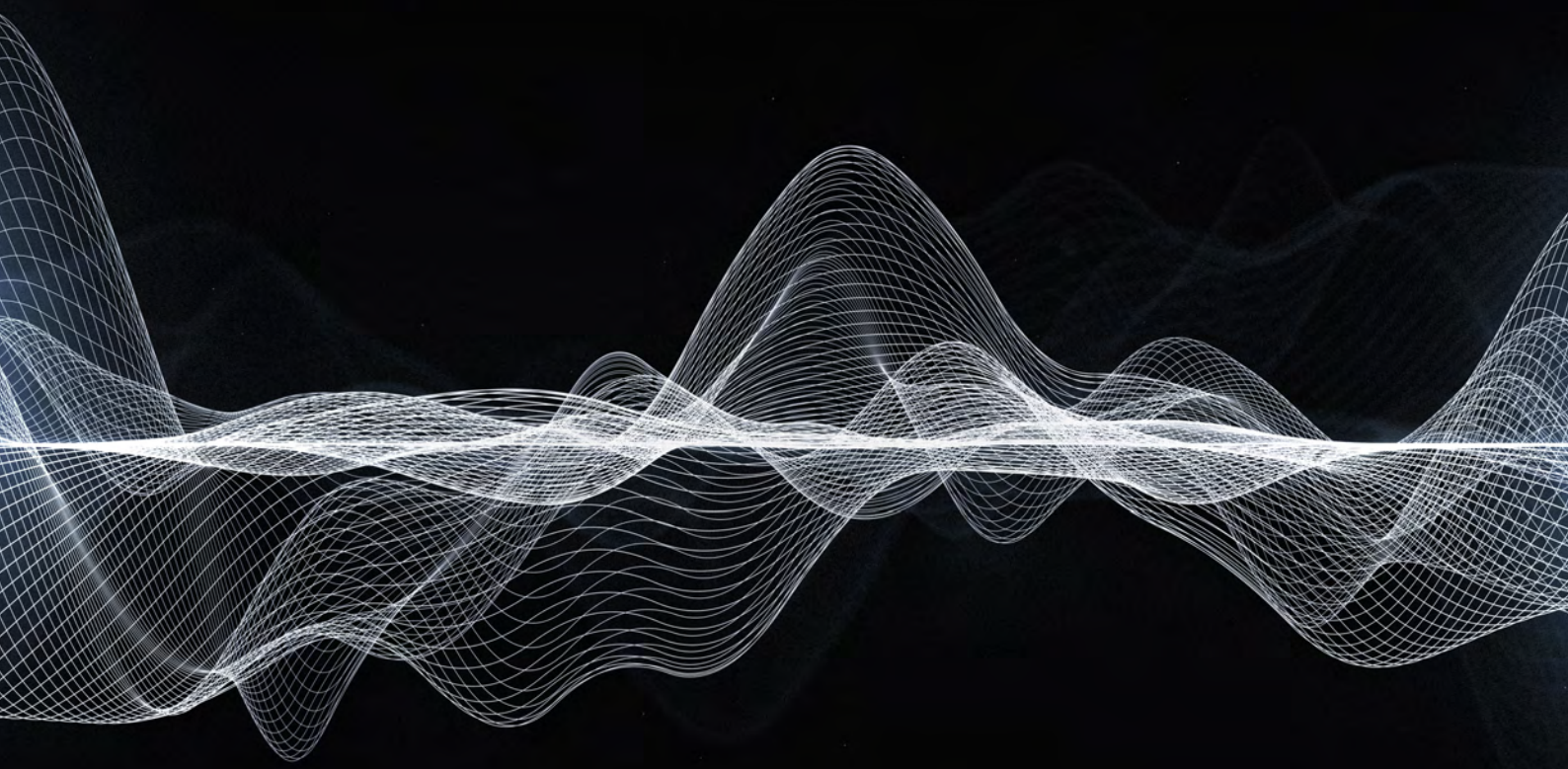
Pure Graphene Sound born in MExplorer



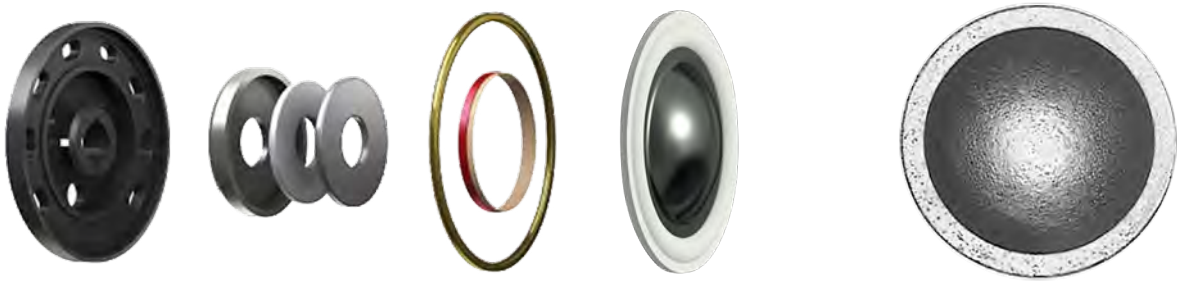
Pure
Graphene Diaphragm

Graphene &
Its applications

MEXPLORER®

Sound Revolution in TWS from **Pure Graphene Diaphragm**

Pure Graphene Diaphragm born in **MExplorer** revolutionizes Sound of True Wireless Stereo (TWS).



