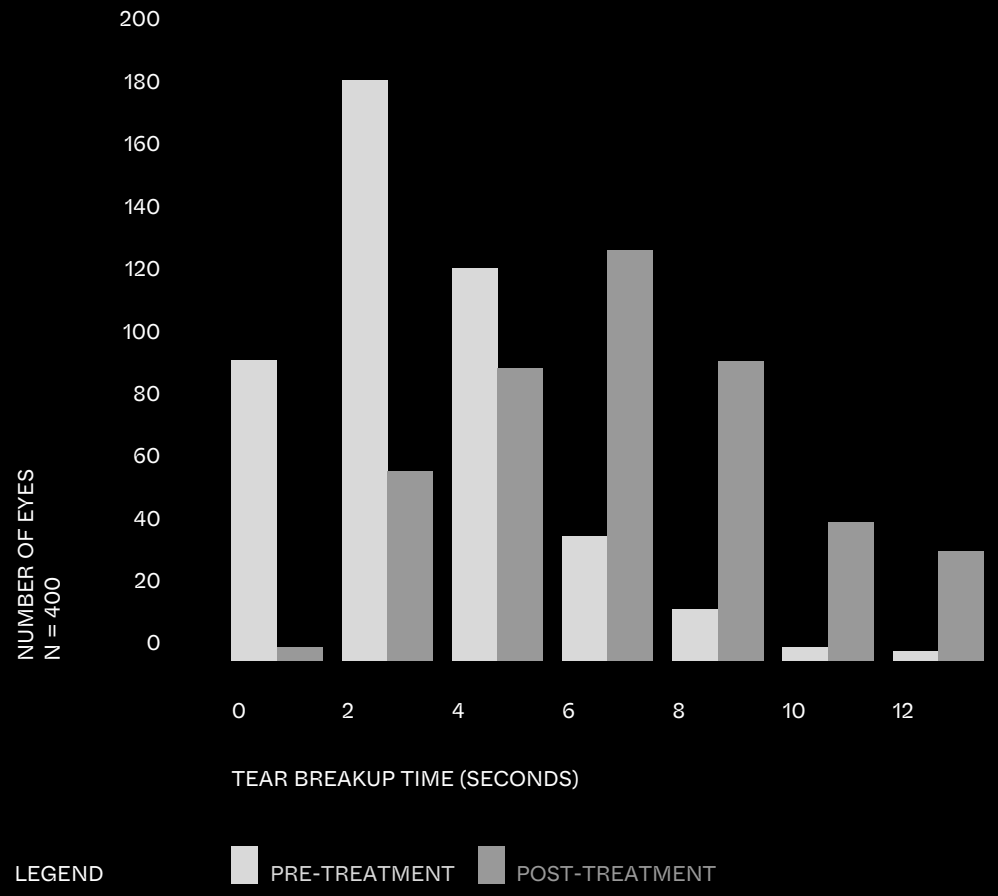
MASK TERMINAL
CERTIFIED
MEDICAL LEDs



A recent scientific paper has confirmed that LM® LLLT, employed jointly with OPE® IPL, is the key factor in effectively managing the most severe cases of recalcitrant MGD.

