Atty. Docket No.	Express Mail Label No				
FORM PTO-1619A Expires 06/30/99 OMB 0651-0027	U.S. Department of Commerce Patent and Trademark Office PATENT				
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PATENTS ONLY  TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(les).					
Submission Type	Conveyance Type				
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Conveying Party(ies)	Mark if additional names of conveying parties attached Execution Date  Month Day Year				
Name (line 1) EBELING, KARL JOACH	HM 10142001				
Name (line 2)	Execution Date				
Second Party Name (line 1)	Month Day Year				
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Name (line 1) U-L-M PHOTONICS GME	BH If document to be recorded is an assignment and the				
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PATENT REEL: 012070 FRAME: 0478

FORM PTO-1619B Expires 06/30/99 OMB 0651-0027	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT				
Correspondent Name and Address	Area Code and Telephone Number	(215) 568-6400				
Name RANDOLPH J. HUIS, ES	QUIRE					
Address (Ilne 1) VOLPE AND KOENIG, P.C.						
Address (line 2) SUITE 400, ONE PENN	Address (line 2) SUITE 400, ONE PENN CENTER					
Address (line 3) 1617 JOHN F. KENNEDY BLVD.						
Address (line 4) PHILADELPHIA, PA 19103						
Pages Enter the total number of pages of the attached conveyance document # 2						
Application Number(s) or Patent Num	Maik ii addi	itional numbers attached				
Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).						
Patent Application Number(s) 09704346	Faterit N	umber(s)				
If this document is being filed together with a pay Date	the Application open the date the patent application of	Month Day Year				
If this document is being filed together with a <u>new</u> Patent Application, enter the date the patent application was signed by the first named executing inventor.						
Patent Cooperation Treaty (PCT)	PCT PCT	РСТ				
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has not been assigned.	PCT PCT	PCT				
Number of Properties  Enter the total number of properties involved. # 1						
Fee Amount Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00						
Method of Payment: Enclosed Deposit Account						
(Enter for payment by deposit account or if addit	ional fees can be charged to the account.)  Deposit Account Number: #	22-0493				
A		es No				
Statement and Signature						
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as						
indicated herein.	/ 11/11					
Randolph J. Huis, Esquire	forder / the	October 17, 2001				
Name of Person Signing Reg. No. 34,626	Signature	Date				

PATENT

**REEL: 012070 FRAME: 0479** 

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ULMPHOTONICS

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Express Mail Label No. EL7033879873US
ASSIGNMENT

07315026021

Atty. Docket No. UPG-PT002

WHEREAS, Karl Joachim Ebeling, residing at Kelternweg 70, Ulm, Germany, D-89075, a citizen of Germany (hereafter the undersigned), is the inventor of

## OPTOELECTRONIC DEVICE HAVING A HIGHLY CONDUCTIVE

## CARRIER TUNNELING CURRENT APERTURE

for which the undersigned executed an	application for	United States	Letters Patent, U.S.
Patent Application No. 09 1704, 346	, filed	M.02.	2000

The undersigned hereby authorizes assignee or assignee's representative to insert the Application Number and the filing date of this application if they are unknown at the time of execution of this assignment.

AND, WHEREAS, U-L-M Photonics GmbH, a German corporation, having its principal place of business at Albert-Einstein-Allee 45, Ulm, Germany, D-89081 (hereafter referred to as the assignee), is desirous of acquiring the entire right, title and interest in said invention, all applications for and all letters patent issued on said invention.

NOW, THEREFORE, in consideration of One Dollar (\$1.00), receipt of which is acknowledged by the undersigned, and of other good and valuable consideration, the undersigned, intending to be legally bound, does hereby sell, assign and transfer to the assignee and assignee's successors, assigns and legal representatives the entire right, title and interest in said invention and all patent applications thereon, including, but not limited to, the application for United States Letters Patent entitled as above, and all divisions and continuations thereof, and in all letters patent, including all reissues thereof, throughout the world, including the right to claim priority under the Paris Convention.

It is agreed that the undersigned shall be legally bound, upon request of the assignee, to supply all information and evidence relating to the making and practice of said invention, to testify in any legal proceeding relating thereto, to execute all instruments proper to patent the invention throughout the world for the benefit of the assignee, and to execute all instruments proper to carry out the intent of this instrument.

The undersigned warrants that the rights and property herein conveyed are free and clear of any encumbrance.

-1 of 2-

**2**004

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s. 05

EXECUTED under seal on this 44 day of October

Witness:

-2 of 2-