

pixelRo

Accelerated by **SAMSUNG**

more clearly. more comfortable.

The Best Value
Certified by
Gyeonggi Province

경기도유망중소기업

중소벤처기업부 KOSME

중소기업 혁신바우처 수행기관

About PixelRo



Changing the future through technology pixelRo on the export frontier

pixelRo is developing and commercializing an optometry application and kiosk that can provide eye condition self-diagnosis based on digital sensing. We are also supplying eye care films both at home and abroad.

In addition, as part of our new business, we are commercializing a plasma-based antibacterial air purification solution and expanding this business abroad.

We are striving for better human health and well-being under the slogan of “For a better future.”

pixelRo Major Investors

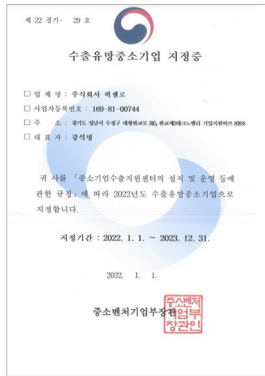
SAMSUNG

IBK 중소기업은행

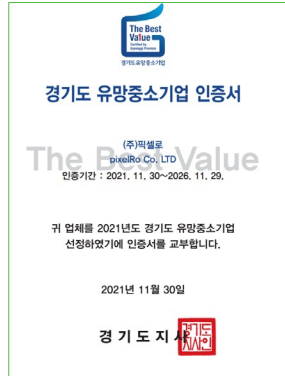
IBK 캐피탈

infobank

A healthy and happy future designed on advanced technology



Designated as a promising SME for exports



Selected as a promising SME in Gyeonggi-do



Registered numerous patents

The path of pixelRo History of pixelRo

23.08	Certified for ISO 13485	19.06	Wadiz crowdfunding (exceeded 660%)
23.05	Launched the NENOON App for kiosks	19.04	Selected as a Nest Start-up (Korea Credit Guarantee Fund)
23.03	Developed the Zeus II Radical Generator (Edison Awards)	18.12	Selected as an excellent SME in Uiwang-si (Youth Job Awards)
22.01	Exported healing care products to Qatar	18.07	Signed an agreement for technology commercialization and development with the Ministry of Trade, Industry and Energy
21.08	Developed the Zeus 1 Radical Generator	18.03	Attracted investment from QNME Consulting
21.03	Transferred the ETRI nano pattern imprint technology	18.02	Attracted investment from Samsung Venture Investment Corporation (SVIC)
20.09	Established the company-affiliated research center	17.11	Established pixelRo Co., Ltd.
19.12	Attracted investment from Industrial Bank of Korea and IBK Capital	16.03	Selected for Samsung Electronics C-Lab

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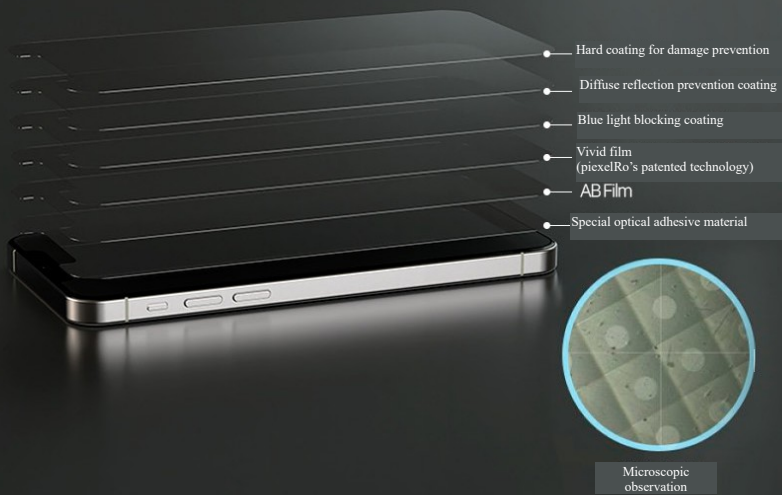
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Vivid Film

(Presbyopia correction film)

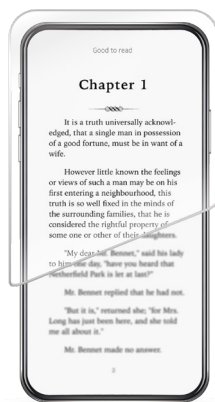




Point 01.

Patented product based on pixelRo's own technology

- The corrective film that can improve readability for people with poor vision
- Applied a patent on multi-layer MLA structure for correcting the user's refractive index problem



Point 02.

Presbyopia correction and readability improvement

- Improves readability, which helps with the initial stage of presbyopia (eyesight)
- Reduces eye fatigue by controlling light scattering and glare
- Blocks 97% of harmful blue light

Point 03.

