

White Light LTD

Volume of investments required: **\$ 500 thousand**

Intended use of investment required:

R&D (light-emitted diode (LED) new generation for different lighting devices)	40%
Fixed assets acquisition (for the LED production)	30%
Marketing	5%
Working capital	25%

Company profile:

1. Date of establishment - October 2004.
2. Stage of development - Seed
3. Size and source of investment to date - \$ 12.5 th. from the Foundation for Assistance to Small Innovative Enterprises
4. Industry - Semiconductor Optoelectronics
5. Target market - Lighting Technology
6. Sales in 2003 - None
7. Description and value of assets - Is being currently determined
8. Intellectual property rights - Russian Federation Patents N 2055420 and N 8836 cover the design of the new generation LED Patentees are Abramov A.V. and Deryagin N.G.
9. Signs of public recognition - Diploma and Gold Medal on the Hi-Tech Exhibition, St.-Petersburg. June 2004.

Owners:

Ioffe Physico-Technical Institute of the Russian Academy of Sciences	25%
2 natural persons	37,5% each other
Share of government property	25%

Management and key personnel:

Abramov, Alexander Vladimirovich - Director General, 55

Deryagin, Nikolay Germanovich - Chief Executive, 40

The company managers are employees of the Ioffe Institute.

Products characteristics:

The company has developed a new design of a light-emitting diode (LED), which is ready for commercialization and has no world analogs. In contrast to well known LEDs, where a significant part of the chip radiation is not collected by the focusing lens and is uselessly dispersed, the original shape of the epoxy package of the LED of the new generation enables to collect effectively and to focus in required direction all emitted by the chip radiation. The viewing angle of the radiation pattern can be easily varied by the adjustment of the chip position in the epoxy package. Commercialization of the suggested design permits to have minimum expenditures and to produce different LEDs with better lighting parameters than known world analogs.

Comparative analysis with existing alternatives:

Fabricated examples of the LEDs in the epoxy package of the new design have shown their unquestionable advantages over the LEDs, manufactured by the world industry. Depending on the viewing angle of the radiation pattern, value of the luminous intensity of the new generation LEDs is about 5 to 15 times greater than the known world analogs, while pricing and running characteristics are the same. Manufactured on the basis of the last series (2003 year) of the LumiLeds

emitters, examples of the green, white and blue LEDs of the new generation had luminous intensity of 5000-7000 cd, with the value of power consumption of only 4 W. LEDs with such parameters have no world analogs and are not manufactured anywhere in the world.

Рынки и конкуренция:

Having the same cost price, the LEDs of the new generation have the higher value of luminous intensity than LEDs, fabricated by the world industry. Having improved output light parameters, LEDs of the new design, obviously, can successfully replace traditional LEDs practically in all fields of application. We believe the most perspective is their application instead of traditional incandescent lamps. Examples of the LEDs, fabricated on the basis of the last series of the LumiLeds emitters, confirm the fundamental possibility of their application for that purpose. Taking into account the enormous volume of this segment of market and world market tendencies, we are planning, first of all, to organize commercial production of the LEDs, suitable for incandescent lamps replacement. As "White Light" company is now in the start-up stage and therefore our possibilities are limited, at the first stage we plan to limit our operation to the Russia market. At the present time there are no competitive products at the market, so we do not expect any competition from Russian LED manufacturers.

The strategic goal of the company's activity is organization of the commercial production of the LEDs of the new design to be used in different lighting devices. As intermediate stages of the strategic goal in the nearest 3-4 years we plan to organize at first pilot and then small-lot production of the LEDs of the new design with the full capacity of 100 thousand LEDs per year. Taking into account the fact that in the production process of the LEDs of the new generation the standard semiconductor emitting chips, produced by world industry, are used and the production is limited to manufacturing of the epoxy package of the special shape, we can expect sufficient profits and good sales volumes even in the case of the small-lot production .

The main LEDs manufacturers and potential competitors in Russia are: "Planeta"(Velikiy Novgorod); "Corvette-Lights" company (Moscow); JSC "Proton" (Orel). Estimated sales volume of LEDs at the Russian market is about \$10 million. With the current growth tendency in the next 3 - 4 years the sales volume is not expected to exceed \$15 - 20 million.

Therefore, after organization of the small-lot LED production we plan to take up to 10 % of the Russian LED market in 2008.