PIE

JANUS Pro Sunlike

PROPOSAL

English Ver. 01

www.pie.co.kr

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1 Hardware Features

2 Skin Analysis Items

3 Skin Analysis Features

4 PIE's Technical Skills

5 Special Feature

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JANUS Pro Sunlike

1st Generation
2st Generation
3st Generation
4st Generation
5st Generation

5th Generation Face Skin Analyzer **JANUS Pro Sunlike**

Introducing the new **Flagship Model** of PIE Inc.

JANUS Pro Sunlike

That's how it works.

Analysis

Four shots

More than 12 Items

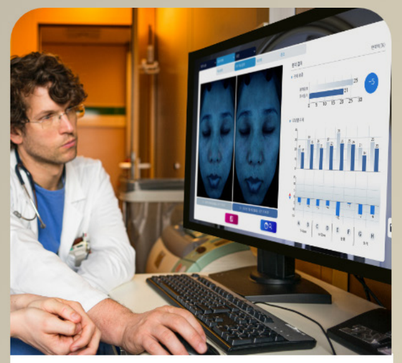
Counseling

Analysis Results

Image Observation

Management

Customized management



Comparison

Change before and after management

Recommend

Custom Products

Satisfaction

Skin improvement

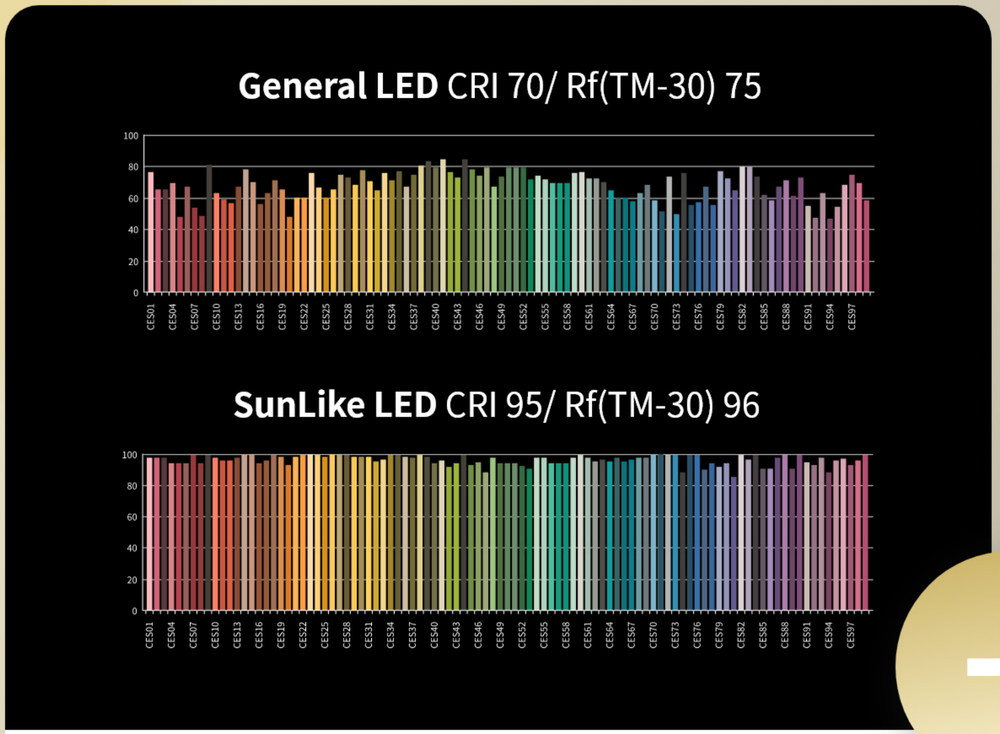
Mobile App Support

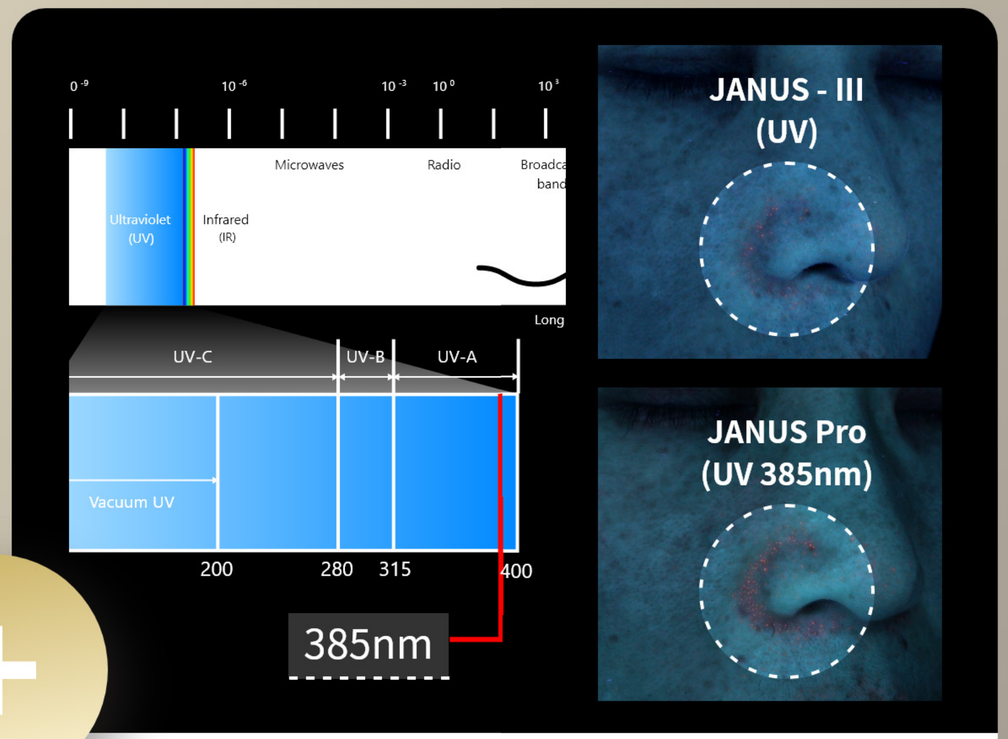
Hardware Features

- Hybrid light source
- Three-dimensional light source design
- Four Light Sources
- Self-sterilization
- Foldable hood
- Tablet PC Mounting

Sunlike LED Light Source

JANUS Pro Sunlike





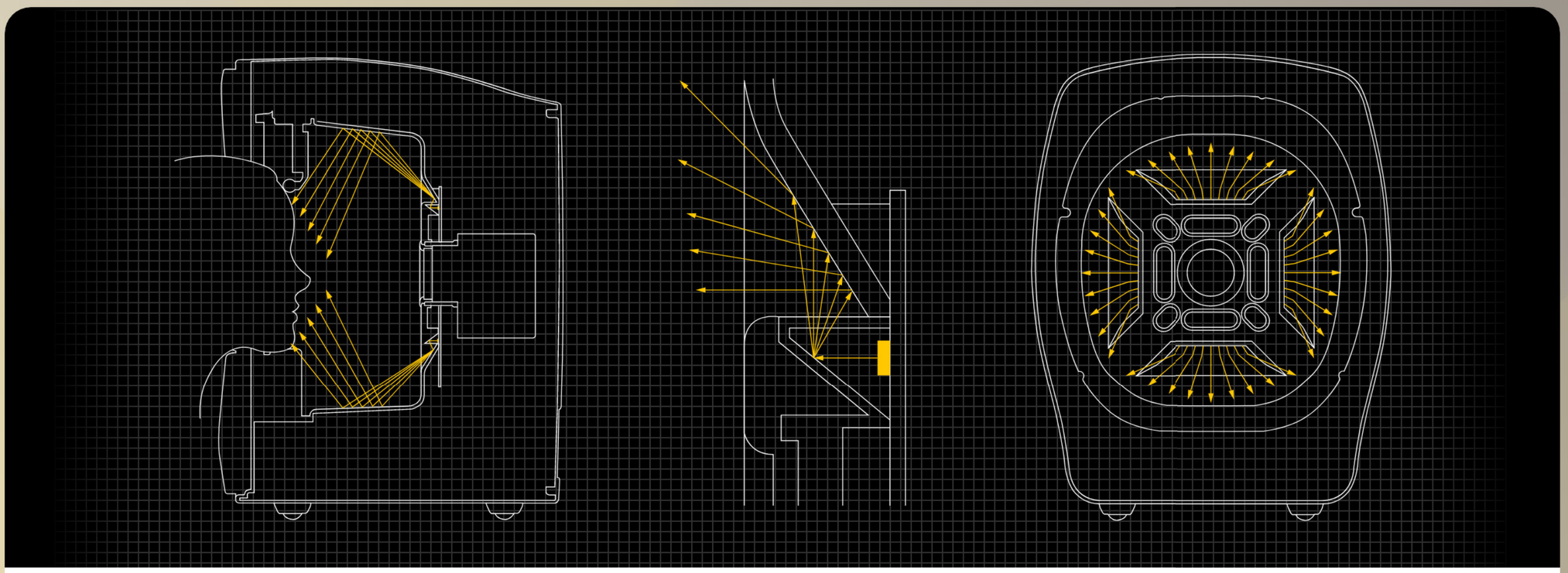
Sunlike LED Light Source

It can show rich colors that are different from normal LEDs and can be used semi-permanently.

385nm UV LED

It is safe with short wavelengths close to visible light and shows sebum, porphyrin, and pigmentation more clearly and accurately.