Outstanding quality

- High transparency, pollution-proof coating, safe shatter-proof coating, and UV protective coating
- Its quality and usability verified for those who have undergone a LASIK eye surgery or those who have myopia
- Glass type: Shatter-proof
- PET type: Scratch-resistant



Specifications

Design/Country of manufacture	Republic of Korea
Type	Glass/PET
Materials	Tempered glass/Urethane/PET

Blue Light Blocking Filter (BLC) Privacy Filter (PVC) (Vision protection filter)



**Blocks 99.9%
of harmful blue light**

**Blue Light Blocking Filter blocks 99.9%
of very high frequency blue light.
The product is perfect for those whose
eyes get easily tired due to the monitor.**



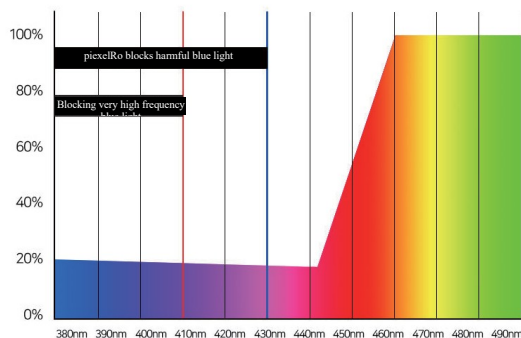
Certified for blocking blue light

Blue Light Blocking



Privacy Filter





Blue Light Blocking Filter (BLC)

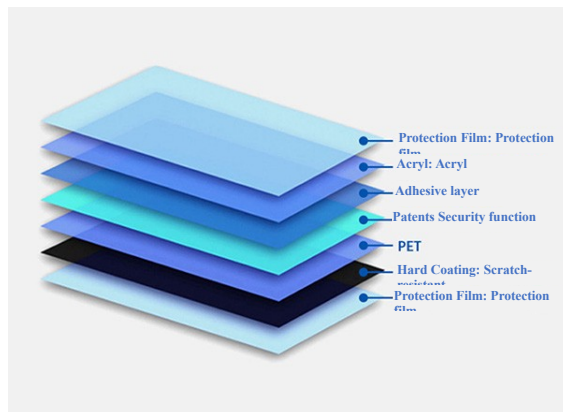
Protect yourself from harmful blue light

- Blocks 99.9% of harmful blue light
- A clear monitor screen that displays original colors
- Protects the screen from external shocks

Privacy Filter (PVC)

Protect your privacy

- Completely blocks the gaze of others viewing your screen with microlouvre technology
- Applies anti-reflective coating
- Blocks harmful blue light and UV light



Sizes

Hanger type

Inch	Size (W x D)	Inch	Size (W x D)
13"	305 x 200 mm	22"	505 x 320 mm
14"	330 x 210 mm	24"	560 x 360 mm
15"	335 x 230 mm	27"	635 x 415 mm
17"	400 x 250 mm	32"	730 x 440 mm
19W"	440 x 290 mm	-	-

