

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YU-KUNG HSIAO, CHIH-KUNG CHANG, FU-TIEN WENG,
CHUNG-SHENG HSIUNG, BII-JUNG CHANG, and KUO-LIANG LU

Appeal No. 2003-1656
Application No. 09/725,973

ON BRIEF

Before GARRIS, WALTZ, and TIMM, Administrative Patent Judges.
GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 1-5 and 8-12 which are all of the claims remaining in the application.

The subject matter on appeal relates to an optoelectronic microelectronic fabrication. With reference to the Appellants' drawing, the fabrication comprises a substrate 10 having formed therein a photoactive region 12a-12d, a microlens layer 24a-24d in registration with the photoactive region, and an infrared filter layer 18 between the substrate and the microlens layer wherein the

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infrared filter layer is formed as a planarizing layer not contacting the substrate. The appealed subject matter also relates to a method for fabricating the above discussed optoelectronic microelectronic fabrication. This subject matter is adequately represented by independent claim 1 which reads as follows:

1. An optoelectronic microelectronic fabrication comprising:
a substrate having formed therein a minimum of one photoactive region which is sensitive to infrared radiation;

a minimum of one microlens layer formed over the substrate and in registration with the minimum of one photoactive region; and

a minimum of one infrared filter layer formed interposed between the substrate and the minimum of one microlens layer, wherein the minimum of one infrared filter layer is formed as a planarizing layer not contacting the substrate.

The references relied upon by the Examiner as evidence of obviousness are:

Oozu et al. (Oozu)	5,453,611	Sep. 26, 1995
Jedlicka et al. (Jedlicka)	5,604,362	Feb. 18, 1997
Chiulli et al. (Chiulli)	5,667, 920	Sep. 16, 1997

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All of the claims on appeal stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Oozu in view of Jedlicka and Chiulli.¹

We refer to the brief and the answer for a complete exposition of the opposing viewpoints expressed by the Appellants and by the Examiner concerning this rejection.

OPINION

For the reasons well stated in the answer and for the reasons set forth below, we will sustain this rejection.

As correctly indicated by the Examiner and not disputed by the Appellants, the fabrication of Oozu (see Figures 40-41 and the specification disclosure relating thereto) comprises a substrate 301, photoactive region 302, 304 and an infrared filter layer 315 which does not contact the substrate in accordance with the requirements of appealed claim 1. This claim distinguishes from

¹ On page 6 of the brief, the Appellants' separately group fabrication claims 1-5 from method claims 8-12. However, as properly indicated by the Examiner in the paragraph bridging pages 2 and 3 of the answer, the fabrication claims and the method claims have not been separately argued. That is, the arguments presented in the brief apply equally to each of these claim groupings. Under these circumstances, we consider the appealed claims to stand or fall together. See Ex parte Schier, 21 USPQ2d 1016, 1018 (Bd. Pat. App. & Int. 1991) and 37 CFR § 1.192(c)(7)(2002). Therefore, in assessing the merits of the above noted rejection, we will focus only on representative independent claim 1.

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Oozu by requiring a microlens layer and by requiring that the infrared filter layer be formed as a planarizing layer.

According to the Examiner, it would have been obvious for an artisan with ordinary skill to dispose a microlens layer on the infrared filter layer 315 of Oozu in view of and for the reasons taught by Chiulli (see the paragraph bridging columns 7 and 8), and, toward this end, it would have been obvious to form Oozu's infrared filter layer 315 as a planarizing layer in order to obtain the planarizing benefits taught by Jedlicka with respect to planarizing his infrared filter layer 40 (e.g., see the paragraph bridging columns 4 and 5 and lines 34-52 in column 5). In this regard, Jedlicka teaches that one of the functions of his planarizing (and infrared filter) layer 40 is "so that subsequent layers ... will be applied evenly over the relatively smoothed out surface of polyimide layer 40" (column 5, lines 49-52), and this teaching would have led the artisan to form Oozu's infrared filter layer 315 as a planarizing layer so that the subsequent microlens layer formed thereon will be applied evenly and uniformly in accordance with the teachings of Chiulli (again see the paragraph bridging columns 7 and 8 and especially the "uniform layer" desideratum in line 11 of column 8).

In the last sentence on page 8 of the brief, the Appellants seem to argue that no reason exists for forming Oozu's infrared filter layer 315 as a planarizing layer "since Oozu's color filter layer 314 upon which it is formed is already formed as a planarized layer which provides no need for a planarizing layer formed thereupon". We do not find and the Appellants do not identify any disclosure in the Oozu reference which supports the aforequoted assertion that patentee's color filter layer 314 "is already formed as a planarized layer". Moreover, the Examiner has expressly and repeatedly disagreed with this assertion (see pages 4, 6 and 7 of the answer), and the Appellants have filed no reply to this disagreement by the Examiner. Under these circumstances, the Appellants' assertion that Oozu's layer 314 is formed as a planarized layer lacks perceptible accuracy.

In any case, even if assumed to be correct, the Appellants' assertion would not forestall an obviousness conclusion. That is, regardless of whether Oozu's layer 314 is a planarized layer as asserted by the Appellants, a planarizing function still would have been desirable at the top surface of patentee's infrared filter layer 315 so as to ensure that the subsequent microlens layer formed thereon would be uniform pursuant to the desideratum of Chiulli. In this way, Chiulli's desideratum for a uniform layer

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of microlens material would have been achieved via a planarizing technique which Jedlicka evinces was recognized in the prior art as effective for this purpose.

The Appellants further argue that Jedlicka would not have suggested and indeed teaches away from the modifications proposed by the Examiner because patentee's planarizing layer 40 is formed directly on substrate 20 whereas appealed claim 1 requires that the infrared filter layer be formed "as a planarizing layer not contacting the substrate". We share the Examiner's view that such arguments amount to an inappropriate attack of the applied references individually. See In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Such an attack does not militate against an obviousness conclusion because the test for obviousness is what the combined teachings of the applied references would have suggested to those of ordinary skill in the art. Keller, 642 F.2d at 425, 208 USPQ at 881. For the reasons thoroughly detailed above and in the answer, the combined teachings of Oozu, Jedlicka and Chiulli would have suggested the modifications purposed by the Examiner, and the fact that Jedlicka's planarizing layer 40 is formed directly on substrate 20 is simply not relevant to the Examiner's obviousness conclusion or his rationale in support thereof.

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In light of the foregoing, it is our ultimate determination that the reference evidence adduced by the Examiner establishes a prima facie case of obviousness which the Appellants have failed to successfully rebut with argument or evidence of nonobviousness. We hereby sustain, therefore, the Examiner's § 103 rejection of all appealed claims as being unpatentable over Oozu in view of Jedlicka and Chiulli. See In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The decision of the Examiner is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
THOMAS A. WALTZ)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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CATHERINE TIMM)	
Administrative Patent Judge)	

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