Three-dimensional light source design



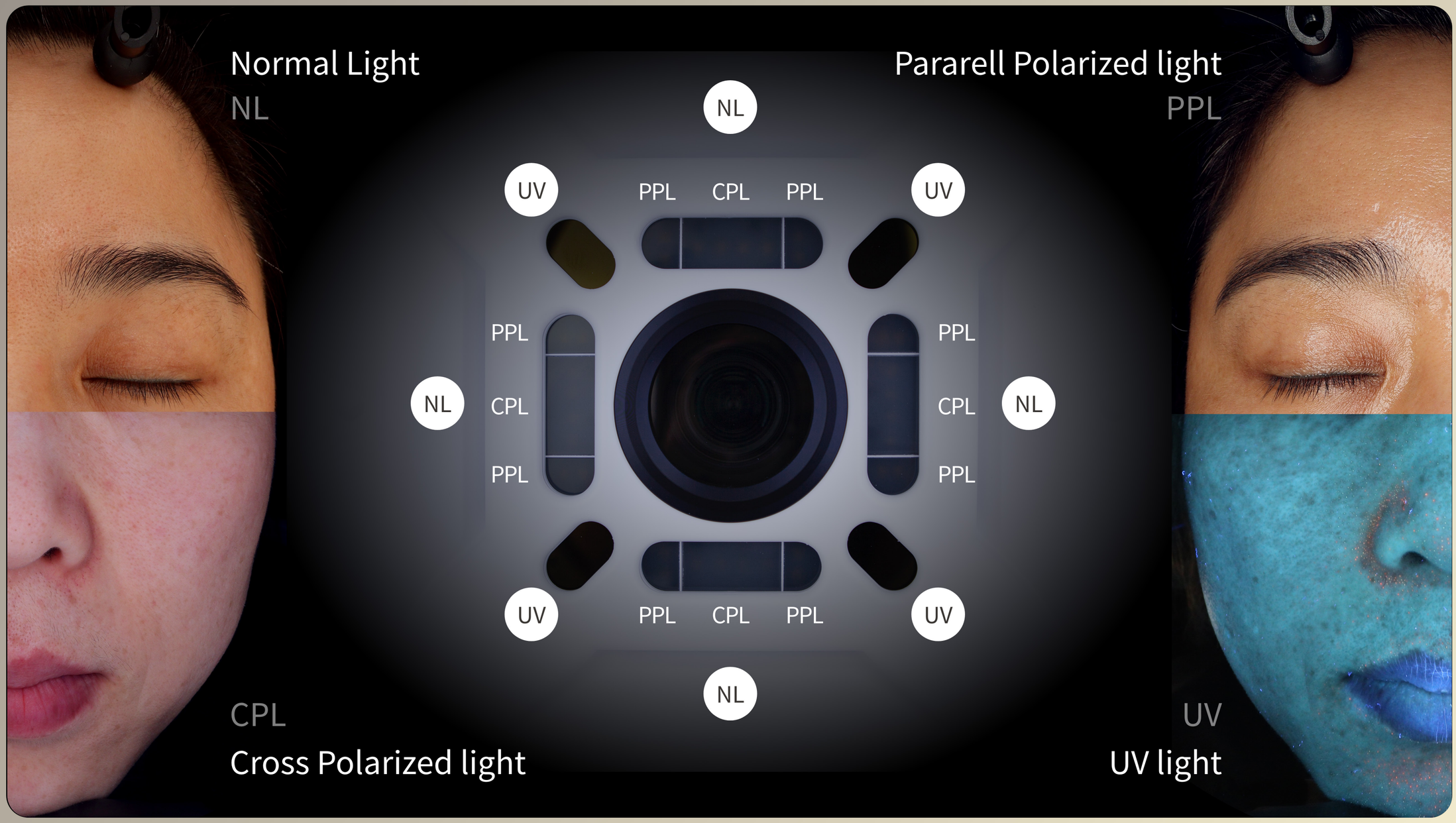
The fruit of efforts for optimal light distribution

We thought about creating a more evenly distributed light source when filming.
Finally, the optimal light distribution was achieved with the new structural design.

Patent Application Number: 10-2020-0168226

4 light sources

JANUS Pro Sunlike



Self-sterilization

violeds

Violeds is a UV LED clean technology with 99.9% sterilization power by optimally designing the wavelength, angle, distance of light without using harmful chemicals.

Industry's first sterilization LED equipped

It is also responsible for the safety of customers using the facial skin analyzer.
Violeds technology eliminates harmful germs and viruses.
Permanent sterilization (UV-A) / Concentrated sterilization (UV-C)
operates in two modes.

Storageable Foldable Hood

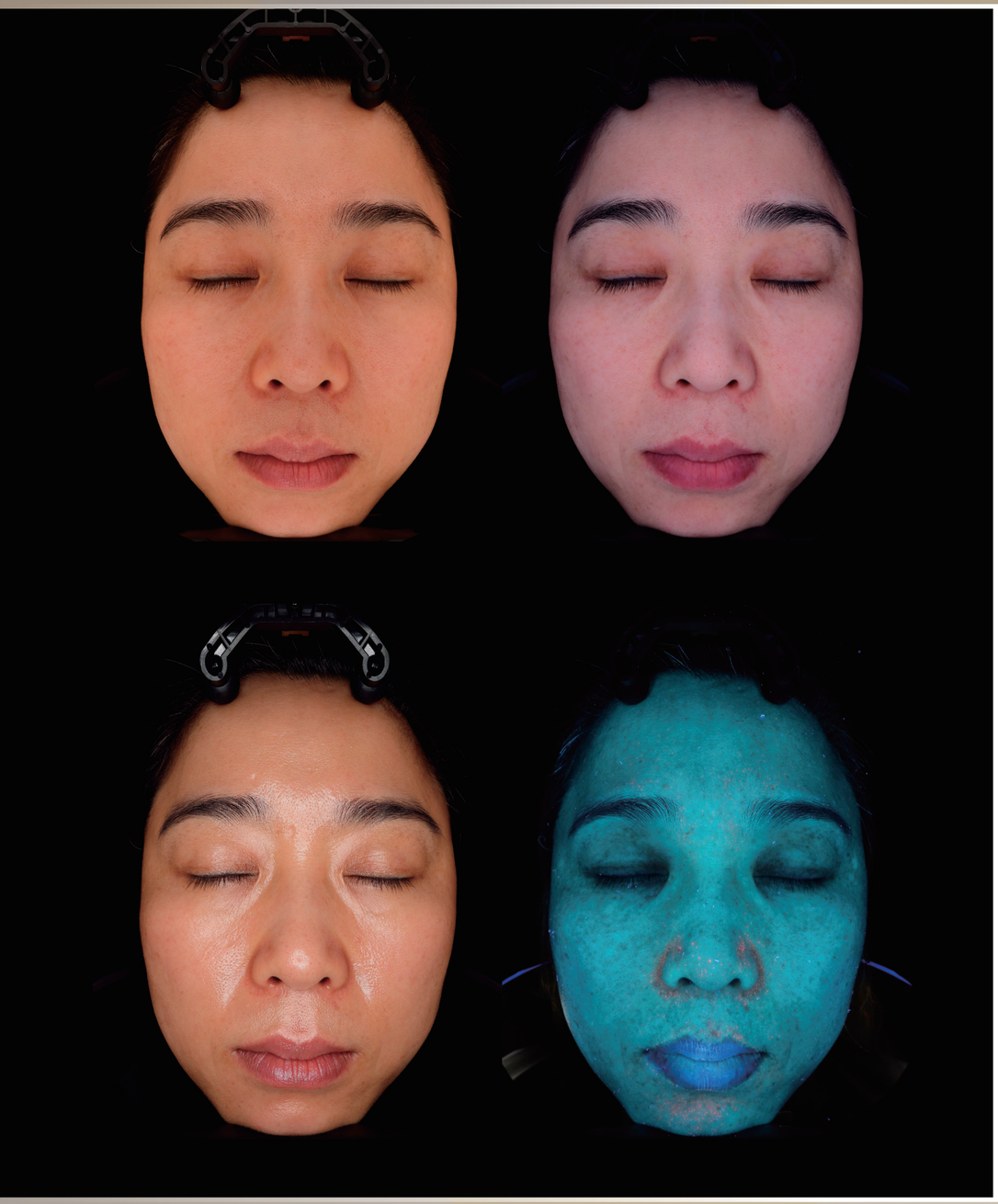
It is made of dustproof and waterproof materials after durability test.
It completely blocks the outer light when filming.
You can fold it lightly with one touch and store it after using

Tablet PC Mounting

JANUS Pro Sunlike

Utilize space efficiently with tablet holder

Tighten the rigid tablet holder to the top of the equipment.
You can use the equipment with just one tablet PC,
without a desktop PC or monitor.



Skin Analysis

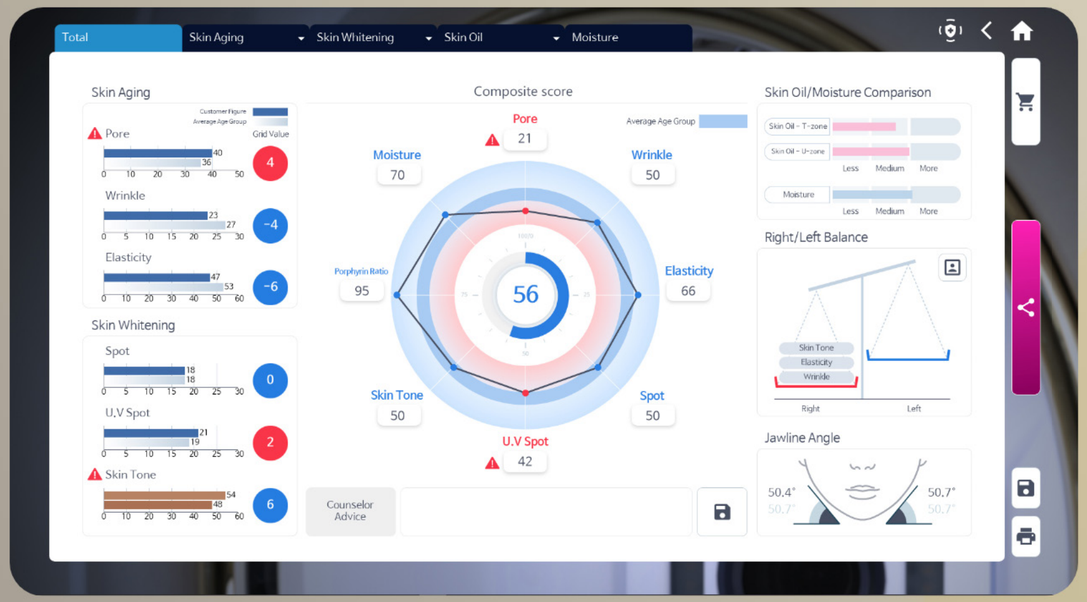
Items

- Overall result
- Skin aging
- Skin whitening
- Oil/Moisture

Overall result

JANUS Pro Sunlike

- Skin Aging
- Scoring 8 Items
- Oil/Water Balance
- Symmetric Picture of Face Side to the Left
- Skin Whitening
- Compare to Age group
- Left and Right Balance of the Skin
- Jawline Angle