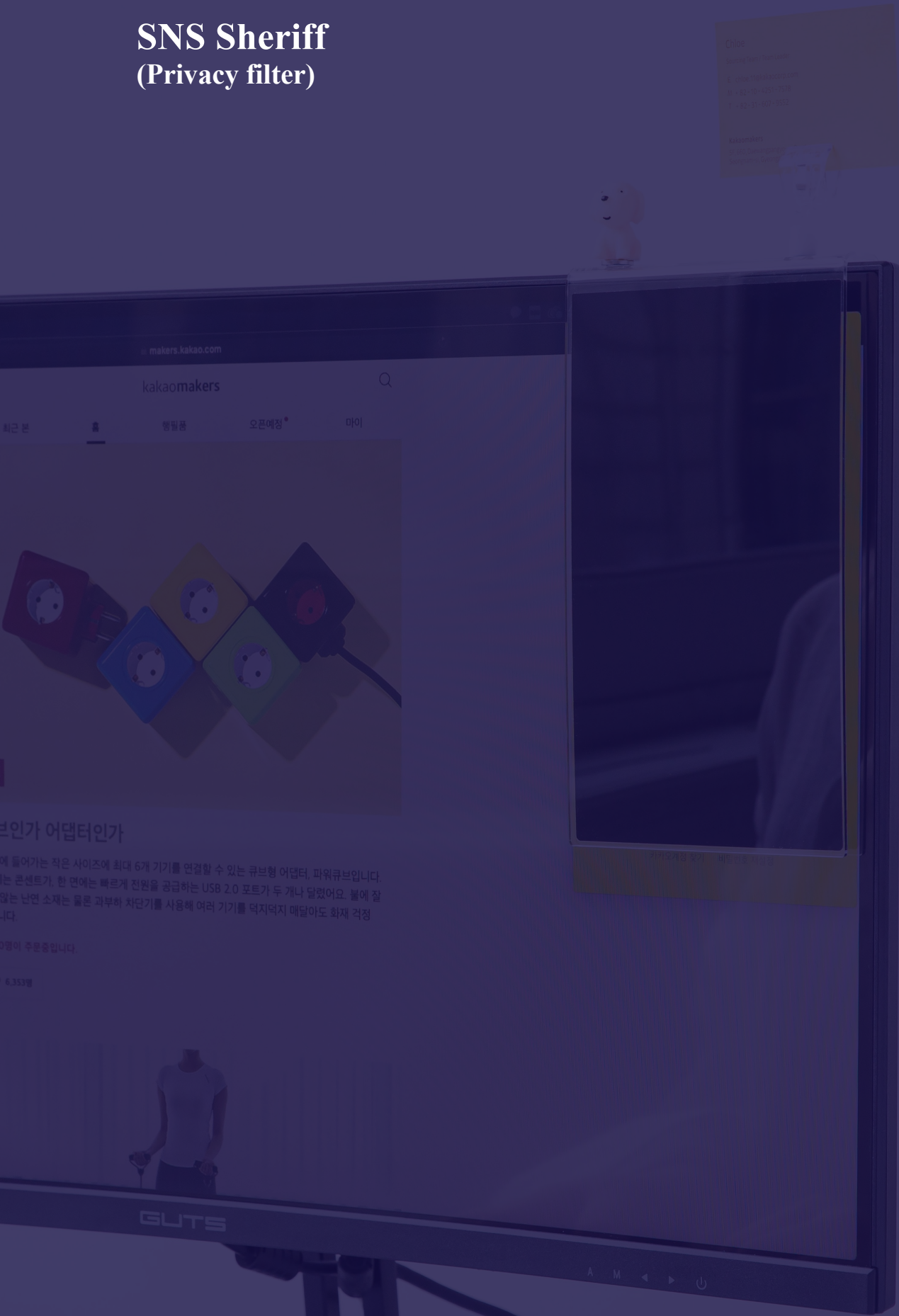
Light type

Inch	Size (W x D)
23-24"	540 x 340 mm
26-27"	613 x 365 mm

Film type

Inch	Size (W x D)	Inch	Size (W x D)
13.3W-A"	294 x 166 mm	22"	474 x 297 mm
14"	310 x 175 mm	23W-A"	510 x 287 mm
15"	331 x 186 mm	23.6"	522 x 294 mm
15.6"	345 x 194 mm	24W-A"	519 x 325 mm
17W"	338 x 271 mm	24W-B"	532 x 299 mm
19W"	409 x 256 mm	27B"	598 x 337 mm
19"	377 x 302 mm	32W"	698.7 x 394.3 mm
21.5"	477 x 268 mm	-	-

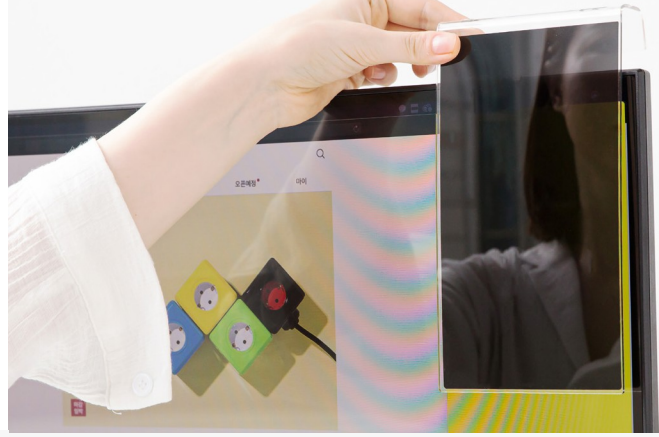
SNS Sheriff (Privacy filter)



Point 01.

Hide only what you want

- A security film applicable to a specific part of the monitor
- Not visible at an angle of 30° or more from side to side



Point 02.

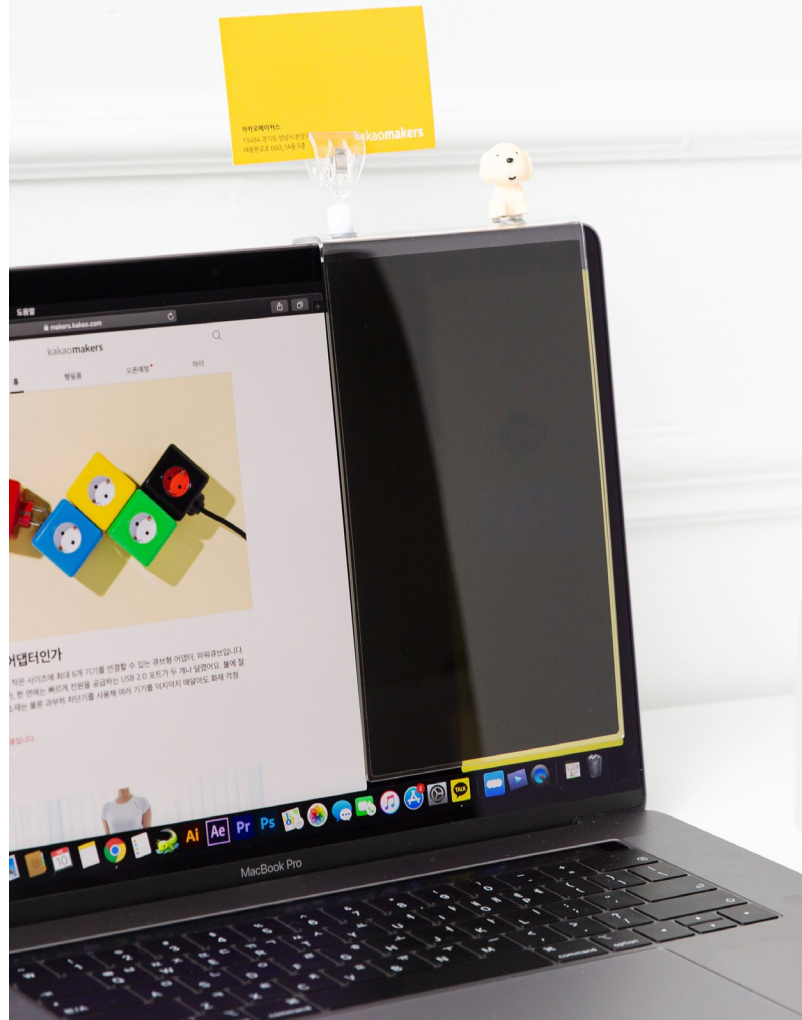
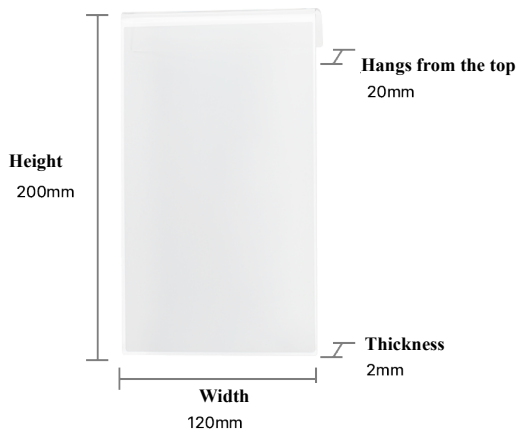
Easy installation and removal

