

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.22

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MICHAEL R. T. TAN, KENNETH H. HAHN,  
LONG YANG and SHIH-YUAN WANG

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Appeal No.1998-0181  
Application No.08/566,222

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ON BRIEF

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Before URYNOWICZ, KRASS, and BARRY, Administrative Patent Judges.  
URYNOWICZ, Administrative Patent Judge.

Decision on Appeal

This appeal is from the final rejection of claims 4 and 5.

The invention pertains to a surface emitting laser (SEL).

Claims 4 and 5 read as follows:

4. A method for inducing uniform filament formation in large-area SEL comprising:

a light generation layer for generating light in response to light passing therethrough;

mirror means disposed on opposite faces of said light generation layer for reflecting light generated in said light generation layer toward said light generation layer such that said reflected light adds coherently to said light generated in said light generation layer; and

a reflective electrode deposited on a face of said mirror means, remote from said light generation layer;



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reflectivity than electrode 28 is positioned between the pieces. Upon energization of the SEL's four electrodes, a four-beam far-field pattern is produced (column 6, lines 49-51).

#### Opinion

After consideration of the positions and arguments presented by both the examiner and the appellants, we have concluded that the rejection should be sustained. We agree in general with the comments made by the examiner; we add the following discussion for emphasis.

With respect to claim 4, appellants' argument is that the rejection is improper because Kapon does not teach induction of filaments. We disagree. As noted above, at column 6, lines 49-51 Kapon teaches that rectangular arrays of the embodiment of Figure 1 produce a four-beam far-field pattern. This establishes that the four electrodes 28 of Figure 1 produce filamentation adjacent to the imperfections separating the electrodes.

Claim 5 merely recites that the step of providing plural localized regions includes a step of forming localized regions of different refractive index in said mirror means. This subject matter is met by Kapon's disclosure at column 4, lines 44-58, that electrodes 28 are gold (Au), and that material 30 at the imperfections between electrodes 28 is Ti/Au or Cr/Au, each of which inherently has a different refractive index than Au. Diffraction occurs when a wave of energy passes obliquely from one medium to a medium of another kind.

Arguments made by appellants with respect to dependent claim 5

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at item VIII., section B., of the brief are simply not commensurate in scope with the subject matter added by the claim. For example, claim 5 does not recite that imperfections induce filamentation.

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

AFFIRMED

STANLEY M. URYNOWICZ JR.	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
ERROL A. KRASS	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
LANCE LEONARD BARRY	)	
Administrative Patent Judge	)	

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