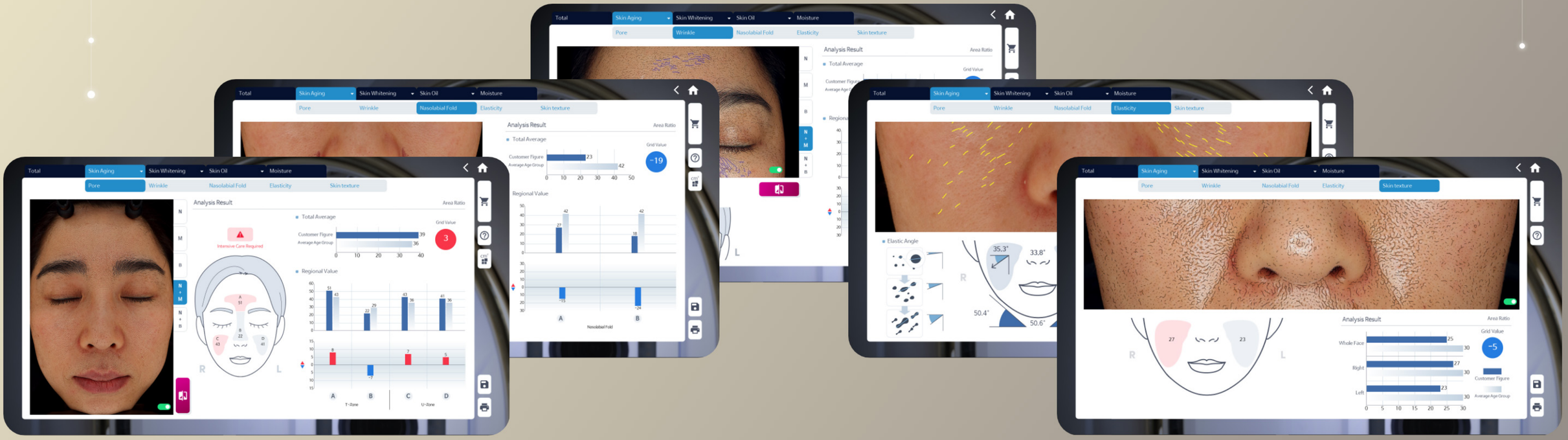
Skin aging

JANUS Pro Sunlike

Pore	Nasolabial folds	wrinkles	Elasticity	Skin texture
Number · Size · Shading	Size · Shading	Number · Size · Shading	Number · Angle	Number · Angle