- Easy to install and remove this hanger-type product
- Able to decorate your PC with a figurine or set your business card on this office décor item

Point 03.

Because privacy is important everywhere.

- Not visible at an angle of 30° or more side to side
- Protect your privacy and enhance your work efficiency at the same time
- Easy to carry



NENoon Solution



Core Technology of NENOON



Eye age test algorithm



Automatic distance measurement and indication change depending on the distance



Pupil tracking technology based on eye tracking



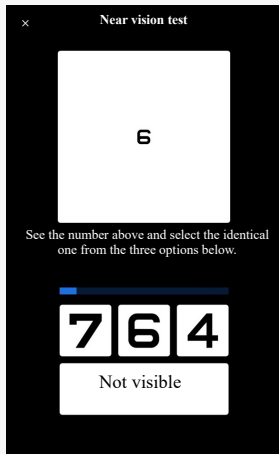
NENOON Eye Health Self-diagnosis Kiosk



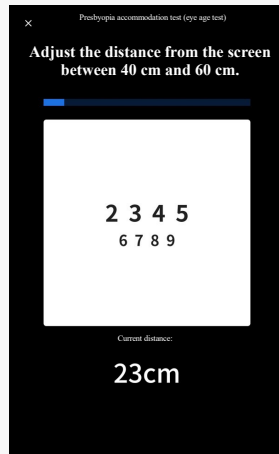
NENOON App

NENoon KIOSK

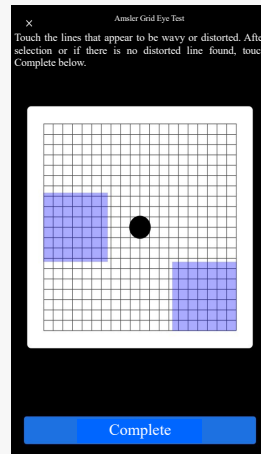
NENoon Eye Health Self-diagnosis Kiosk



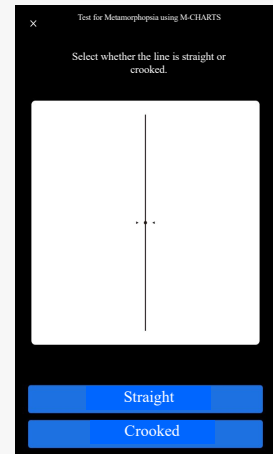
Near vision test



Presbyopia accommodation test (Eye age test)



Macular degeneration test (Amsler grid eye test)



Macular degeneration test (M-CHARTS)

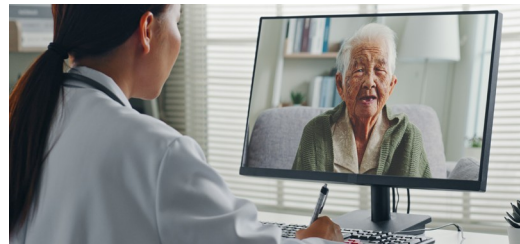
Point 01.
Convenient vision test even in a public place