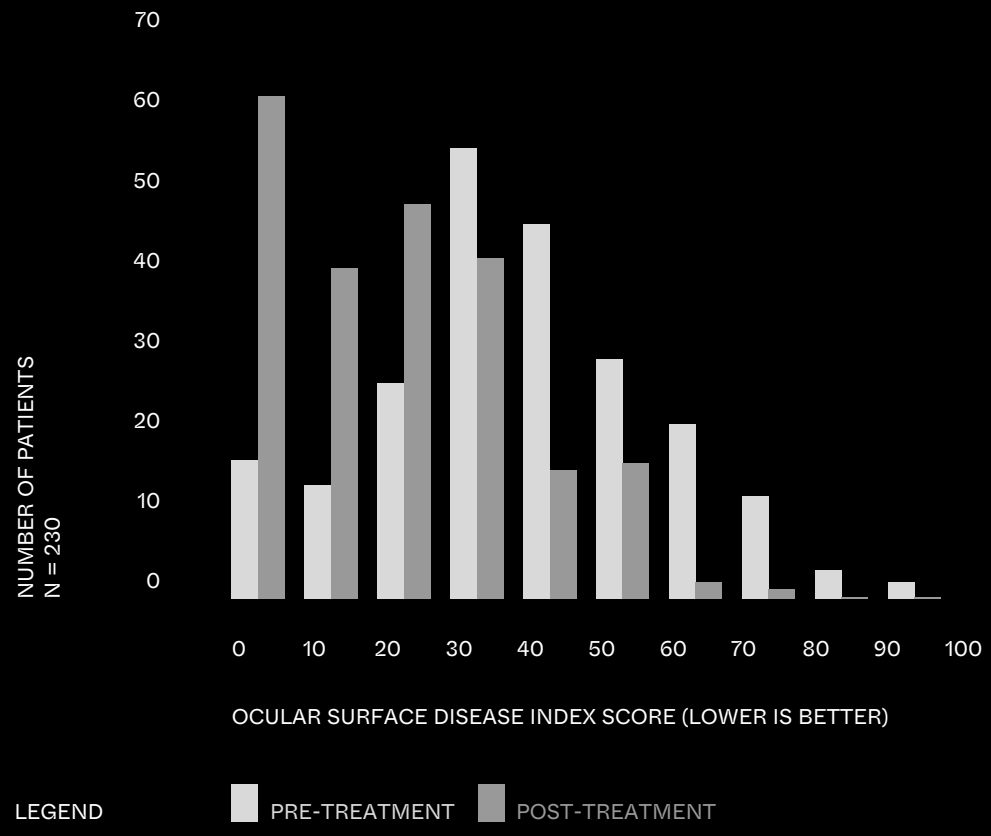


Studies show that tear production quality increases dramatically, as the treatment nearly doubles tear breakup time, resulting in immediate relief of symptoms.



SOURCE: KARL STONECIPHER ET AL, CLINICAL OPHTALMOLOGY JOURNAL, 2019, DOVEPRESS

And consequently,
the treatment improved
by 10% or more
the patient's ocular
surface disease index
—i.e., OSDI Index,
in over 70% of cases,
with only one treatment.



 SOURCE: KARL STONECIPHER ET AL, CLINICAL OPHTALMOLOGY JOURNAL, 2019, DOVEPRESS

1
Light Modulation®
Low Level Light Therapy
> LLLT

2
Optimal Power Energy®
Impulse Power Light
> IPL

We designed OPE® IPL as a polychromatic light whose thermal impulses are calibrated via software to always be emitted at just the right intensity, providing an extremely high degree of safety and effectiveness.

We designed OPE® to be the best IPL on the market.

We invested heavily in designing an IPL technology that could minimize risk for the patient whilst maximizing ease of use for the operator.

Our patented OPE® IPL is the only pulsed light worldwide allowing for usage without any gel —unlike competitors' solutions, OPE® IPL is built to automatically set the intensity of the pulsed light beam to an optimal level, thus not requiring any protective substance on the skin.



Our technologies are built seamlessly into all our solutions.

We craft our solutions in Italy, with the greatest care and attention to their industrial design, durability and safety.



meibomask® close-up shot

We craft our solutions in Italy, with the greatest care and attention to their industrial design, durability and safety.