Analysis

Age comparison



Skin whitening

JANUS Pro Sunlike

Pigmentation
Number · Size · Shading

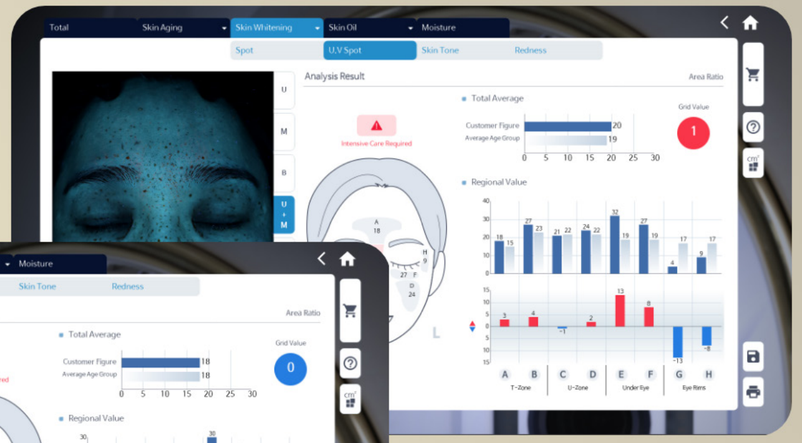
UV pigmentation
Number · Size · Shading

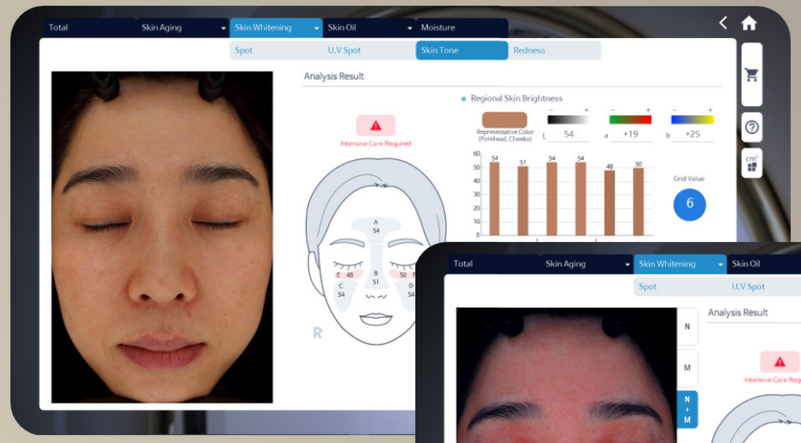
Skin tone
Uniformity of skin color

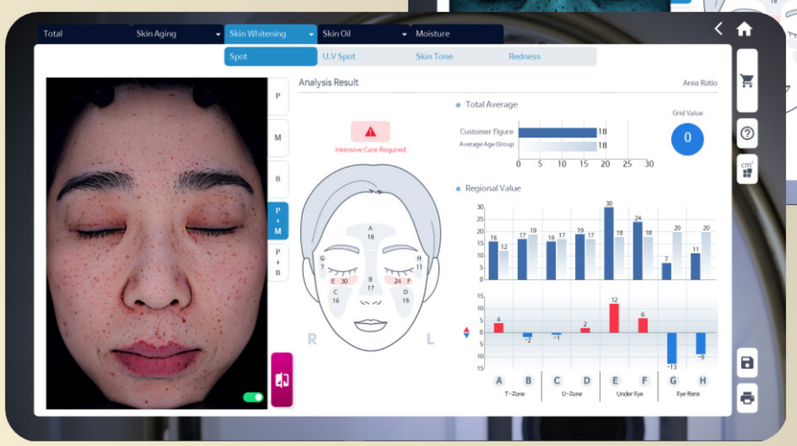
Redness
RED figure

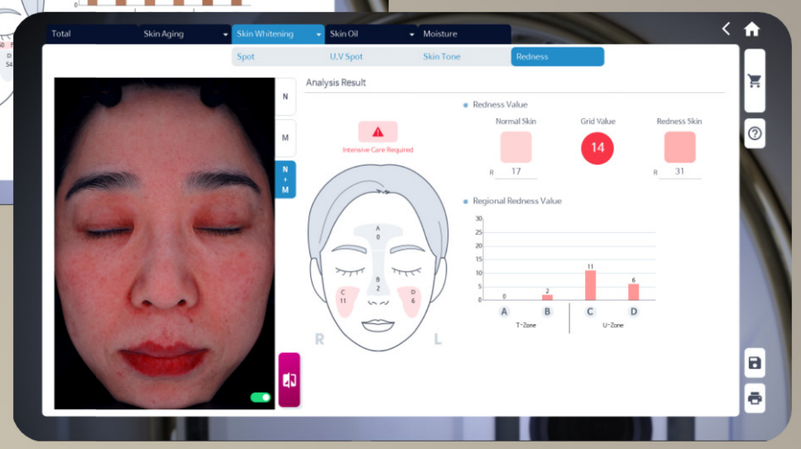
Analysis

Age comparison









Oil/Moisture

JANUS Pro Sunlike

Sebum

Number · Size

Porphyrin

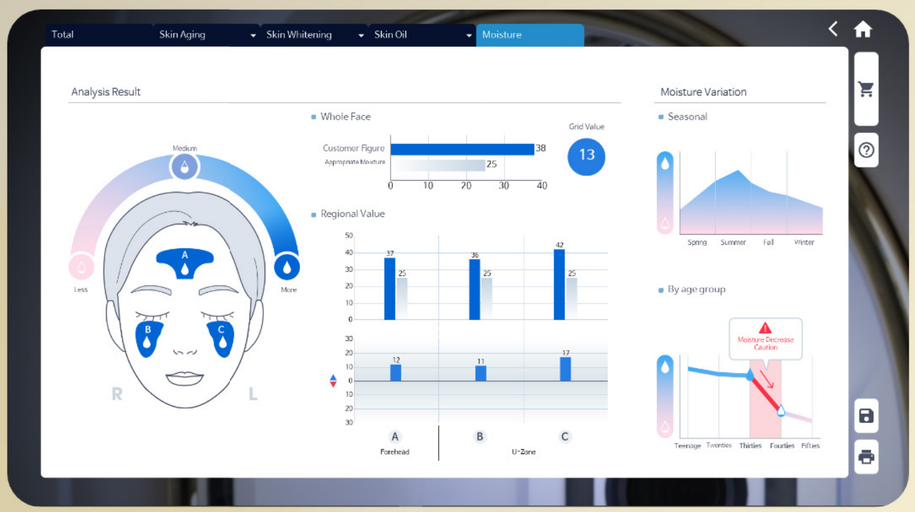
Number · Size

Moisture

Moisture Meter Value

Analysis

Age comparison



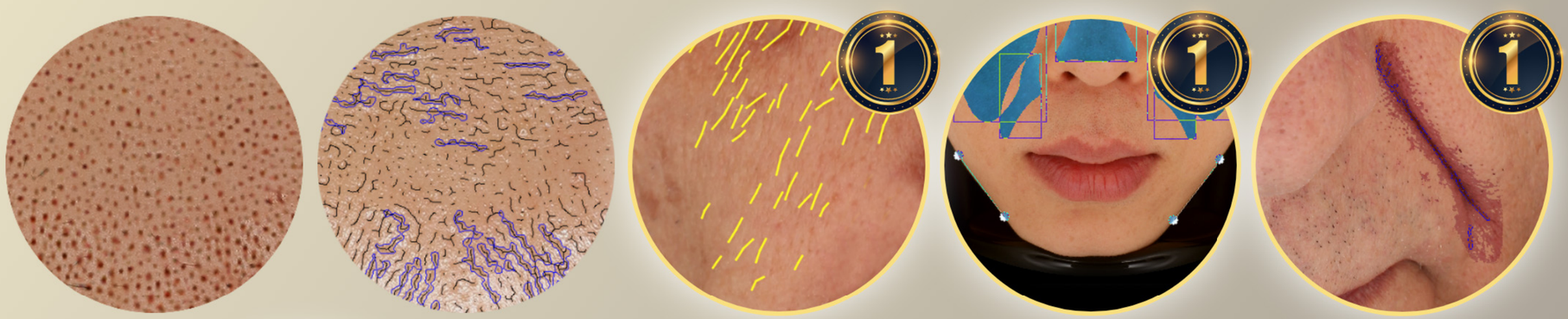
Skin Analysis Features

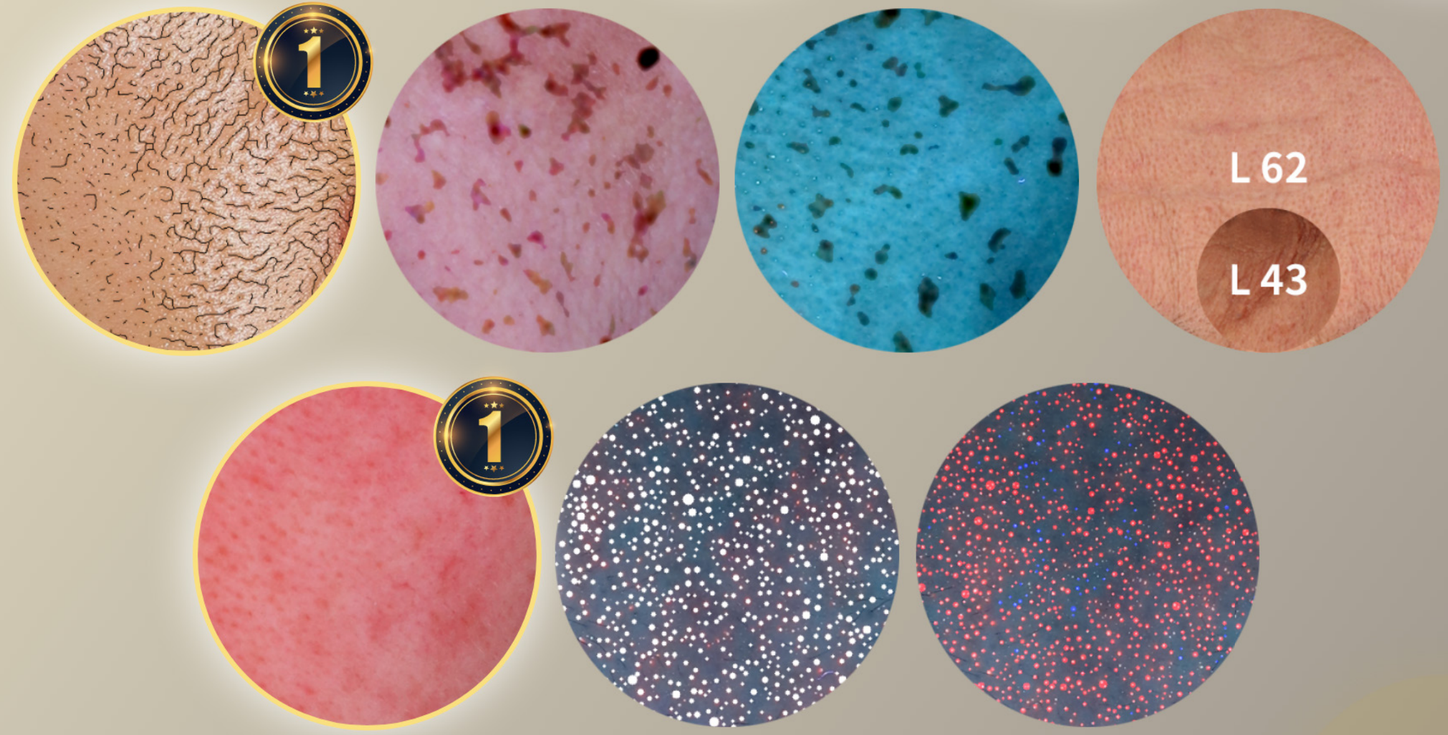
- Differentiated Analysis Items
- Effective viewer functionality
- Outstanding image
- Comparative analysis and product recommendations
- Image Viewer and Field Measurements

Differentiated Analysis Items

JANUS Pro Sunlike

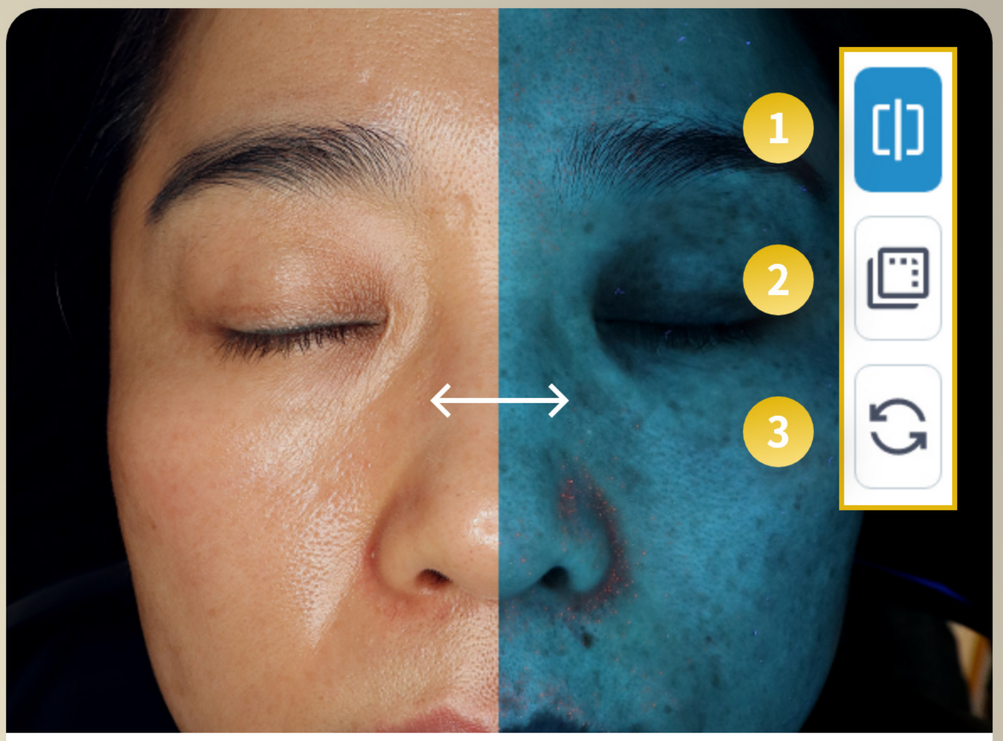
The industry's first standards for dermal analysis.





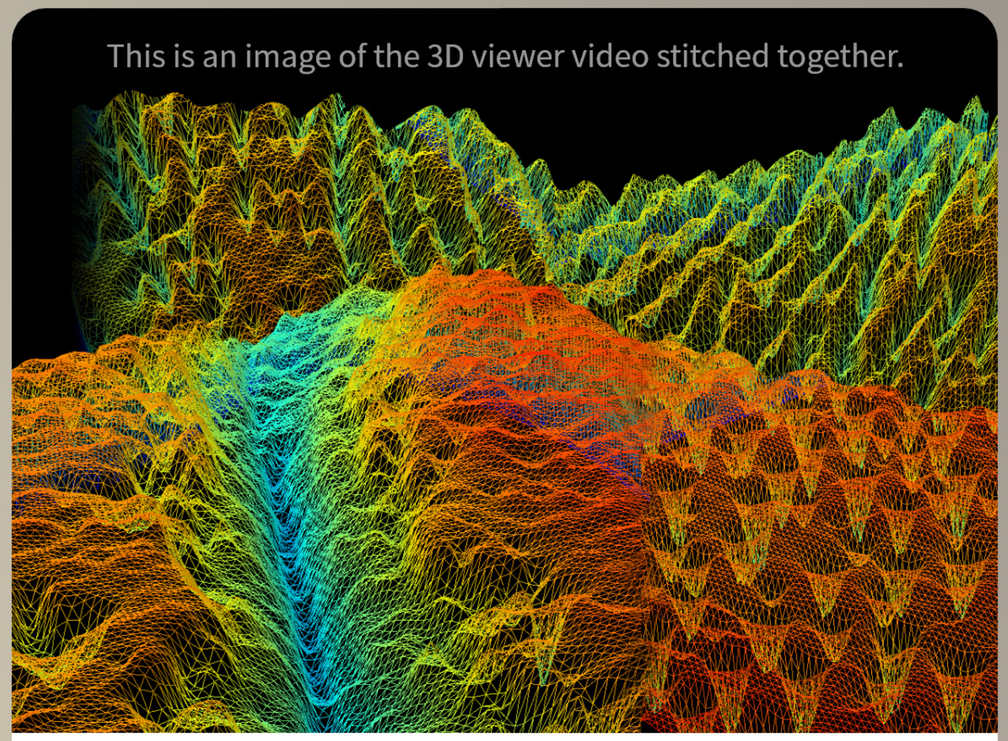
Effective viewer functionality

JANUS Pro Sunlike



Curtain Function - Image switch

By transforming images into different ways,
you can effectively
show your customers skin problems.

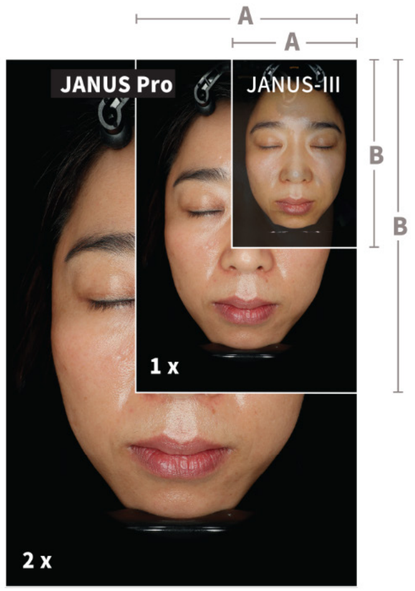


3D Viewer - Skin Surface Observation

Express cross sections of the skin in 3D space
and observe flexion. It is mainly easy to
observe pores and wrinkles.

Outstanding image

JANUS Pro Sunlike



150%

improvement in original image size over 4th generation JANUS.

Provides a high-definition source image

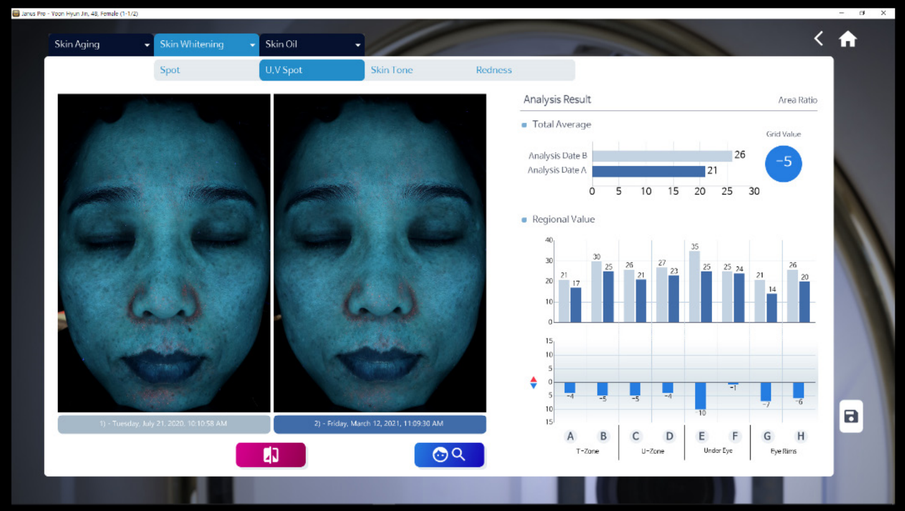
Provides 24.1-megapixel high-definition original images taken with a DSLR camera. Up to 8000 x 12000px (200%) can be magnified to observe.

Sharper filter effect

Express cross sections of the skin in 3D space and observe flexion. It mainly shows pores and wrinkles effectively.