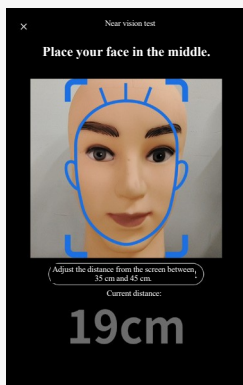
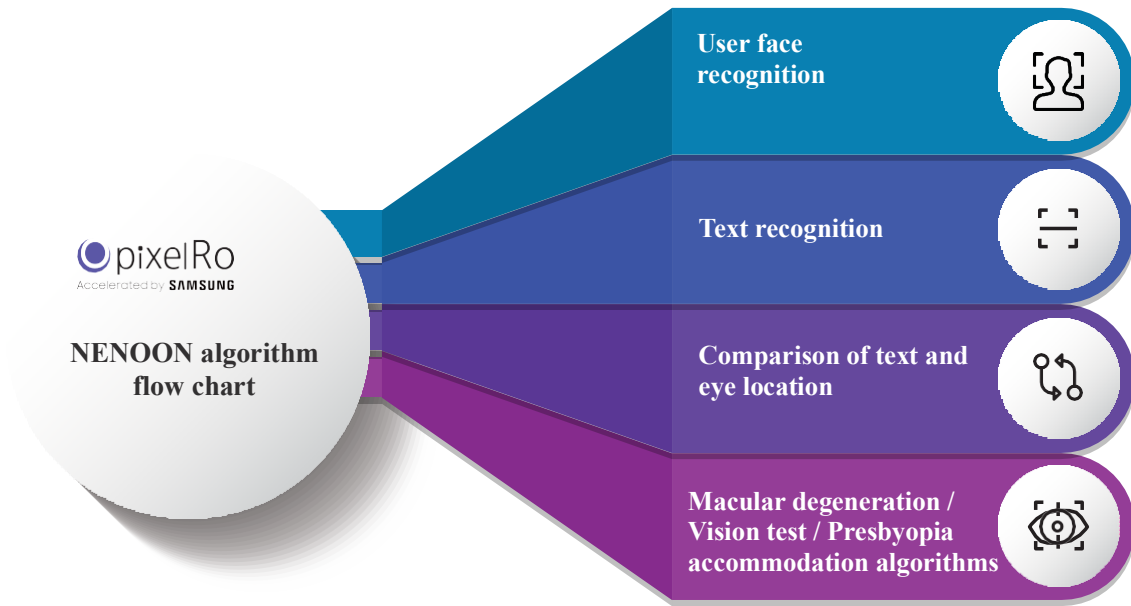


Point 02.
Test result printout



Point 03.
Expert consultation in addition to a vision test



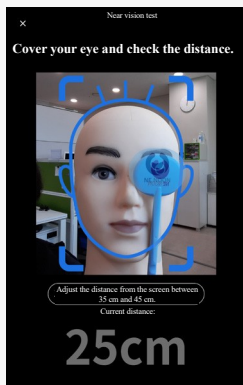
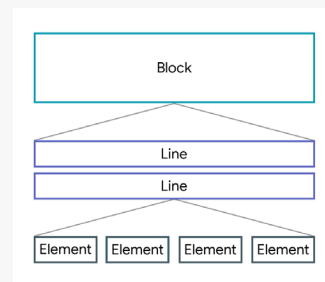


1 AI face recognition

It locates your face from the input image and recognizes your eyes, nose, mouth, etc.

2 AI text recognition

It finds natural languages from the input image and identifies and recognizes the composition of natural languages such as paragraphs, sentences, and words and the location of text.



3 Recognition of the left and right eyes

Recognizes which eye (left or right) is covered, based on text location information and the eye recognized through a deep learning model.

Feature 01. Eye health chart

Supports convenient macular degeneration, near vision, and presbyopia accommodation test services with swift chart changes.

Feature 02. Convenient kiosk stand

The height of the kiosk stand is adjustable depending on the situation so users can conduct a variety of examinations conveniently and systematically.

Feature 03. Vivid display

The screen provides clear display images in any lighting environment, enabling accurate examinations.

