

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIAVI SOLUTIONS INC.,
Petitioner,

v.

MATERION CORPORATION,
Patent Owner.

Case PGR2019-00017
Patent 9,989,684 B2

Before BARBARA A. BENOIT, BART A. GERSTENBLITH, and
NATHAN A. ENGELS, *Administrative Patent Judges*.

GERSTENBLITH, *Administrative Patent Judge*.

DECISION
Denying Institution of Post-Grant Review
35 U.S.C. § 324

I. INTRODUCTION

A. *Background*

VIAVI Solutions Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of a post-grant review of claims 1–16 of U.S. Patent No. 9,989,684 B2 (Ex. 1001, “the ’684 patent”). Materion Corporation (“Patent Owner”) filed a Preliminary Response (Paper 9, “Prelim. Resp.”). On the same day Patent Owner filed its Preliminary Response, Patent Owner filed a statutory disclaimer of claims 12–14 and 16 under 37 C.F.R. § 1.321(a). Ex. 2023. Accordingly, the claims remaining in the ’684 patent—claims 1–11 and 15—are the subject of Petitioner’s challenge in this proceeding. *See* 37 C.F.R. § 42.207(e) (“No post-grant review will be instituted based on disclaimed claims.”); *cf.* *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1357 (2018) (“[T]he claims challenged ‘in the petition’ will not always survive to the end of the case; some may drop out thanks to the patent owner’s actions.”).

We review the Petition under 35 U.S.C. § 324(a), which provides that a post-grant review may not be instituted unless “it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” 35 U.S.C. § 324(a). Upon consideration of the present record and for the reasons explained below, we determine Petitioner has not satisfied its burden under § 324. Thus, we do not institute a post-grant review.

B. *Related Proceedings*

The parties indicate there are no related matters involving the ’684 patent. Pet. 3; Paper 12, 1.

C. Real Parties in Interest

Petitioner identifies VIAVI Solutions Inc. as the sole real party in interest. Pet. 2. Patent Owner identifies Materion Corporation as the sole real party in interest. Paper 12, 1.

D. The '684 Patent

The '684 patent is directed to “near infrared optical interference filters with improved transmission.” Ex. 1001, Title. The '684 patent explains that known transmission interference filters employ a stack of alternating silicon and silicon dioxide (SiO₂) layers. *Id.* at 1:19–20. “To extend device operation into the near infrared, it is further known to hydrogenate the silicon, so as to employ alternating layers of hydrogenated amorphous silicon (a-Si:H) and SiO₂.” *Id.* at 1:40–43. The '684 patent provides:

an interference filter comprising a stack of a plurality of layers of at least one layer of amorphous hydrogenated silicon and at least one layer of one or more dielectric materials having a refractive index lower than the refractive index of the amorphous hydrogenated silicon wherein the layers of one or more dielectric materials include layers of a dielectric material having a refractive index in the range 1.9 to 2.7 inclusive.

Id. at 1:51–58. The '684 patent explains that the layers of amorphous hydrogenated silicon may include nitrogen (a-Si:H,N). *See, e.g., id.* at 1:59–62, 4:18–21, 4:36–39. The '684 patent discloses various ranges for the passband center wavelength of several interference filters from 750 nm to 1250 nm. *See, e.g., id.* at 1:64–66 (“750 to 1000 nm”), 3:5 (“800-1250 nm”).

Figure 4 of the '684 patent is reproduced below:

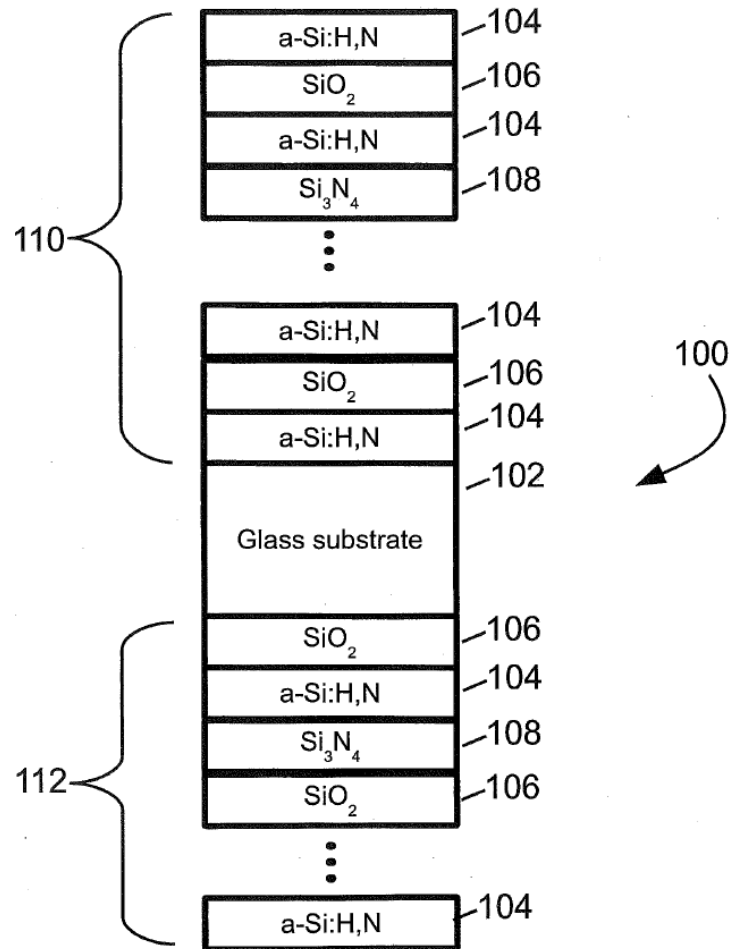


Fig. 4

Figure 4 of the '684 patent “diagrammatically shows an interference filter suitably manufactured using the sputter deposition system.” *Id.* at 2:26–28. Interference filter 100 includes substrate 102 and “alternating layers of a-Si:H,N 104 and SiO₂ 106 and/or Si₃N₄ 108.” *Id.* at 7:7–12. “[F]ilter 100 includes layer stacks 110, 112 on opposite sides of the substrate 102” *Id.* at 7:21–22.

E. Illustrative Claim

After Patent Owner's disclaimer, claim 1 is the sole independent claim remaining in the '684 patent and challenged in this proceeding. Claim 1 is representative of the claimed subject matter and reproduced below:

1. An optical filter comprising:
 - a transparent substrate;
 - an interference filter comprising a layers stack comprising a plurality of layers of at least:
 - layers of amorphous hydrogenated silicon; and
 - layers of one or more dielectric materials having a refractive index lower than the refractive index of the amorphous hydrogenated silicon wherein the layers of one or more dielectric materials include layers of a dielectric material having a refractive index in the range 1.9 to 2.7 inclusive;
 - the layers stack including repeating units of two or more layers configured to have a passband with properties defined by the repeating units including at least a passband center wavelength,
 - wherein the layers stack includes a first layers stack on one side of transparent substrate and a second layers stack on the opposite side of the transparent substrate.

Ex. 1001, 8:47–64.

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