Magnet *Voice coil* *Graphene Diaphrgm* *Pure Graphene Diaphragm of MExplorer*

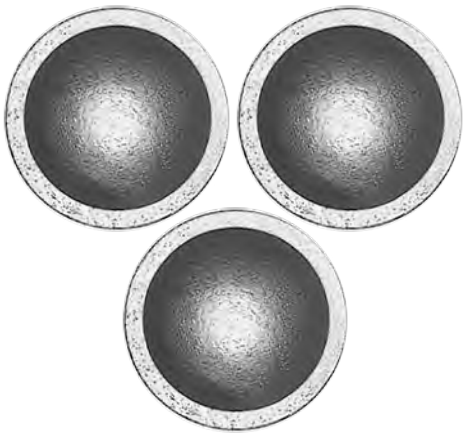
Ideal material properties in **Graphene Diaphragm of MExplorer**

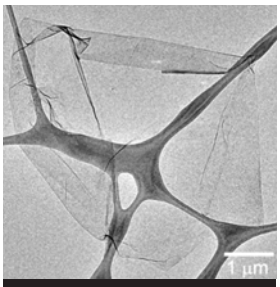
- High Young's modulus at a level of metal (15 – 20 GPa at 1 Hz)
- Low specific gravity at a level of plastic (1.50 - 1.55)
- The Highest level of Tangent loss (0.08 - 0.1 at 1 Hz)

Pure Graphene Diaphragm manufactured in MExplorer has been commercially used in Dynamic Drivers of global TWS products from 2022.

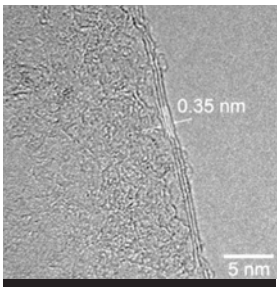
Graphene & Its applications
MEXPLORER®
508, Hanyang Univ. ERICC building, 55 Hanyangdaehak-ro, Sangrok-gu, Ansan, Gyeonggi-do, Korea, 15588
Tel. +82-31-400-3710, **Fax:** +82-31-400-3711 **E-mail:** MExplorer.info@gmail.com www.MExplorer.co.kr

Instead of Graphene coating on the surface of plastic films, **Graphene Diaphragm** of **MExplorer** is purely structured of **Single-crystal Graphene** manufactured in MExplorer.





MExplorer Graphene



Carbon layer of MExplorer Graphene


Single-crystal MExplorer Graphene

Evaluation of the best sound quality from Europe evaluation institutes in 2022

MÜLLER-BBM VibroAkustik Systeme

intertek Total Quality. Assured.

hclab high tech & computing lab

Division	Specific Gravity	Young's modulus (GPa)	Tangent loss
Ti	3.42	34	0.005
Al38	2.28	87	0.004
Mg	1.38	20	0.003
Graphene Diaphragm (MExplorer)	**1.50 - 1.55**	**15 - 20**	**0.08 - 0.1**
LCP	1.4	1-2	0.08 - 0.09
NOMEX	0.7	-	0.016
PEEK	1.33	4.2	0.007

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Incomparable Qualities

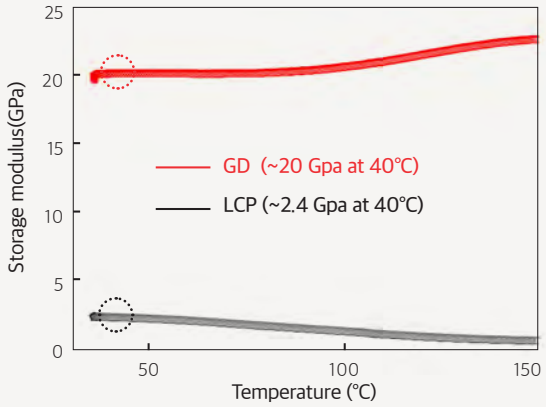
Graphene &
Its applications
MEXPLORER®

Pure Graphene Diaphragm of MExplorer
for the best sound quality in TWS

High Young's modulus of MExplorer Graphene Diaphragm

- Excellent sound-extension up to the mid-and high-frequency sound range
- Outstanding play of sound source in the mid-and high-frequency sound range
- Dynamic and high-resolution Sound in mid-and high-frequency sound range