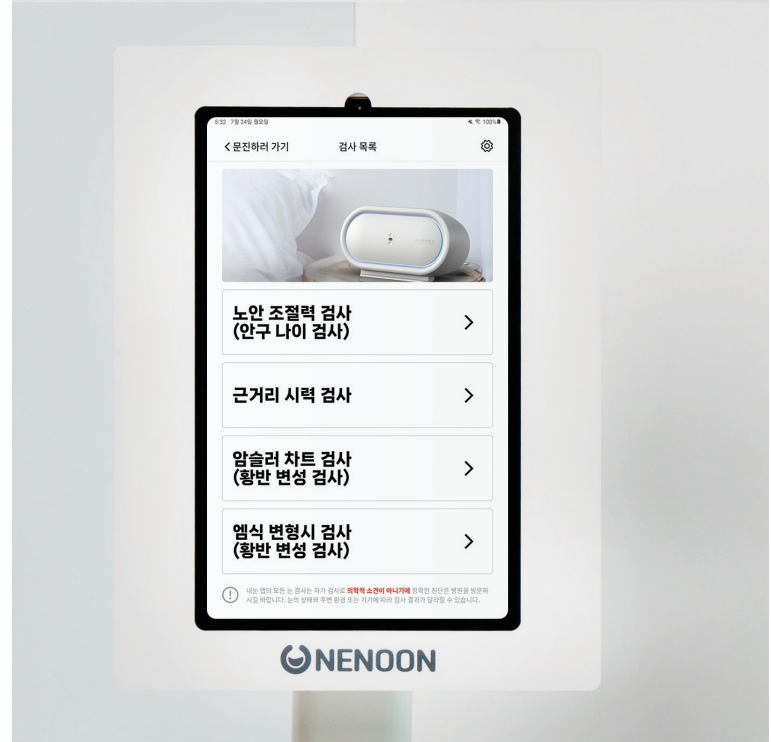
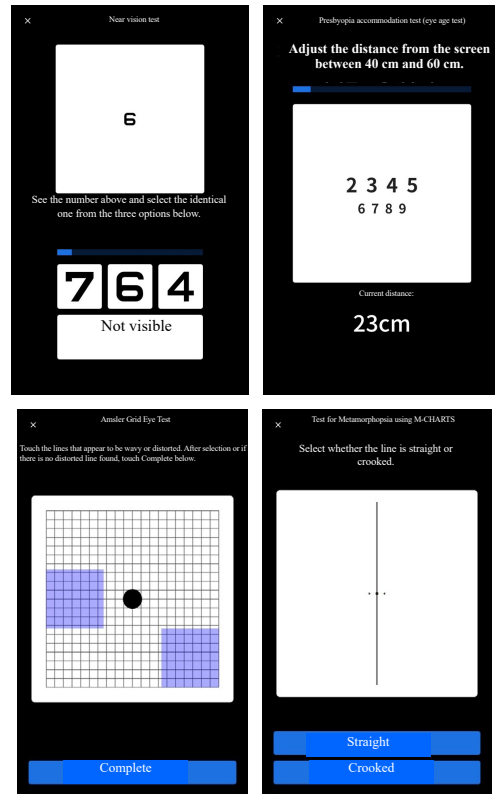
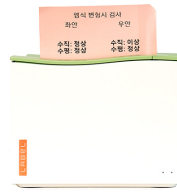


Chart Type



Specification of NENoon Eye Health Self-diagnosis Kiosk

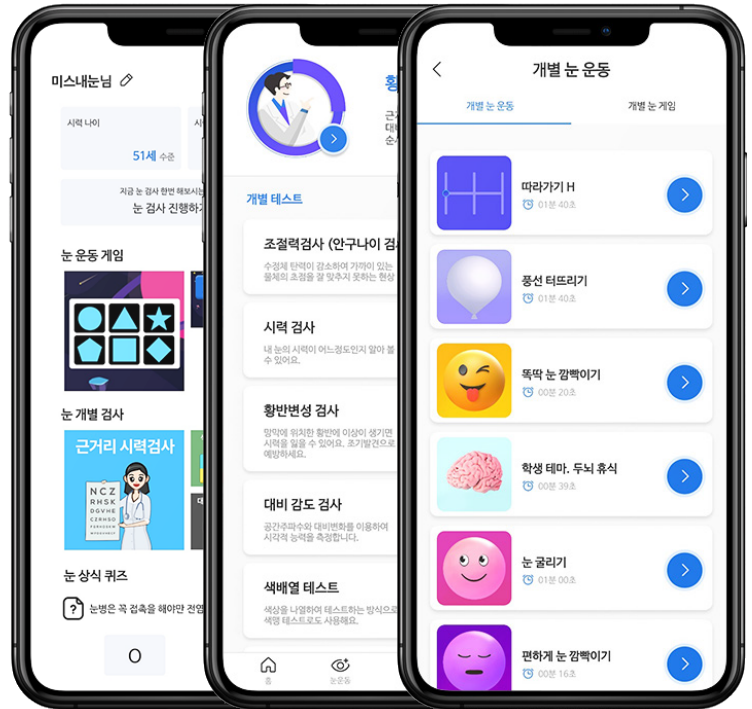
Operating System	Google Android	Apple iOS
Screen size	10.4 inches	10.2 inches
Aspect ratio	5:3	4:3
Test distance	30 cm – 3 m (a 10 mm unit basis)	
Control	Screen touch	
Chart types	4 types (vision, M-chart, Amsler, and presbyopia accommodation)	
User recognition method	Real-time distance measurement (accuracy: at least 92%) Head pose (accuracy: at least 90%) Eye tracking	
Measurement method	Self-recognition measurement	
Dimensions (WxLxH)	200 mm x 320 mm x 465–654 mm	200 mm x 320 mm x 471–660 mm
Weight	5.24KG	5.26KG
Optional accessory	Wireless printer	

NENoon KIOSK NENoon App

Point 01.

A combination of advanced technologies

- Eye age measurement algorithm
- Eye chart conversion algorithm by distance
- Eye tracking algorithm
- Advice from an optometrist at a university hospital



Visual acuity test Eye age measurement Macular degeneration Eye exercise

Point 02.