Every single unit is tested singularly to maintain the highest standard of quality.



eye-light® rear shot



eye-light®

LM® LLLT + OPE® IPL
PROFESSIONAL
DEVICE



TERMINAL
OPE® IPL LAMP

meibomask®

LM® LLLT-ONLY
PROFESSIONAL
DEVICE



TERMINAL
LM® LLLT MASK
—OPHTHALMOLOGY USE

my-mask®

LM® LLLT-ONLY
HOME-USE
DEVICE



TERMINAL
LM® LLLT MASK
—OPHTHALMOLOGY USE

me-check®

SCREENING
DIAGNOSTIC DEVICE



eye-light®

LM® LLLT + OPE® IPL
PROFESSIONAL
DEVICE



TERMINAL
OPE® IPL LAMP

TERMINAL
LM® LLLT MASK
—OPHTHALMOLOGY USE

meibomask®

LM® LLLT-ONLY
PROFESSIONAL
DEVICE



my-mask®

LM® LLLT-ONLY
HOME-USE
DEVICE



TERMINAL
LM® LLLT MASK
—OPHTHALMOLOGY USE

me-check®

SCREENING
DIAGNOSTIC DEVICE



eye-light®
is our flagship solution,
featuring both our
core technologies,
for non-invasive
treatment of most
ocular surface
conditions.



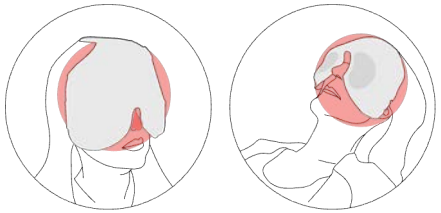
eye-light® is built with three elements: the device, from which the treatments get set, and the two terminals —one for OPE® IPL and one for LM® LLLT.