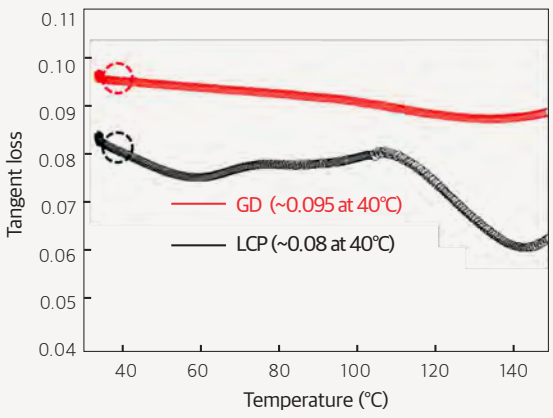
Young's modulus of MExplorer GD vs. LCP (DMA at 1 Hz)



The highest Level of Tangent loss in MExplorer Graphene Diaphragm

- Excellent separation of individual sounds from complex sound sources
- Clear and Transparent Sound Color with high-resolution
- Abundant and Stable sound in the low-frequency sound range

Tangent loss of MExplorer GD vs. LCP (DMA at 1 Hz)



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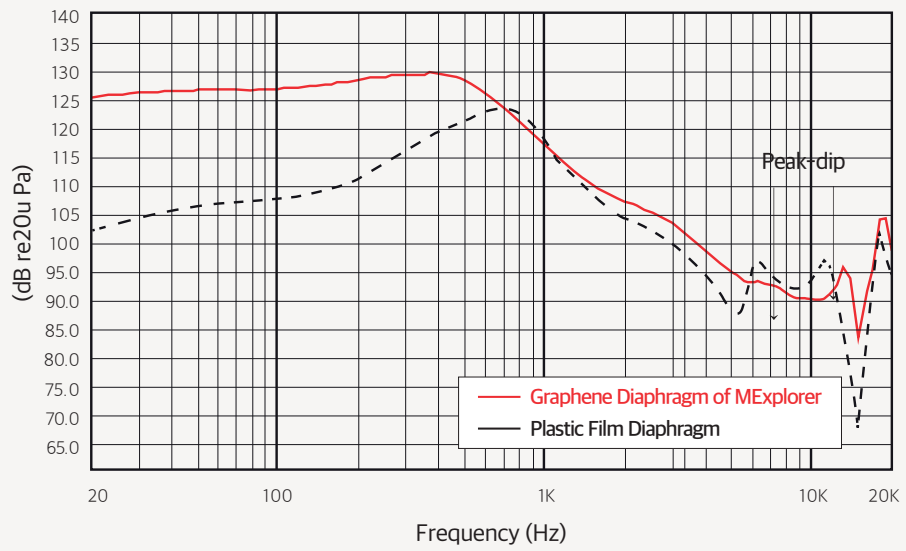
Best Sound

Graphene &
Its applications
MEXPLORER®

Revolutionary Sound in Dynamic Driver with Graphene Diaphragm of MExplorer

Frequency Response [SoundCheck, GRAS 43AA Ear Simulator, 0.22V(3mw)]

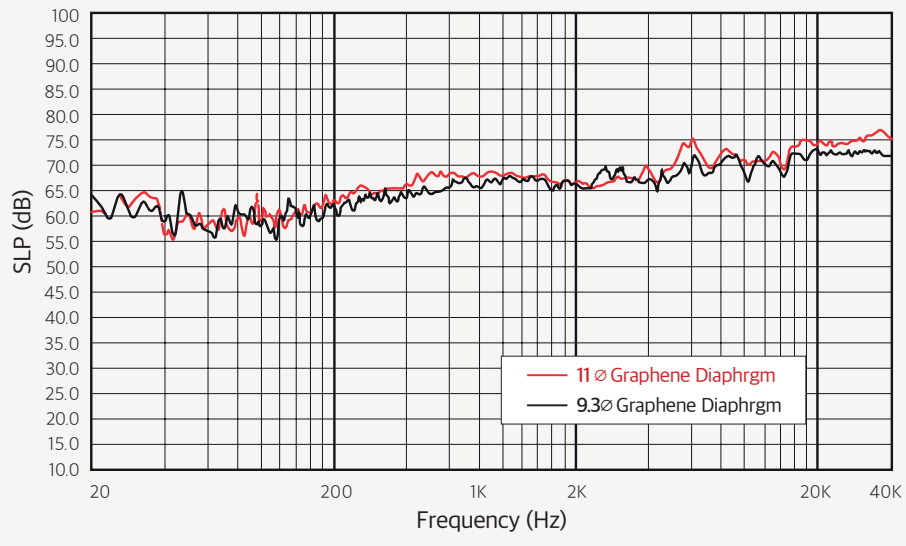


Graphene Diaphragm

Elastomer

Plastic film Diaphragm

Free Field [ETANI S265, 1/4 Mic, 0.1m]



Graphene Diaphragm

Elastomer

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