Eye exercises as well as vision tests

- Two-way interaction-based eye exercises
- Builds children's level of concentration and prevents dementia in the elderly

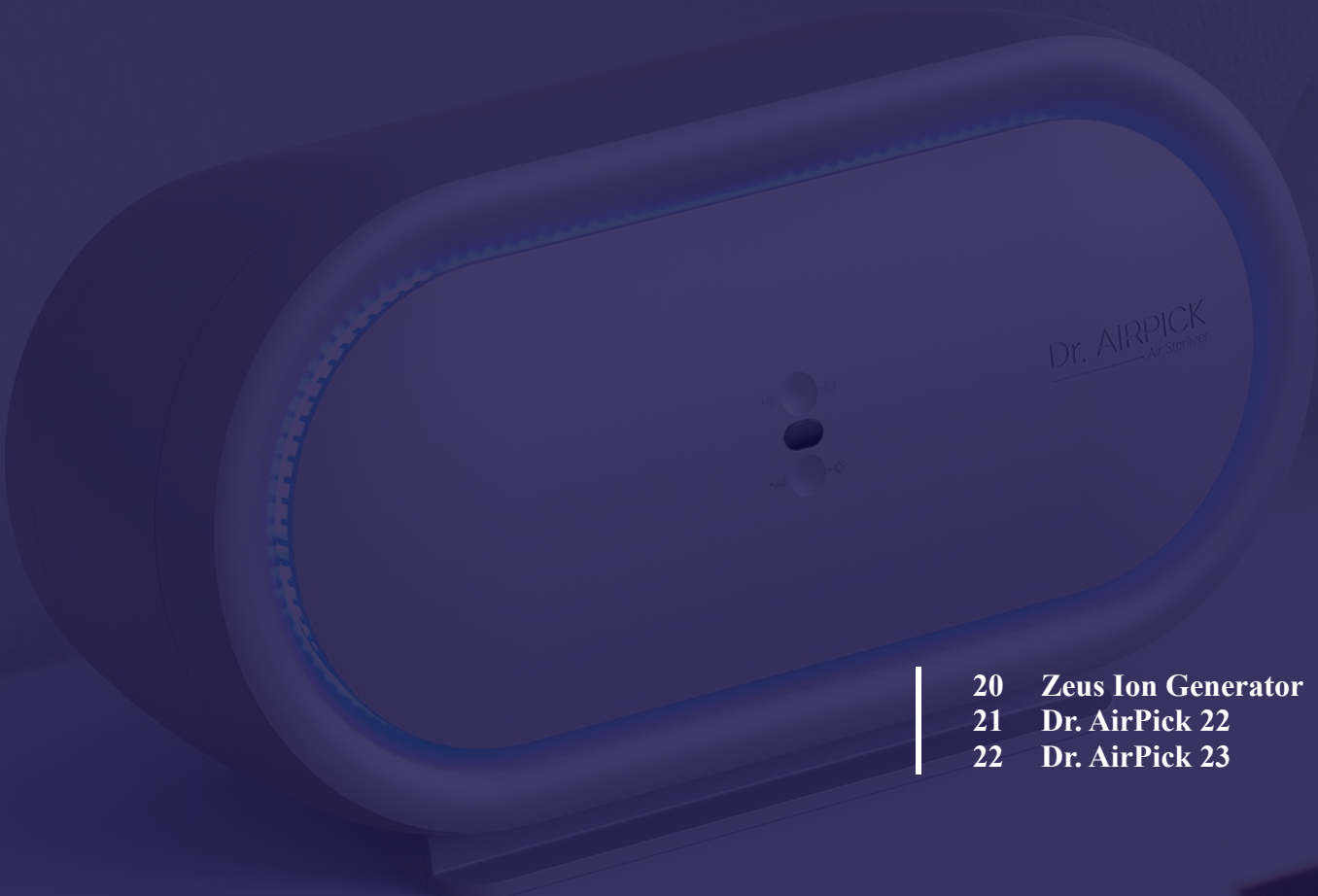
Point 03.

Easy at-home eye exam with NENoon Kit

- Consists of a stand (NFC tag), eye protection band, eye occluder, and mouse
- You can easily take an eye exam anywhere if you have a smartphone and a NENoon Kit!



Digital Healing Care



- 20 Zeus Ion Generator
- 21 Dr. AirPick 22
- 22 Dr. AirPick 23



ZEUS I



ZEUS II



ZEUS V

ZEUS Ion Generator Zeus Ion Generator (Plasma Ion Module)



How does Zeus work?

The ion generator generates and combines active hydrogen (H) and oxygen ions (O₂⁻) through microplasma discharge and then forms hydroxyl radicals (HOO⁻) which have antibacterial properties.

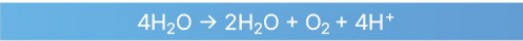
Mechanism

The ion generator generates hydrogen atoms (H) and oxygen ions (O₂⁻) through microplasma discharge.

Cathode (-) Releases electrons through high-voltage discharge and generates active hydrogen and **negative oxygen ions** (O₂⁻).



Anode (+) Generates **positive hydrogen ions** (H⁺) by breaking down molecules of water in the air through microplasma discharge.



Hydroxyl radicals (HOO⁻) are formed when active hydrogen (H) and oxygen ions (O₂⁻) combine with each other.