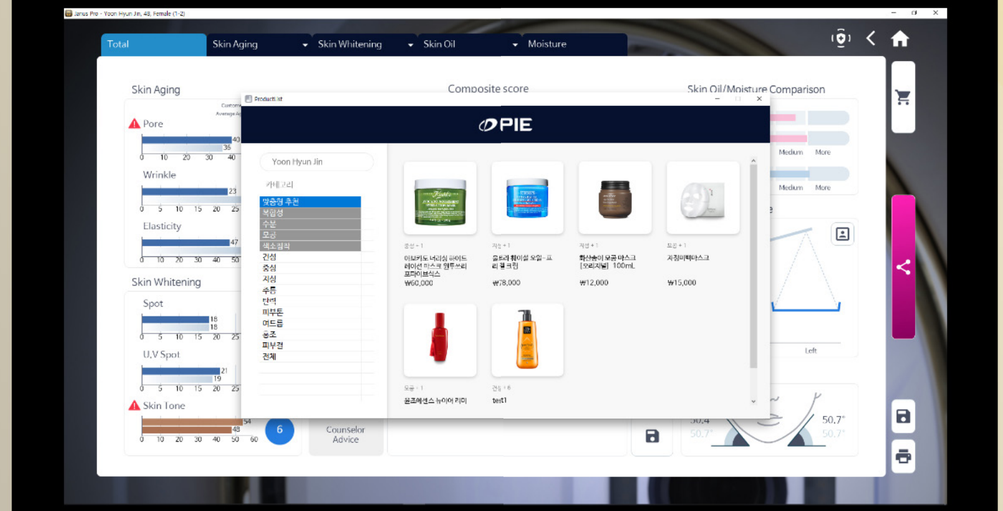
Comparative analysis and Product recommendation

JANUS Pro Sunlike



Before and after comparison analysis

You can accurately show how different your skin is before and after care, and identify which areas you need to focus on later care.



Customized product recommendations

Check the recommended products by item based on analysis results of the analysis. Recognize the needs of products to customers with customized products.

Image Viewer and Field Measurements

JANUS Pro Sunlike

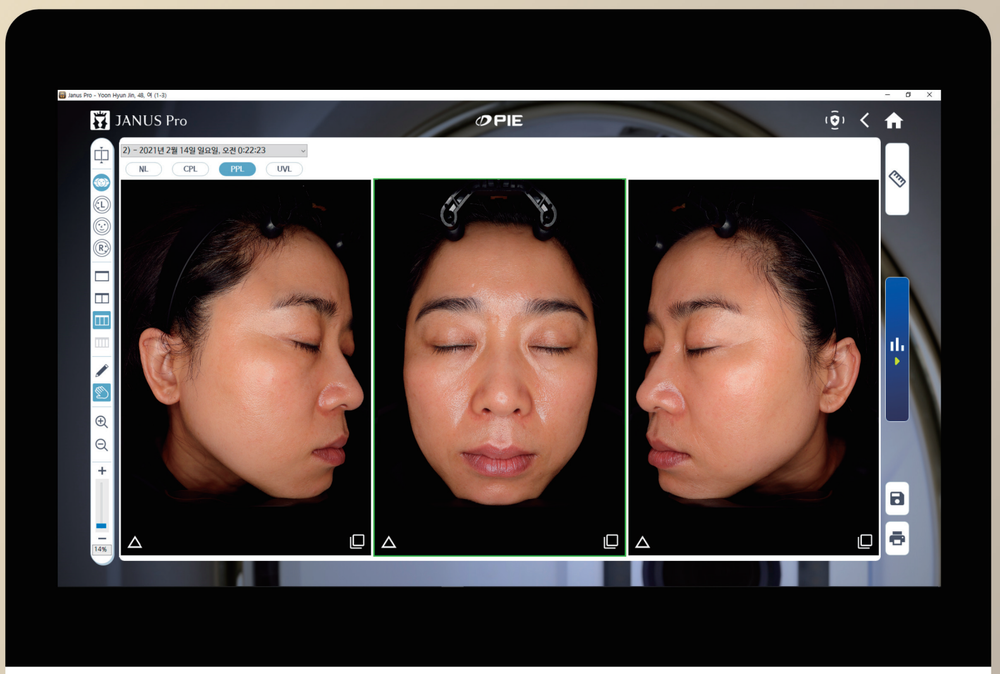


Image at a glance

Effectively observe the desired image by changing the light source or size.
It is easy to see images of the face and all light sources at once.

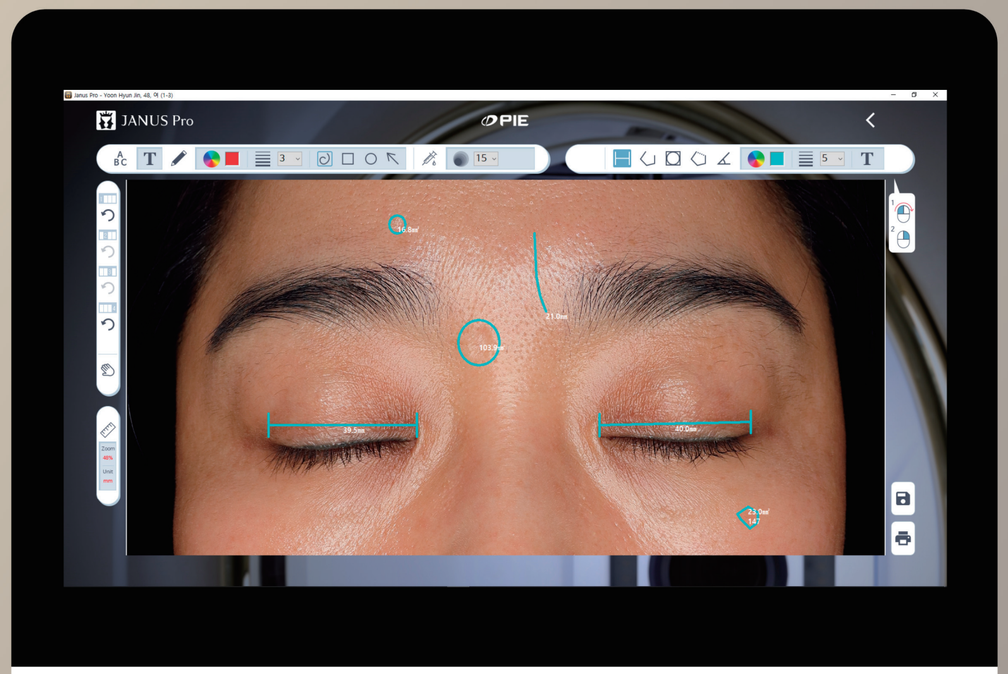
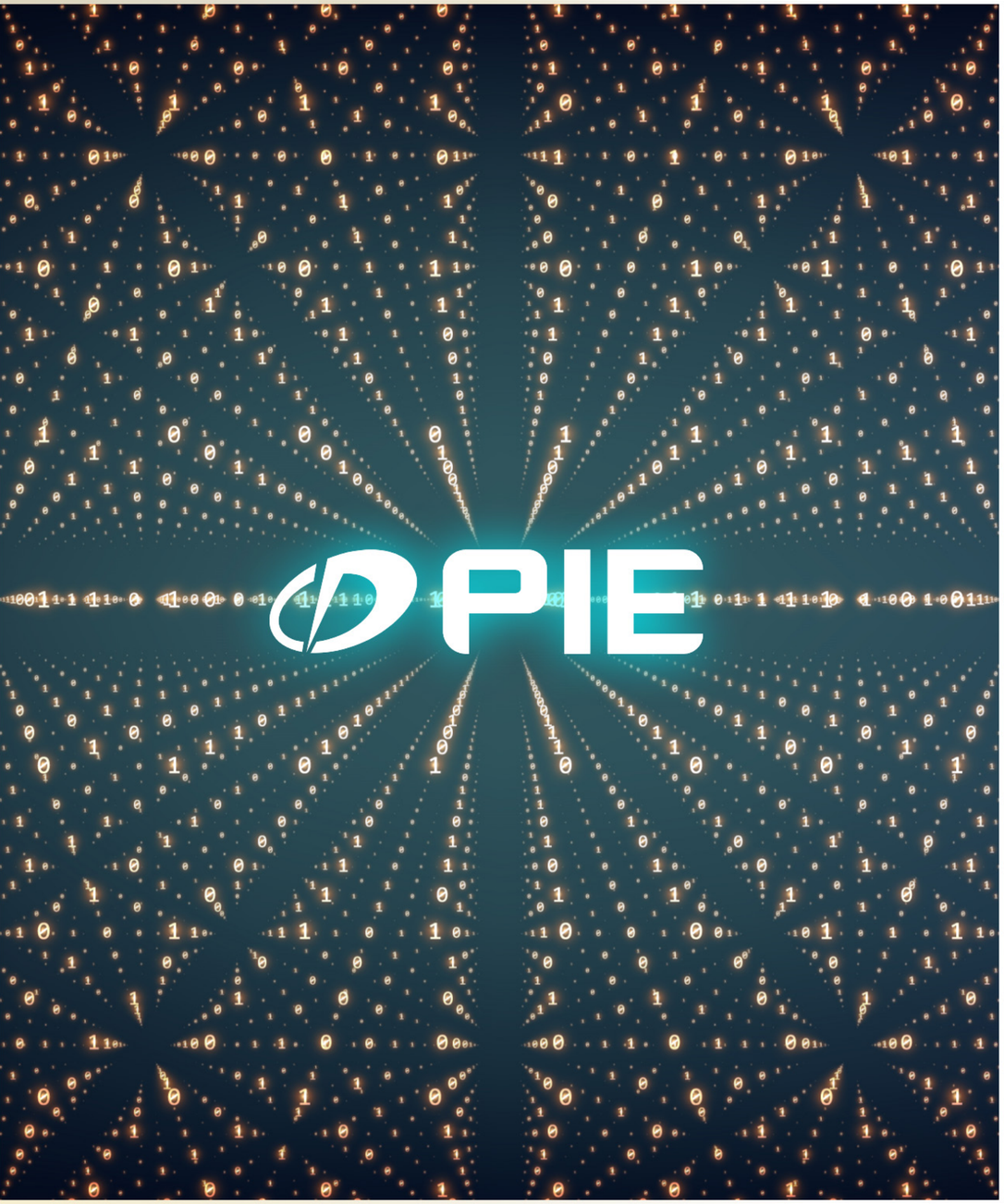


Image Field Measurement

It is set to know the actual size and allows you to measure the length and area of the desired area.