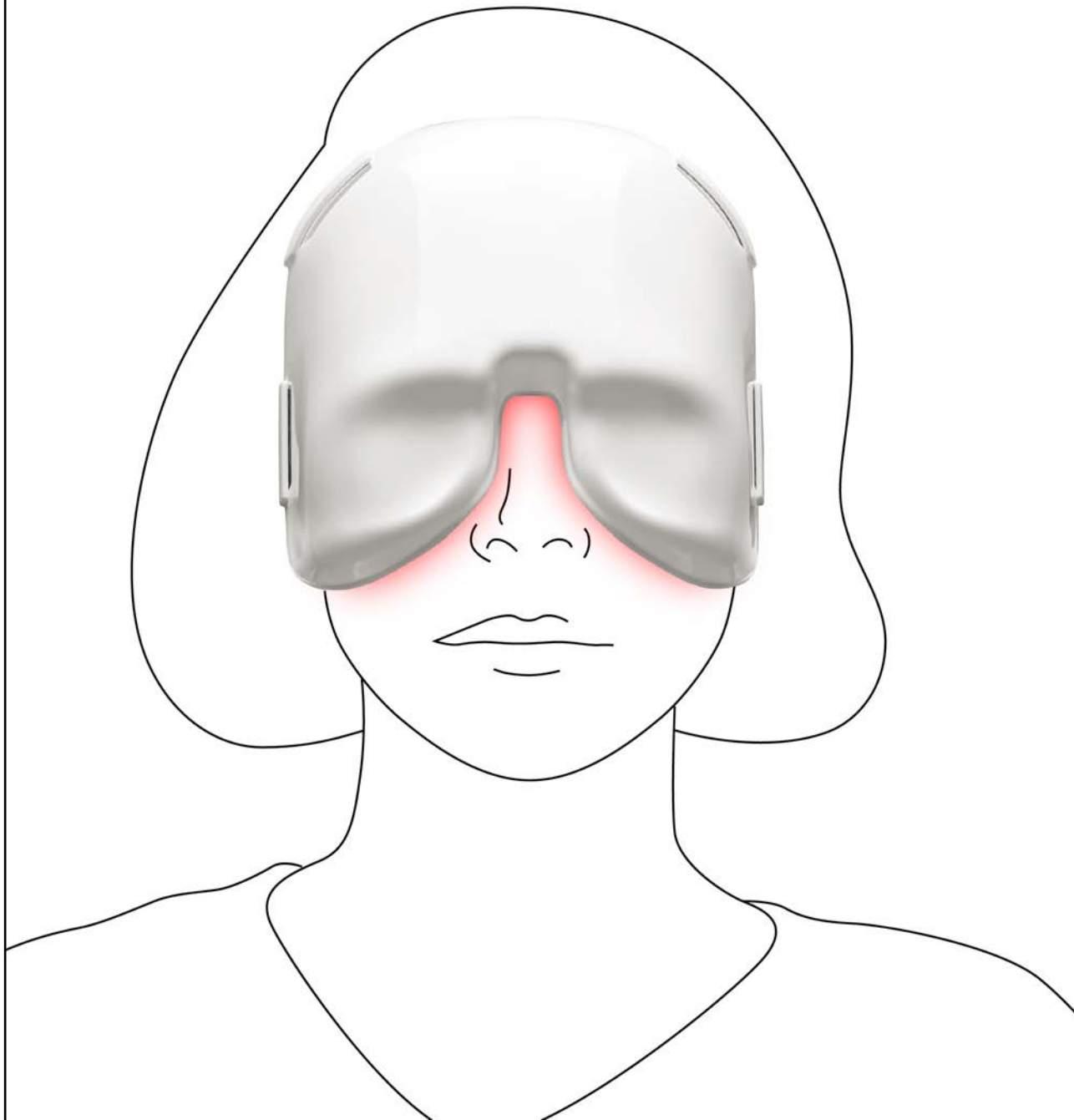


Through eye-light® both operators and patients can enjoy the unique benefits of LM® LLLT technology.

eye-light® and LM® LLLT have many benefits:

i. it's fast—a treatment lasts 15'
ii. it's painless
iii. it grants immediate relief to the patient
iv. it's easy and safe for the operator
v. it's *plug&play*—it doesn't require the operator to be constantly present during the treatment







eye-light®

LM® LLLT + OPE® IPL
PROFESSIONAL
DEVICE



TERMINAL
OPE® IPL LAMP

meibomask®

LM® LLLT-ONLY
PROFESSIONAL
DEVICE



TERMINAL
LM® LLLT MASK
—OPHTHALMOLOGY USE

my-mask®

LM® LLLT-ONLY
HOME-USE
DEVICE



TERMINAL
LM® LLLT MASK
—OPHTHALMOLOGY USE

me-check®

SCREENING
DIAGNOSTIC DEVICE



We believe screening
for MGD and other ocular
surface conditions
shouldn’t be hard
nor expensive,
for both operators
and patients alike.





That’s why we invested heavily in building a diagnosis+screening device that could tackle this challenge easily, quickly and effectively for all—introducing me-check®.

Me-check® is the ultimate solution for screening and diagnosing DED.

It's the only device certified[1] for use also in optic centres.

> ME-CHECK® TABLET



> ME-CHECK® STATION

[1] CE CLASS II DEVICE

We built me-check® leveraging on modularity for it to be as versatile as possible.

It can be used in workstation mode, but also as a hand-held device—for maximum flexibility.