H⁺: Hydrogen ion H: Active hydrogen O₂⁻: Oxygen ion HOO⁻: Hydroxyl radicals

<p>Point 01. Complete antibacterial activity</p> <p>It removes bacteria and harmful fungi as well as cold viruses and influenza viruses. In addition, it removes coronaviruses (including SARS) which are some of the most severe recent health issues.</p>	<p>Point 02. Removal of allergens</p> <p>It efficiently removes allergens, including ticks, pollen, dust, and animal hair that may cause allergic reactions such as rhinitis, asthma, fever, and rash.</p>	<p>Point 03. Neutralization of OH radicals</p> <p>It neutralizes OH radicals that are known to be the most toxic in different types of harmful active oxygen that may cause diseases.</p>	<p>Point 04. Safe technology</p> <p>It generates a small amount of ozone (not exceeding 20 ppb), which is harmless to humans.</p>
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Outstanding antibacterial activity

Substance	Pollutant	Clearance
Antibacterial activity	E. coli	99.6%(6Hr.)
	Pseudomonas aeruginosa	99.1%(6Hr.)
	Staphylococcus aureus	99.4%(6Hr.)
Deodorization	Ammonia	92.3%(240min)
	Formaldehyde	89.2%(280min)
Sterilization	H1N1 Virus A	Effective
	SARS virus	Effective
Stability	Harmfulness	Nontoxic
	Ozone	Not exceeding 20 ppb

Specifications

Input voltage	11.5 ± 0.5 [V]
Current	80 mA ± 5 mA
Ion content	Ion > 2million/cc
Ozone quantity	Ozone quantity ≤ 20 [ppb]
Weight	< 40[g]

**It is more effective at over 40% humidity.*

Dr. AirPic22**Dr. AirPick 22**
(Plasma Ion Sterilizer)**Point 01.**
Simple design

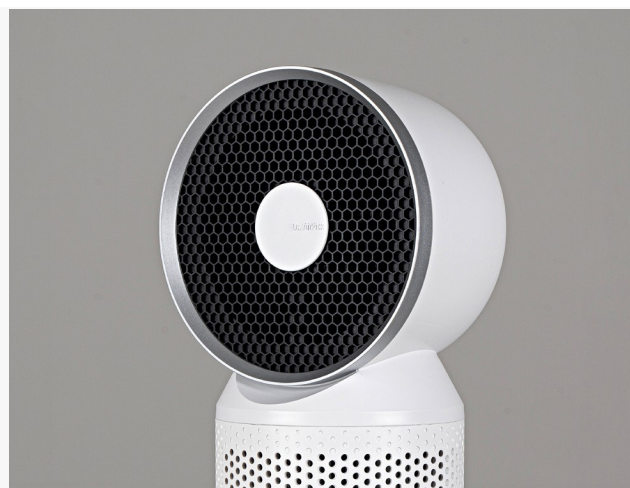
- Suitable as a home décor item
- Easy control with 5 intuitive buttons

**Point 02.**
Advanced technology-based sterilizer

- Premium carbon composite filter
- piexelRo Zeus module

Point 02.
Advanced technology-based sterilizer**Point 03.**
Hygienic anywhere and anytime

- Disinfects viruses in the air
- Removes harmful substances from the air by generating active hydrogen
- Silent operation (30 – 50 dB) that does not disturb your life

Point 03.
Hygienic anywhere and anytime**Specifications**

ModelNo.	POP-XIW800		
Input voltage	110V/220VAC adaptor(12VDCout)		
Power consumption	Max18W	Ion content	Ion>2million/cc
Ozone quantity	Ozone quantity ≤ 20 [ppb]	Size	180X143X360[mm]
Weight	<1.2[kg]	Noise level	30–50 dB
Applicable area	27m2	Certification	KC,CE,IC,FCC,PSE

Dr.AirPic22

Dr. AirPick 23
(Plasma Ion Sterilizer)

Point 01.

Sophisticated design

- Two colors (White & White Blue)
- Elegant design suitable as a home décor item



Point 02.

Sterilizer applying advanced technology

- Connect via Bluetooth and operate via the application
- A high-tech gas sensor
- The AQI system operates depending on the air quality



Point 03.

Hygienic anywhere and anytime

- Removes 99% of viruses from the air
- Removes odors from the air
- Applicable anywhere including conference rooms, offices, and houses



Specifications

ModelNo.	POP-23 APW		
Input voltage	110V/220VACadaptor(12VDCout)		
Power consumption	Max15W	Ion content	Ion>2million/cc
Ozone quantity	Ozone quantity ≤ 20 [ppb]	Size	371X143X204[mm]
Weight	<2[kg]	Noise level	30 – 50 dB
Applicable area	33m2	Certifications	KC,CE,IC,FCC,PSE



pixelRo
Accelerated by **SAMSUNG**

pixelRo makes your future more convenient and happy

Digital Care Solution Partner pixelRo Co., Ltd.

Inquiry about B2B or large purchases (overseas)
+82-10-5940-9290
info@pixelro.com

App inquiries
help@pixelro.com

Website
www.pixelro.com 
www.pixelro.com/en 

Inquiry about B2B or large purchases (overseas)
+82-10-5940-9290
info@pixelro.com

App inquiries
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