

## STATEMENT OF CONSIDERATIONS

### REQUEST BY OSRAM OPTO SEMICONDUCTORS FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN INVENTION RIGHTS UNDER DOE CONTRACT NO. DE-FC26-05NT42341, SUBCONTRACT QZ001; W(A)-05-017, CH-1280

The Petitioner, OSRAM Opto Semiconductor (Osram) was awarded a subcontract under this cooperative agreement for the performance of work entitled, "Scaling Up KiloLumen Solid-State Lighting Exceeding 100 LPW via Remote Phosphor." The cooperative agreement was awarded to Light Prescriptions Innovators, LLC (LPI). The purpose of the cooperative agreement is to develop a new white light emitting diode (LED) light source that emits 1000 lumens with an efficacy exceeding 100 lumens per watt (LPW). The new white LED light source will use multiple Thin Film Indium Gallium Nitride (ThinGaN) chips from Osram and use LPI's patent pending Manifold optics to optically combine the light from individual chips to one exit aperture with phosphor. At this optics' exit aperture, the "combined" blue light stimulates the phosphor and generates homogeneous white light. This waiver is only for inventions of Osram made under its subcontract. Osram notes in response to question 1 that all issued patents resulting from Osram OS inventions will be assigned to Osram OS GmbH in Regensburg, Germany

The total estimated cost of the contract is \$1,448,473 with the DOE share being \$1,156,644 or 80%. The value of Osram's subcontract with LPI is \$514,840, of which Osram's cost share is \$132,829 or 25% (e-mail from Osram confirming these figures is attached). The period of performance is from April 1, 2005 through September 30, 2006.

In its response to questions 5 and 6 of the attached waiver petition, Osram has described its technical competence in the field of phosphor technologies and white LEDs. Osram is one of the leading white LED manufacturers in the world, and has more than 30 white LED products in production, ranging from miniature white LEDs for cell phone backlighting to high-power white LEDs for white illumination. It is the inventor of top-emitting Thin Film chip technologies for both InGaAlP and InGa N materials, and has developed and qualified the first thin film chip on InGaAlP material for mass production in 2002. A representative patent for ThinGaN chip technologies, U.S. Patent No. 6,592,780, is attached to the waiver petition. Osram has also developed leading phosphor conversion technologies for using blue InGaN chips to generate white light (U.S. patent 6,669,866 attached), and it has developed and commercialized several high-power LED products that use multiple chips in a single LED package ( PCT Pub No. 2004/088200, attached to the waiver petition). Osram's response demonstrates its technical competency in the field of phosphor technologies and white LED products.

In its response to questions 9 and 10 of the attached waiver petition, Osram states that other LED companies, such as Lumileds and Nichia, have developed various technologies to produce white LED products with comparable performance and cost. But these technologies use different structures from Osram's ThinGaN chip, and different phosphor and LED packaging technologies and materials. Thus, it would appear that Osram will be seeking to provide a competing technology with these other companies without becoming dominant in the field. Therefore grant of the waiver will have a positive effect on competition and market concentration.

The subject contract will be modified to add the Patent Rights--Waiver clause in conformance with 10 CFR 784.12, wherein Osram has agreed to the provisions of 35 U.S.C §§ 202, 203, and 204. This waiver clause will also include a paragraph entitled U.S. Competitiveness, in which Osram agrees to substantial U.S. manufacture of subject inventions (attached hereto). Additionally, Osram agrees not to transfer subject inventions to any other entity unless that other entity agrees to these same requirements.

Considering the foregoing, it is believed that granting the waiver will provide the Petitioner with the necessary incentive to invest resources in the commercialization of the results of the subcontract in a fashion which will make the subcontract's benefits available to the public in the shortest practicable time. In addition, it would appear that grant of the above requested waiver would not result in an adverse effect on competition nor result in excessive market concentration. Therefore, in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver, as set forth above, be granted.

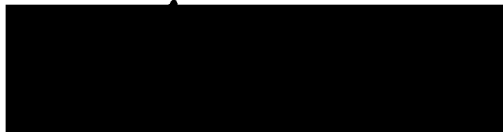


Mark P. Dvorscak  
Assistant Chief Counsel  
Office of Intellectual Property Law

Date Dec 26 2005

Based on the foregoing Statement of Considerations and the representations in the attached waiver petition, it is determined that the United States and the general public will best be served by a waiver of rights of the scope described, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of this subcontract, where through such modification or extension, the purpose, scope, or cost of the subcontract is substantially altered.

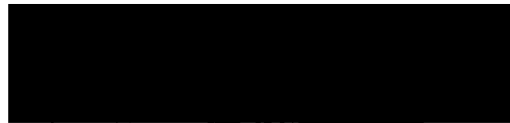
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Date 1-24-06

APPROVAL:



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Technology Transfer and  
Intellectual Property, GC-62

Date 2-9-06

(t) U. S. COMPETITIVENESS The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoument of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.