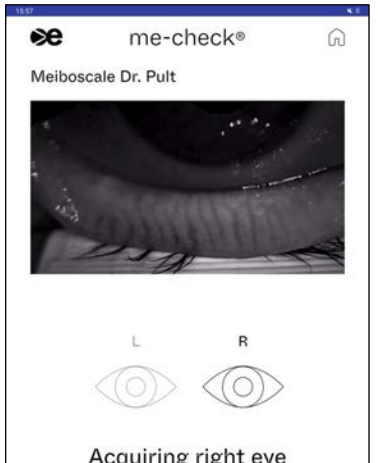


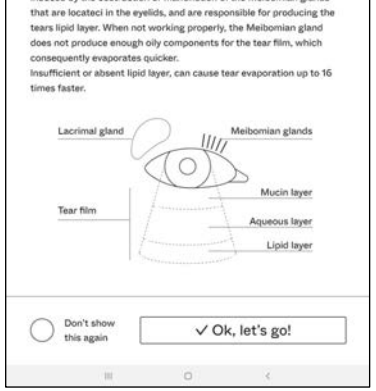
ESPANSIONE ECOSYSTEM
> ME-CHECK® OS

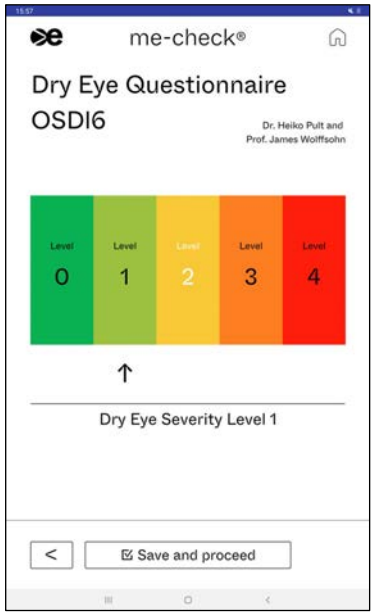
Me-check®'s unique benefit lies in its software.

We built it from scratch through complex mathematical algorithms, packaged with an fresh UI, to provide the operator with a simple and effective screening in under 5 mins.

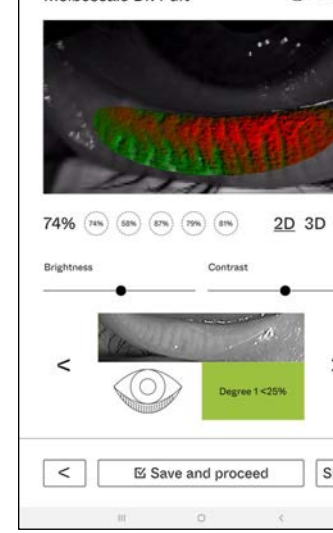


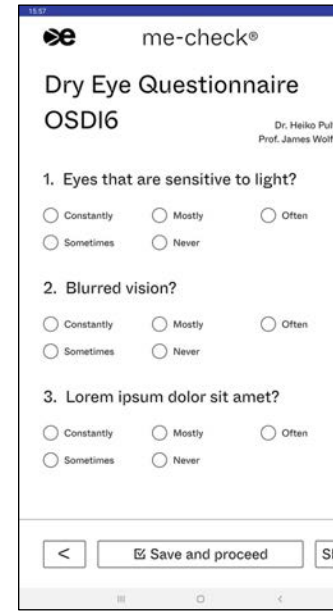












ME-CHECK®
> SCREENING OS, BASIC SOLUTION

The most complete screening device for professionals.

AVAILABLE TESTS

2D Meibography
—in partnership
with Dr. Pult

OSDI-6 Test
—in partnership
with Dr. Wolffsohn

KEY BENEFITS

1. Quick (5')
   > rapid patient turnover
2. Intuitive
   > no training needed
3. Objective Measurement
   > repeatable+consistent

ME-CHECK®
> DIAGNOSIS OS, FULL-FLEDGED SOLUTION

The simplest, fastest device, made for any eye care operator.

AVAILABLE TESTS

3D Meibography (12 levels)
—in partnership
with Dr. Pult

OSDI-6 test
—in partnership
with Dr. Wolffsohn

Demodex Screening

OSE (Ocular Surface Evaluation)

Interferometry*

Blink Quality Test*

KEY BENEFITS

1. Quick (5')
   > rapid patient turnover
2. Intuitive
   > no training needed
3. Objective Measurement
   > repeatable+consistent
4. Upgradeable
   > always up to date
5. Automatic
   > no input needed
6. Comprehensive Reporting
   > all analyses in one place

(*) AVAILABLE SOON VIA OS UPDATE

1 Eye Test

Both eyes are tested —e.g., through a 2D/3D Meibography for DED.

The average eye test is conducted within 5', start to finish, with no harm nor discomfort for the patient. The result is repeatable and consistent.

2 OSDI-6

An OSDI-6 questionnaire is conducted to complete the results of the eye test.