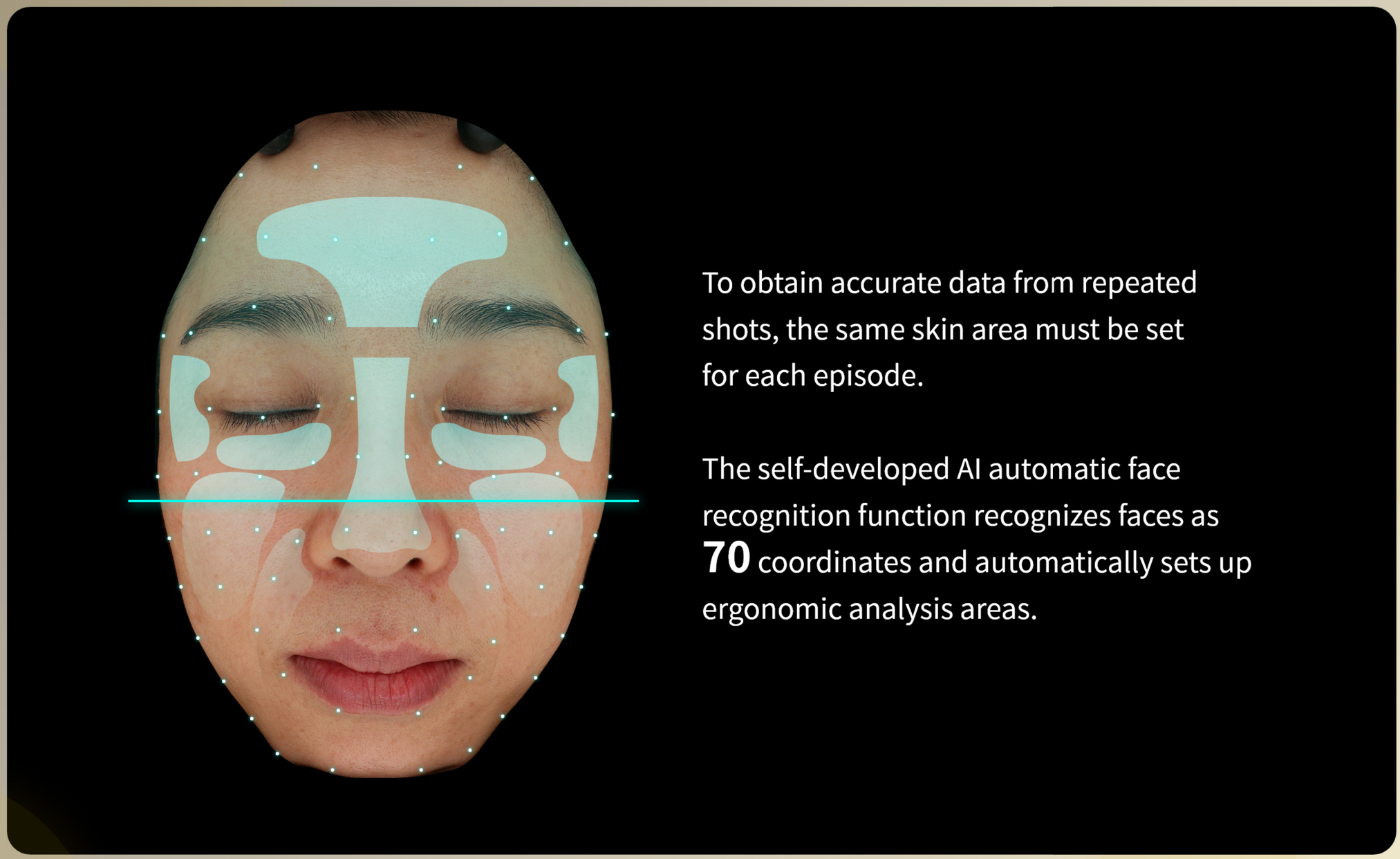


PIE's Technical Skills

- AI Automatic Face Recognition
- Brightness Retention Device
- Smart image calibration
- Big Data & Deep Learning
- Automatic updates and data security

AI Automatic Face Recognition

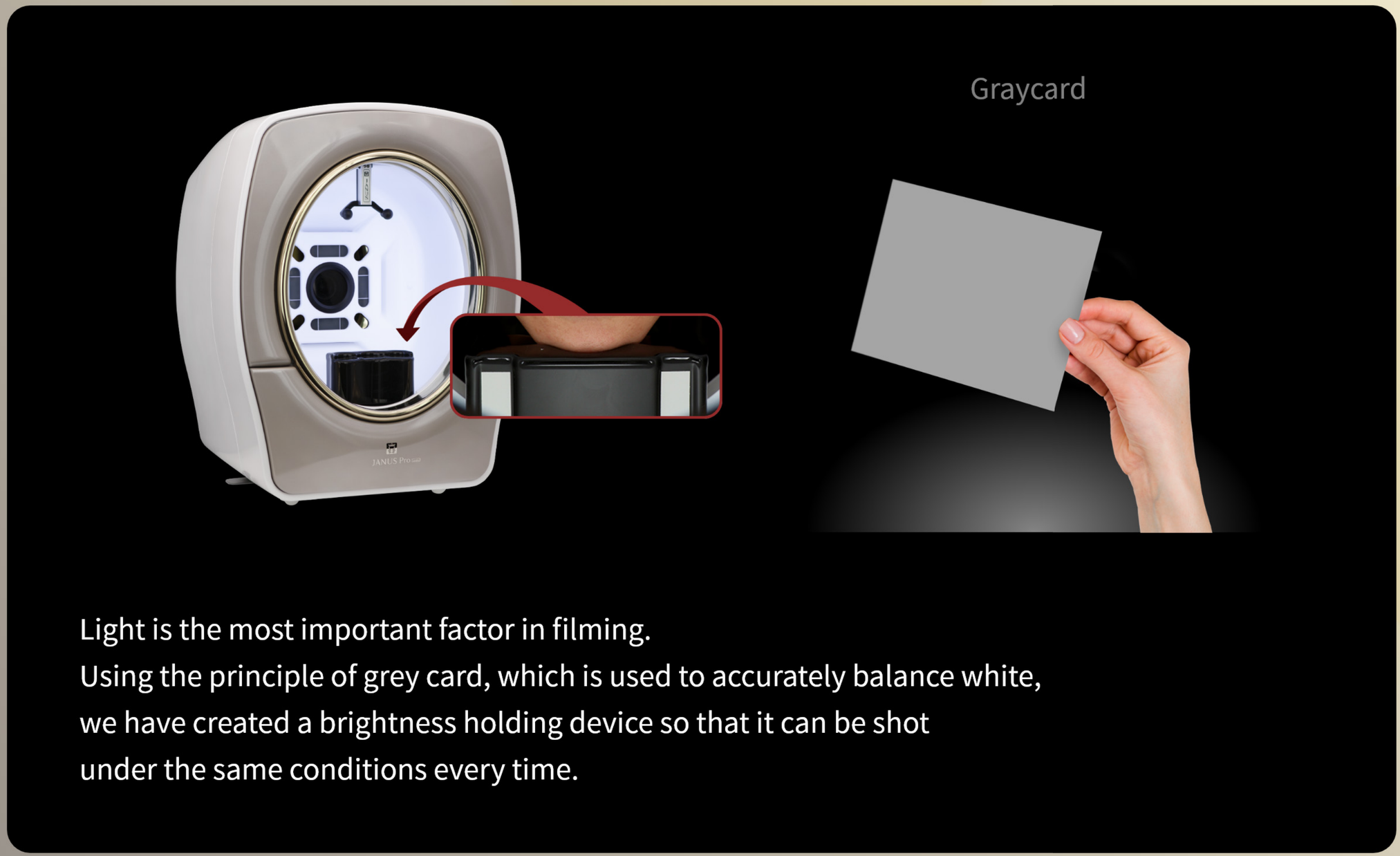
JANUS Pro Sunlike



To obtain accurate data from repeated shots, the same skin area must be set for each episode.

The self-developed AI automatic face recognition function recognizes faces as **70** coordinates and automatically sets up ergonomic analysis areas.

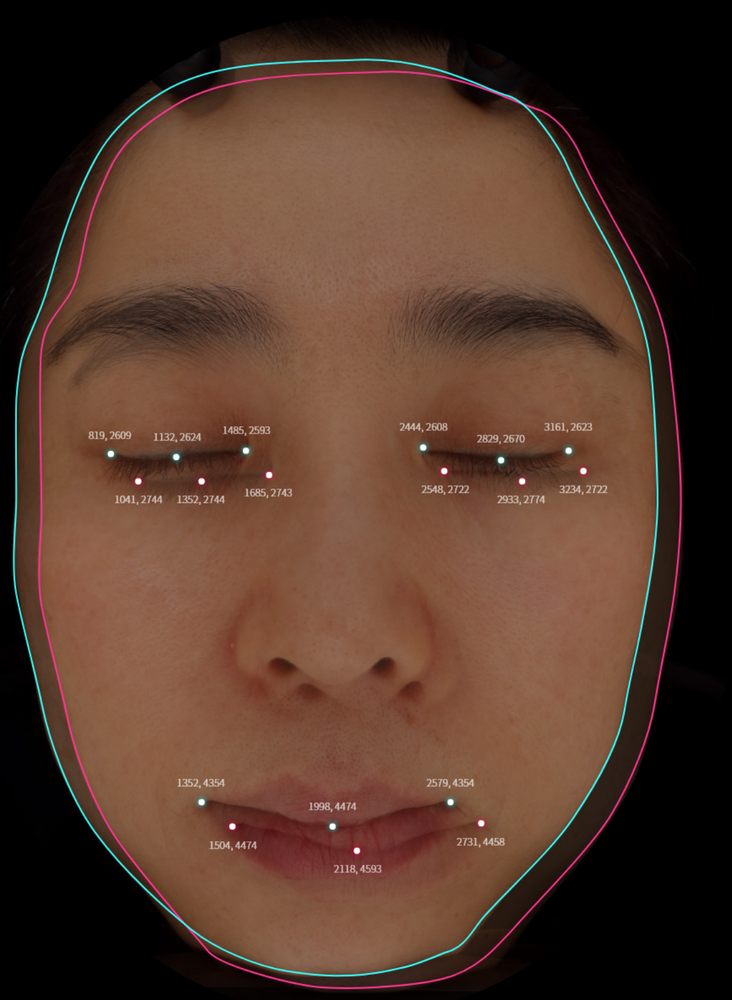
Brightness Retention Device



Light is the most important factor in filming.
Using the principle of grey card, which is used to accurately balance white,
we have created a brightness holding device so that it can be shot
under the same conditions every time.

Smart image calibration

JANUS Pro Sunlike



During re-shooting, the face position may change depending on the customer's posture.

The Smart image correction function aligns the coordinate position of the eyes and mouth based on the first image analyzed.

You can measure the same analysis area for each shot.

