UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

Before The Honorable Bryan F. Moore
Administrative Law Judge

In the Matter of **CERTAIN SENSORS WITH PIXELS AND PRODUCTS CONTAINING THE SAME**	**Investigation No. 337-TA-1403**

RESPONDENTS SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC., AND SAMSUNG SEMICONDUCTOR, INC.'S
PROPOSED CONSTRUCTIONS PURSUANT TO GROUND RULE 7.1

Respondents Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Semiconductor, Inc. (collectively "Samsung") provide the following proposed constructions pursuant to Ground Rule 7.1 (Order No. 2) and the Procedural Schedule (Order No. 6) for U.S. Patent Nos. 9,064,764 (the "'764 patent"), 9,905,599 (the "'599 patent"), 10,224,359 (the "'359 patent"), 11,721,714 (the "'714 patent"), and 11,069,737 (the "'737 patent").

<u>’764, ’599, ’359, and ’714 Patents</u>

Terms	Claims	Constructions[1]
a high refractive index material sandwiched between two low refractive index materials *a first material sandwiched between two second materials* *said third layer is disposed between said first and second layers*	’764:1–2; ’714:1 ’764:8; ’714:9 ’359:1, 18	“a [high refractive index material] in contact with [low refractive index materials] on two opposing surfaces” “a first material in contact with two materials on two opposing surfaces” “said third layer is in contact with said first and second layers on two opposing surfaces”
two low refractive index material(s)	’764:1–2 ’714:1–4, 7	“the [low refractive index materials] must be different materials”
textured region and/or *textured film layer* *textured layer*	’599:12–13, 19, 31; ’359:12–15, 17, 19–20, 22, 26–29, 76–79 ’599:13–14, 31–32; ’359:15–16, 20–21 ’764:21–22	“region that makes light incident on the pixel scatter to improve absorption” “layer that makes light incident on the pixel scatter to improve absorption” “layer that makes light incident on the pixel scatter to improve absorption”
a textured layer positioned to interact with light proximal to the backside surface	’764:21	“a [textured layer] disposed on the backside surface”

[1] Bracketed text identifies terms that are separately construed herein.

Terms	Claims	Constructions[1]
reflective layer	’599:1, 19; ’714:14	“a layer that reflects more light than it transmits”
light trapping material	’764:1, 2, 6, 8, 16–17, 20–22, 25; ’599:1–5, 11, 15–17, 19–24, 30, 33–35; ’359:56, 62; ’714:1, 9, 12–14, 17–18	“a material that reflects more light back into the pixel than it transmits”
light sensitive pixel *light sensitive image sensor pixels*	’764:1, 8, 17, 21; ’599:1, 19; ’359:1, 5, 12, 18–19, 23, 67–69, 73–75; ’714:1, ’359:1, 18, 38–40, 42, 45–47, 49	“photodiode capable of detecting light”
sidewall	’764:1, 4–5, 8, 14–15, 17–19, 21, 23–24; ’599:1, 7–8, 18–19, 26–27, 36; ’714:1, 10–11	“trench”
high refractive index material/low refractive index material(s)	’764:1–2; ’714:1, 5–6 ’764:1–2; ’714:1–4, 7	“material that have a refractive index of greater than or equal to 2.1” “material(s) that have a refractive index less than 2.1”
a peripheral sidewall disposed into at least a portion of the pixel	’764:1, 8, 17, 21; ’714:1	indefinite
sloped surface at the pixel device interface	’764:17; ’714:18	indefinite

Terms	Claims	Constructions[1]
extending at least partially [or *substantially*] *around the pixel periphery* *extends completely around the pixel periphery*	’764:1, 8, 17, 21; ’599:1, 19; ’714:18 ’764:4, 14, 18, 23; ’599:7, 26; ’714:10	indefinite unless Samsung’s construction of *light sensitive pixel* is adopted
substantially	’764:1, 8, 17, 21; ’599:1, 16, 18–19, 34, 36; ’359:5; ’714:1	the complete or nearly complete extent or degree of an action, characteristic, property, state, structure, item, or result so as to have the same overall result as if absolute and total completion were obtained
thereupon from inside the pixel back into the pixel back into the pixel	’599:1, 19	plain and ordinary meaning, meaning that the light must bounce back into the pixel twice
imager device	’359:1, 18, 52–83	Preamble is not limiting

<u>’737 Patent</u>

Term	Claims	Construction
A photosensitive imager device capable of detecting visible and infrared electromagnetic radiation	’737:1, 32	Preamble is limiting and means, “An image sensor pixel capable of detecting visible and infrared electromagnetic radiation.”
imager device	’737:1, 32	“image sensor pixel”
shallow trench isolation etching	’737:30	indefinite
the surface features are arranged according to a pattern	’737:1, 54–55	indefinite

Term	Claims	Construction
a textured region comprising a plurality of surface features configured to interact with incident electromagnetic radiation so as to increase the quantum efficiency of the device	’737:1, 32	“a region with a plurality of surface features that makes light incident on the pixel scatter to increase the quantum efficiency of the device” indefinite
the textured layer	’737:6, 37	indefinite
processing the region of the semiconductor layer or support substrate comprising the surface features with CMP after depositing the oxide material	’737:26	indefinite
substantially	’737: 12, 24, 43, 54	the complete or nearly complete extent or degree of an action, characteristic, property, state, structure, item, or result so as to have the same overall result as if absolute and total completion were obtained

Dated: August 27, 2024

By: /s/ *Nitin Subhedar*

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CERTIFICATE OF SERVICE

I, Marissa Golub, certify that on August 27, 2024, copies of the foregoing **RESPONDENTS SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC., AND SAMSUNG SEMICONDUCTOR, INC.'S PROPOSED CONSTRUCTIONS PURSUANT TO GROUND RULE 7.1** were delivered, pursuant to Commission regulations, upon the following interested parties as indicated:

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