The questionnaire is conducted by the practitioner, requires no more than 5' and the results are input straight into me-check® OS.

3 Diagnosis

The me-check® OS provides a comprehensive overview of the patient's conditions leveraging Dr. Pult's scale for DED.

4 Treatment

If possible, diagnosis is seamlessly loaded straight into an Espansione solution —e.g., eye-light®, for treatment.

If the me-check® workflow is brought forward without the possibility of an immediate treatment, the diagnosis is sent over directly from the software via email to whoever will treat the patient.

> 1 ESPANSIONE GROUP
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> 5 SCIENCE COMPENDIUM

Pathology	Technology	Protocol > No. Treatments	Protocol > Frequency (Days Apart)
MGD/DED	OPE® IPL + LM® LLLT (Red / Blue / Yellow)	1 to 3	5 to 10
	OPE® IPL LM® LLLT (Red / Blue / Yellow)	2 to 4	2 to 10
Blepharitis	OPE® IPL + LM® LLLT (Red / Blue / Yellow)	2 to 3	5 to 10
	OPE® IPL LM® LLLT (Red / Blue / Yellow)	4 to 5	5 to 10
Chalazion	OPE® IPL LM® LLLT (Red / Blue / Yellow)	2 to 4	4 to 7

LEGEND SINGLE USAGE JOINT USAGE

Pathology	Technology		Protocol > No. Treatments	Protocol > Frequency (Days Apart)
Stye	OPE® IPL	LM® LLLT Red Blue Yellow	2 to 4	4 to 7
Sjögren's Syndrome	OPE® IPL +	LM® LLLT Red Blue Yellow	4 to 5	5 to 10
Pre-/Post-Surgery —i.e., Refractive	OPE® IPL	LM® LLLT Red Blue Yellow	1 to 2	5 to 10