Big Data & Deep Learning

JANUS Pro Sunlike

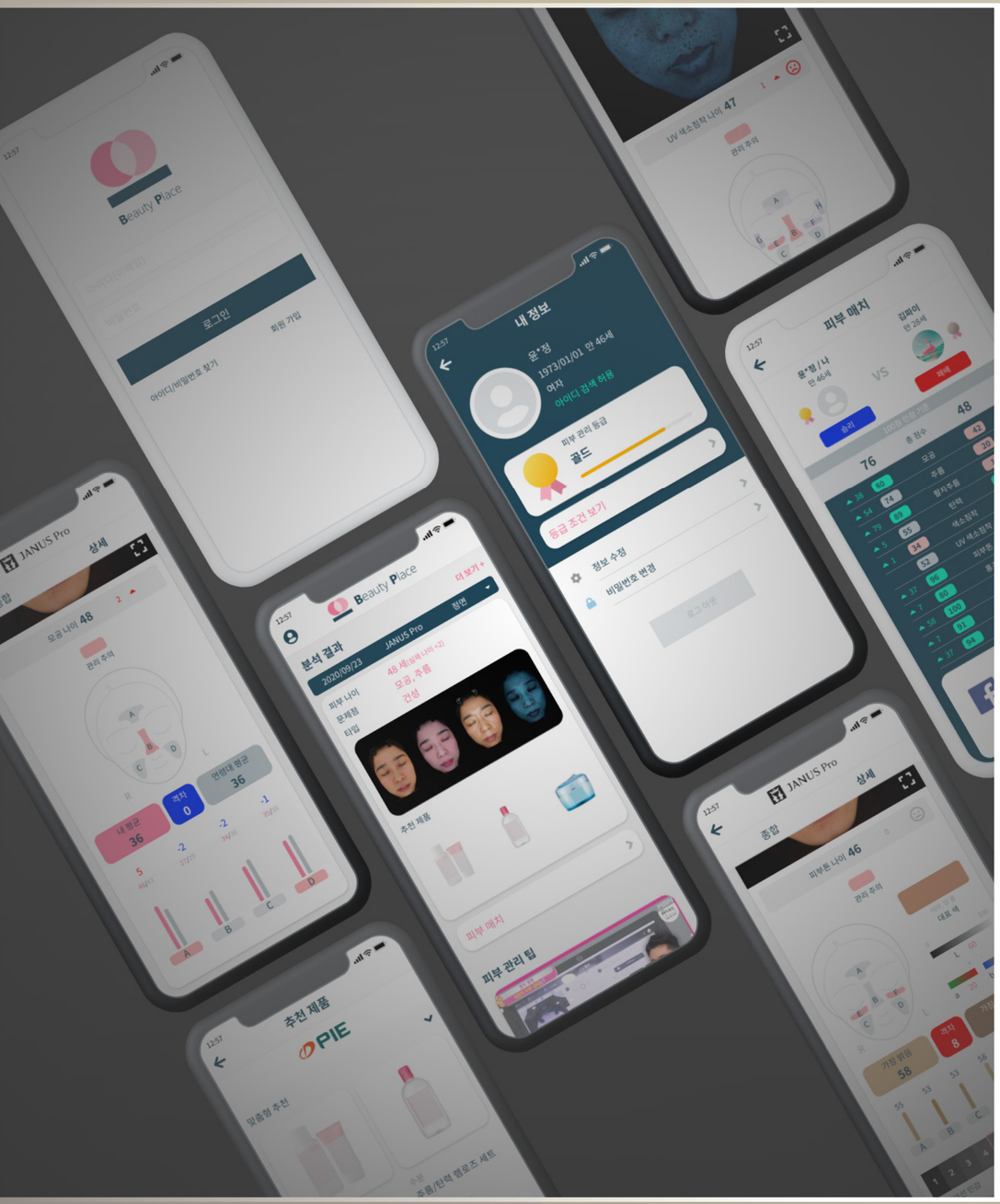
Cloud servers gather global skin analysis data and
deep learning creates more accurate analytics logic.
Currently, more than **150,000** skin data are accumulated.

Automatic updates and data security

JANUS Pro Sunlike

The application is updated automatically updated.
Frequently updates keep your programs in top shape,
including bug fixes and data improvements.

Stored customer photos are also secured
against viruses such as hacking and ransomware
with their own security technology.



Special Features

- AI Voice
- Beauty Place App
- Join a Partner

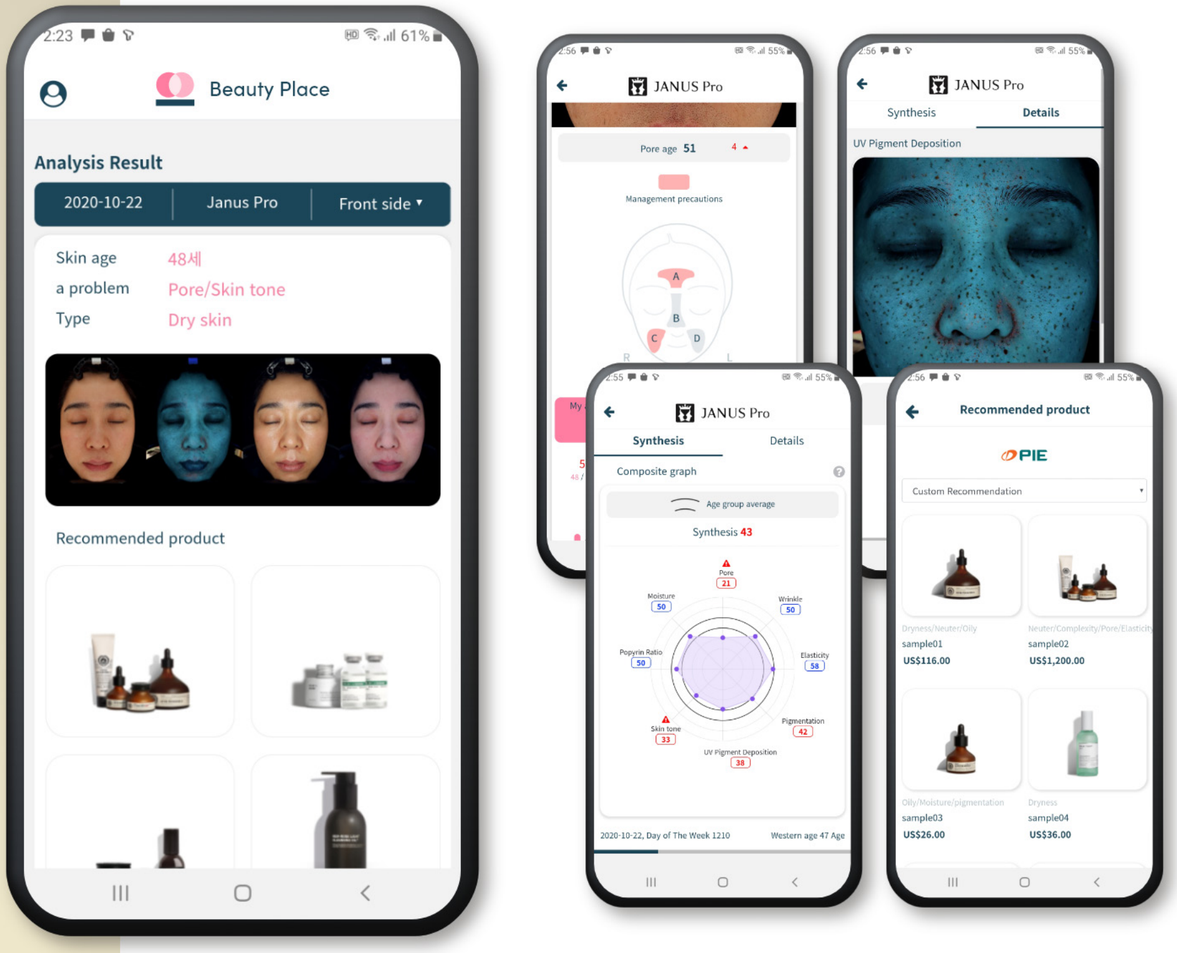
AI voice

An announcement voice is output from the equipment's speakers so that both the counselor and the customer can have a comfortable shoot.

Put your chin and forehead on the pedestal and close your eyes.

Beauty Place App

JANUS Pro Sunlike



Beauty Place

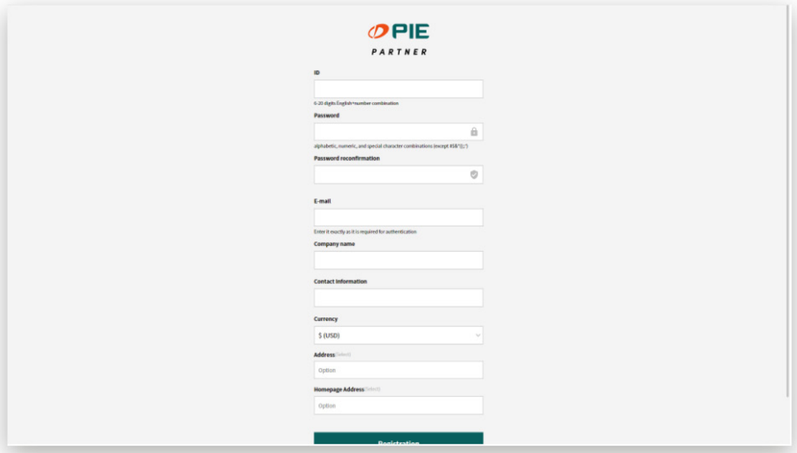
Supports both Android & iOS

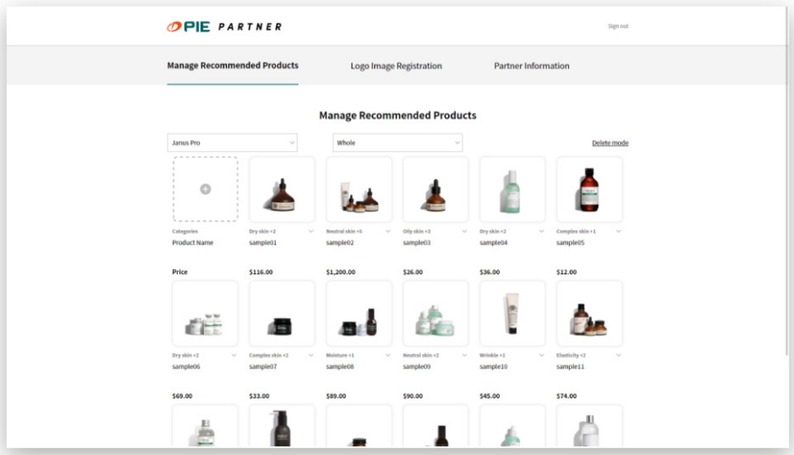
Skin analysis results can be sent to the customer's cell phone.

Recommend customized products and show skin care tips videos.

Join a Partner

JANUS Pro Sunlike





Program and App Manager

By joining a partner company,
you can register your company's
logo in the program, and it is
easy to register, modify,
and delete recommended products.