LEGEND SINGLE USAGE JOINT USAGE

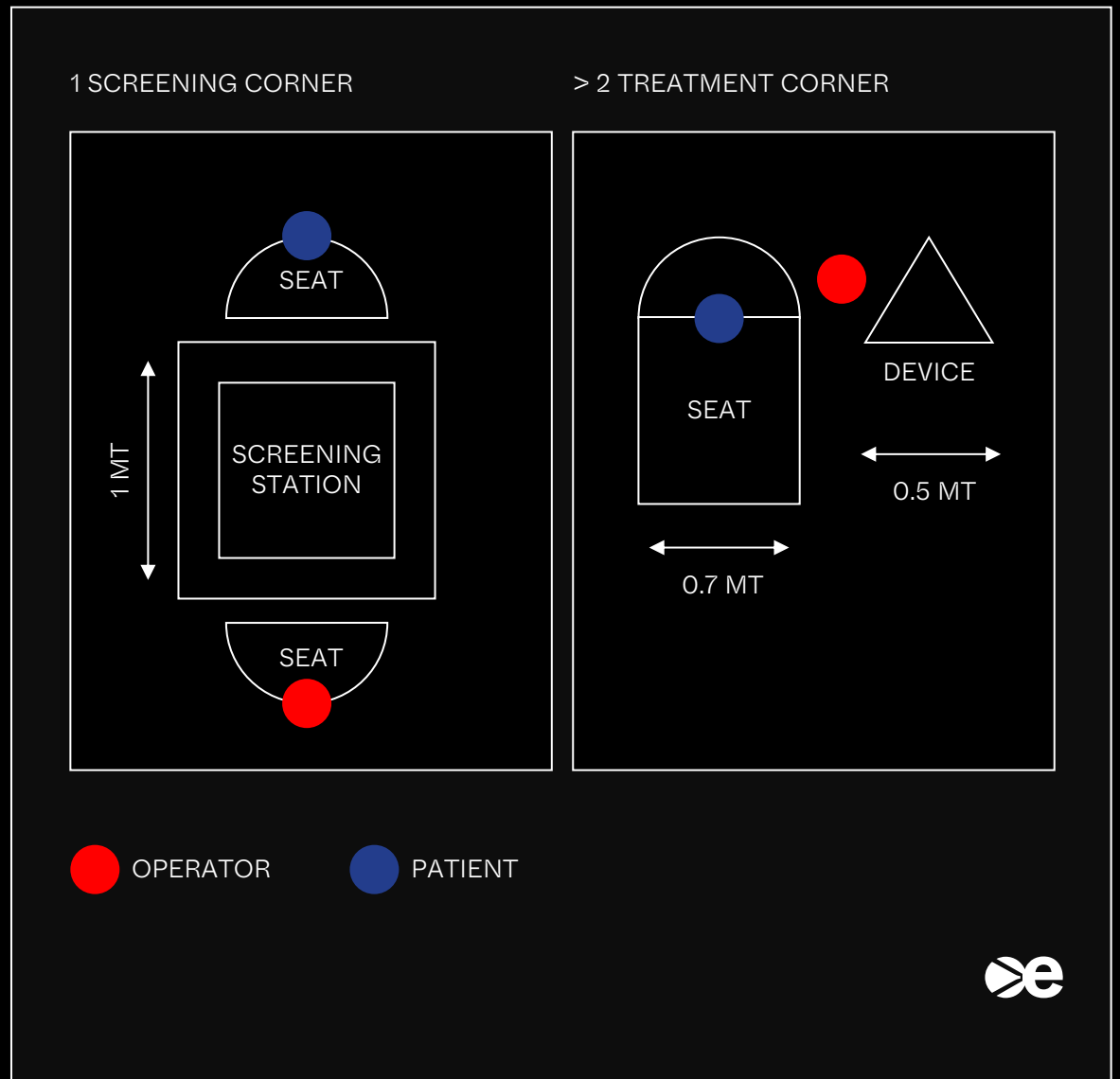
Pathology	Technology		Protocol > No. Treatments	Protocol > Frequency (Days Apart)
Demodex	OPE® IPL	LM® LLLT Red Blue Yellow	2 to 4	5 to 10
Post-blepharoplasty	OPE® IPL	LM® LLLT Red Yellow Blue	2	1x Immediately Post-Surgery 1x 4 to 7 Post-Surgery
Rosacea	OPE® IPL +	LM® LLLT Red Blue Yellow	3 to 5	5 to 10
	OPE® IPL	LM® LLLT Red Blue Yellow	4 to 5	5 to 10

LEGEND SINGLE USAGE JOINT USAGE

Our system is *plug and play*, and can be easily implemented in every location.

Espansione Group solutions have many benefits providing a great experience:

i. limited dimensions and thus lightweight
ii. transportable
iii. independent, no need of other hardware/software
iv. simple training: no need of advanced device know-how from operators
v. quick, seamless experience—i.e., 15 minutes treatment



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The resonance of Espansione technology has been impressive.



Every day, prominent thought leaders in ophthalmology advocate for, and tap into, the possibilities originated by the Espansione ecosystem for their practices.

BEATRICE COCHENER
MD, PHD
FORMER PRESIDENT ESCRS



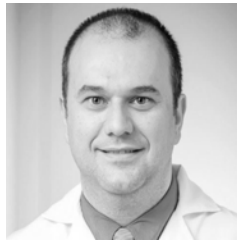
SARAH FARRANT
OD
TFOS AMBASSADOR



PAUL KARPECKI
OD
TFOS AMBASSADOR



DAVID PIÑERO
PHD, OD
>200 PAPERS PUBLISHED



KARL STONECIPHER
MD
AAO, ISRS, ASCRS AMB.



ROHIT SHETTY
MD, PHD
KOS, ASCRS AMBASSADOR



ELISABETH M. MESSNER
MD, F.E.B.O.
PROFESSOR



HEIKO PULT
MD, PHD
TFOS AMBASSADOR



We developed me-check® and other solutions of the Espansione ecosystem in partnership with valued key opinion leaders.

HEIKO PULT
OD, PHD



QUALIFICATIONS

Optometrist at College of Optometry Munich, Germany

MSc (Optometry) at PCO Salus University, Philadelphia, USA

PhD (Vision Sciences) at School of Optometry and Vision Sciences, Cardiff University, Cardiff, UK

Hon. – Vis. Prof. at Cardiff University, Cardiff, UK

Academic Fellow at Aston University

MEMBERSHIPS

Fellowship+Founding Member European Academy of Optometry and Optics (EAOO)

Fellowship, American Academy of Optometry (AAO)

Fellowship, British Contact Lens Association (BCLA)

Association of Research in Vision and Ophthalmology (ARVO)

Tear Film and Ocular Surface Society (TFOS)

JAMES WOLFFSOHN
OD, PHD



QUALIFICATIONS

Honours degree in Optometry (first class), University of Manchester Institute of Science and Technology (UMIST)

PhD (Cardiff University)

Diplomate of American Academy of Optometry

University of Houston: Adjunct Professor

Aston University: Senior Lecturer

MEMBERSHIPS

Fellowship, American Academy of Optometry

Fellowship, Higher Education Academy

Fellowship, International Association of Contact Lens Educators

Fellowship, British Contact Lens Association

Fellowship of Society of Biology

The patented technologies built into our solutions have been reported as clinically successful in treating all most common ocular surface conditions.

MGD (DRY EYE)	CHALAZION	SJÖGREN'S	BLEPHARITIS	DEMODEX	ECTROPION	ROSACEA	PRE-/POST- SURGERY
17+	2+	1	2+	2	1	3+	1+
SCIENTIFIC PAPERS+ARTICLES	SCIENTIFIC ARTICLES	SCIENTIFIC PAPER	SCIENTIFIC PAPERS, WIP	SCIENTIFIC PAPERS, WIP	SCIENTIFIC PAPER, WIP	SCIENTIFIC PAPERS+ARTICLS	SCIENTIFIC PAPER, WIP

NOTE: PAPER+ARTICLES COUNTED ABOVE REFER TO NON-SPONSORED WORKS DIRECTLY MENTIONING ESPANSIONE TECH AND SOLUTIONS

APPENDIX
> SCIENTIFIC RESEARCH

1. TFOS DEWS II IATROGENIC REPORT – JOSÈ ALVARO P. GOMES, DIMITRI T. AZAR, CHRISTOPHE BAUDOUIN, NATHAN EFRON, MASATOSHI HIRAYAMA, JUTTA HORWATH–WINTER, TERRY KIM, JOBHBIR S. MEHTA, ELISABETH M. MESSMER, JAY S. PEPOSE, VIRENDER S. SANGWAN, ALAN L. WEINER, STEVEN E. WILSON, JAMES S. WOLFFSOHN
2. TFOS DEWS II IATROGENIC REPORT – GOMES JAP, AZAR DT, BAUDOUIN C, EFRON N, HIRAYAMA M, HORWATH– WINTER J, KIM T, METHA JS, MESSMER EM, PEPOSE JS, SANGWAN VS, WEINER AL, WILSON SE, WOLFFSOHN JS
3. CHANGE IN TEAR FILM CHARACTERISTICS IN VISUAL DISPLAY TERMINAL USERS. – YAZICI A1, SARI ES, SAHIN G, KILIC A, CAKMAK H, AYAR O, ERMIS SS. – EUR J OPHTHALMOL. 2015 MAR–APR;25(2):85–9. DOI: 10.5301/EJO.5000525. EPUB 2014 OCT 8
4. THE FORGOTTEN SYMPTOM: DRY EYE IN CATARACT PATIENTS – PREOPERATIVE TREATMENT PROVEN TO LIMIT COMPLICATIONS – OPHTHALMOLOGYTIMES – MARGUERITE MCDONALD, MD FACS
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Thank you.