Received: 3 September 2019 | Revised: 8 September 2019 | Accepted: 9 November 2019

DOI: 10.1111/srt.12811

ORIGINAL ARTICLE

Repeated measurements of facial skin characteristics Janus- III measurement system

Sangseob Leem | Junghwa Chang | Yunkwan Kim | Joong-Gon Sh
Hae Jung Song | Seo-Gyeong Lee | Suji Yoo | Jinyong Lee | Joor
Sun Gyoo Park | Nae Gyu Kang

R&D Center, LG Household and Health Care, Ltd., Seoul, Korea

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Funding information
The studies presented in this article were funded by LG Household & Health Care, Ltd.

Abstract

Background: For personalized skin care, noninvasive quantitati
ate facial skin characteristics are important. Janus-III is one of t
imaging analysis devices in the skin care industry in Korea. Ja
ues for a range of skin characteristics. Due to the convenience
for a variety of skin characteristics in a single measurement, t
cosmetic stores and research institutes has been recently incr
consistency of skin measurements of Janus-III has not been elu

Materials and Methods: In this study, we repeated skin meas
for 70 different subjects and compared each numerical value i
consistency of the Janus-III. For this purpose, we compared l
tances and within-sample distances.

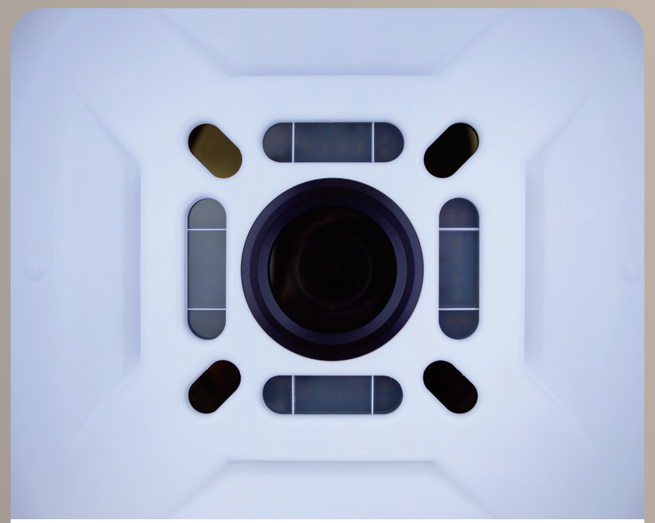
Results: We found important patterns for future analyses in t
First, the average values of skin measurement categories wer
individual part values of facial segments. Second, center part
head and nose were more reliable than side part values such
segments.

Conclusion: If researchers who use Janus-III for studies of facia
lyze average and center part values first, they can obtain relati

Patent & Certification

- Patent
- Certification
- Thesis

Patent



Light source structure

Patent Application Number

10-2020-0168226

Skin texture analysis

Patent Registration No.

10-2251700

Sensitive data security

Patent Registration No.

10-2091388

Certification

JANUS Pro Sunlike

CE EMC

EC Declaration of Conformity

EC Declaration of Conformity
According to
EMC Directive 2014/30/EU

For the following product:

Product Name	:	Facial Analysis System
Model Name	:	JANUS Pro Sunlike
Variant Model Name	:	N/A
Applicant	:	PIE Co., Ltd
Applicant's Address	:	3F, 45 Changnyoung-dearo, Paldal-gu, Suwon-si, Gyeonggi-do 16255
Manufacturer	:	Same as above

We hereby declare that the product identified above meets the requirements of the EMC Directive 2014/30/EU, as laid out in the guideline set down by the member states of the EEC commission.

This declaration is valid for all samples that are part of this declaration, which are manufactured according to the production charts appendix.

CE

The following harmonized standards were applied in full in accordance to Article 6 of Directive 2014/30/EU:

EN 55032:2015/A11:2020
EN 55035:2017

PIE Co., Ltd
3F, 45 Changnyoung-dearo, Paldal-gu,
Suwon-si, Gyeonggi-do 16255

Date of issue: February 02, 2021
(Name and signature of authorized person)

CE LVD

EC Declaration of Conformity

EC Declaration of Conformity
According to
LVD Directive 2014/35/EU

For the following

Product	:	Facial Analysis System
Model Name	:	JANUS Pro Sunlike
Variant Model Name	:	-
Applicant Name	:	PIE Co., Ltd
Applicant Address	:	3F , 45 Changnyoung-dearo, Paldal-gu, Suwon-si, Gyeonggi-do 16255 REPUBLIC OF KOREA
Manufactured Name	:	Same as above
Manufactured Address	:	Same as above

We hereby declare, Low Voltage Directive (2014/35/EU) is fulfilled, as laid out in the guide set down by the member states of the EEC Commission.

This declaration is valid for all samples that are part of this declaration, which are manufactured according to the production charts appendix.

CE

The standards relevant for the evaluation of LVD requirements are as follows:

Test Standard	IEC 62368-1:2018 IEC 62368-3 :2017

Date of issue: January 28, 2021

PIE Co., Ltd
3F , 45 Changnyoung-dearo, Paldal-gu, Suwon-si, Gyeonggi-do
16255 REPUBLIC OF KOREA

(Name and signature of authorized person)

FCC

FCC
Supplier's Declaration of Conformity

Applicant's Name: PIE Co., Ltd.
Applicant's Address: 3F, 45 Changnyoung-dearo, Paldal-gu, Suwon-si, Gyeonggi-do 16255
Manufacturer's Name: Same as above

Declares that the product:

Type of Equipment:	Facial Analysis System
Model Name:	JANUS Pro Sunlike
Variant Model :	N/A

Applicable Regulation: PART 15 Subpart B

I, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s) and Standard(s) as described in the attached test report.

TESTED and CERTIFIED by:
Korea Standard Testlab
107-27, Jangdeokdong-gil, Namyang-eup, Hwaseong-si,
Gyeonggi-do, Korea
Tel: +82-31-356-7333 Fax: +82-31-356-7303

Date of issue : February 02, 2021
Authorized Signature:

KC

09AD-6B3F-E622-8021

방송통신기자재등의 적합등록 필증
Registration of Broadcasting and Communication Equipments

상호 또는 성명 Trade Name or Registrant	파이 주식회사
기자재명칭(제품명칭) Equipment Name	Facial Analysis System
기기부호/추가 기기부호 Equipment code /Additional Equipment code	IM161
기본모델명 Basic Model Number	JANUS Pro Sunlike
파생모델명 Series Model Number	
등록번호 Registration No.	R-R-pie-JANUSPROS
제조자/제조국가 Manufacturer/Country of Origin	파이 주식회사 / 한국
등록연월일 Date of Registration	2021-02-08
기타 Others	

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2021년(Year) 02월(Month) 08일(Day)

국립전파연구원장

Director General of National Radio Research Agency

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Thesis

JANUS Pro Sunlike

Comparative analysis of skin characteristics evaluation by a dermatologist and the Janus-III measurement system

1

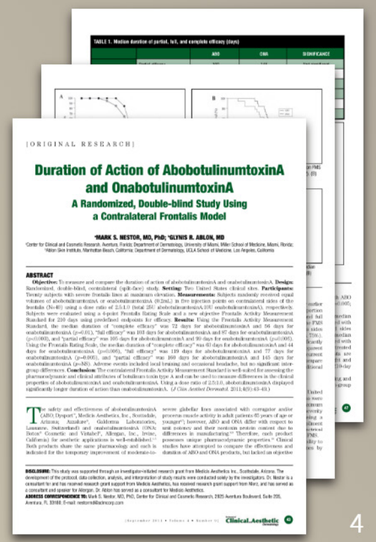
Journal Pre-proof

Genome-wide association analyses of 17,019 Korean women identifies variants associated with facial pigmented spots

2

Repeated measurements of facial skin characteristics using the Janus-III measurement system

3



[ORIGINAL RESEARCH]

Duration of Action of AbobotulinumtoxinA and OnabotulinumtoxinA

A Randomized, Double-blind Study Using a Contralateral Frontalis Model

4

The Journal of Physical Therapy Science

Effects of low-level laser therapy, electroacupuncture, and radiofrequency on the pigmentation and skin tone of adult women

5

The Journal of Physical Therapy Science

Effects of radiofrequency, electroacupuncture, and low-level laser therapy on the wrinkles and moisture content of the forehead, eyes, and cheek

6

Photodynamic Therapy with Ablative Carbon Dioxide Fractional Laser in Treatment of Actinic Keratosis

7

Treatment of facial erythematotelangiectatic rosacea with a Q-switched 595-nm Nd:YAG laser

8

Treatment of melasma by low-fluence 1064 nm Q-switched Nd:YAG laser

9

Listed in SCI-level papers

The fourth generation of JANUS has been utilized in many SCI-level papers.

Please refer to the appendix page for the thesis name.

Specification

- Specification
- Addendum

Specification

JANUS Pro Sunlike

Unit : cm

Camera	Canon 200D II DSLR
Pixel number	24.1 million pixels
Lens	Canon 18-55mm IS STM
Light source	LED(SunLike) + UV LED(385nm)
Dimension	42 x 38 x 54cm, 10.4kg
Analysis Items	Pore/ wrinkles/ Nasolabial folds Elasticity/ Jaw angle/ Pigmentation UV pigmentation/ Skin tone/ Redness Sebum/ Porphyrin/ Moisture/ Skin texture (13 in total)
Languages	Korean/ English/ Chinese/ Japanese/ Traditional Chinese/ Russian/ Vietnamese/ German/ Thai/ French/ Portuguese/ Italian/ Hungarian/ Indonesian/ Spanish/ Arabic (16 in total)
Special Features	UV Sterilization/ AI Voice/ Tablet PC Mounting/ Foldable Hood
Terminals	USB-C Charger/ USB 2.0 x 3/ PC/ INPUT

Addendum

JANUS Pro Sunlike

1. Comparative analysis of skin characteristics evaluation by a dermatologist and the Janus-III measurement system

2. Genome-wide association analysis of 17,019 Korean women identifies variants associated with facial pigmented spots

3. Repeated measurements of facial skin characteristics using the Janus-III measurement system

4. Duration of Action of AbobotulinumtoxinA and OnabotulinumtoxinA

5. Effects of low-level laser therapy, electroacupuncture, and radiofrequency on the pigmentation and skin tone of adult women

6. Effects of radiofrequency, electroacupuncture, and low-level laser therapy on the wrinkles and moisture content of the forehead, eyes, and cheek

7. Photodynamic Therapy with Ablative Carbon Dioxide Fractional Laser in Treatment of Actinic Keratosis

8. Treatment of early-stage erythematotelangiectatic rosacea with a Q-switched 595-nm Nd:YAG laser

9. Treatment of melasma by low-fluence 1064 nm Q-switched Nd:YAG laser

Thank you.

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