PRESS RELEASE

FOR IMMEDIATE RELEASE

DATELINE: MELBOURNE, FLORIDA
FEBRUARY, 2008

ELK INDUSTRIES®, LLC, announced it's amazing new "BLUE LASER COMBINATION CRYSTAL". The Revolutionary (single) device produces Single Longitudinal Mode LASER Radiation at λ=473 nanometers (in the BLUE wavelength region). What makes this device so unique, is that this single simple, yet economical device allows one to convert (easy to fabricate) λ=808 nanometer (LASER Diode Outputs) at (only) 1-2 watts of power directly into λ=473 nanometers LASER Light - without difficult and time-consuming alignment and mounting maneuvers.

How easy is it? Well, essentially, all you have to do is focus your LASER from 808 nm (NIR) Diode LASER (such as the **Model 8081** OEM from Elk Industries®) onto the entrance face of the BLUE LASER CORE or COMBINATION CRYSTAL (SET), then, instantly, you will see a highly collimated BLUE LASER BEAM produced, as the output, exiting from the opposite (exit side) of the BLUE LASER CORE DEVICE! "It is quite a spectacle to behold", says Mr. Robin Elkins, CEO of Elk Industries®, "It is very compact!" This device measures a mere 4 millimeters thick x 8 millimeters in diameter. " … And, it's easy to mount, as well as integrate into a *turnkey LASER solution*," he adds. In fact, Elk Industries® is slated to add *it's own* CDRH/IEC compliant version of the entire Turnkey LASER Solution, complete with pump LASER, emission indicator key control, beam attenuator, required labels, and emission delay, all in a compact, robust, all-metal 01/25" thick annodiaded aluminum enclosure, operable from 90-230 VAC @ 50/60 Hz with less than 30 watts of input power. This NEW LASER will be called the **Model 473** SLM BLUE LASER.

Elk Industries® has been using a fore-runner of this product, the "GREEN LASER CORE" (Green Combination Crystal) in it's **Model 532** nm GREEN, Nd:YVO_4 LASER for over 2 years, with stable and reliable, adjustable output power of up to 100 milliwatts. It has its own GREEN LASER CORE made with a Nd:YVO_4 crystal and KTP crystal combination is also available from Elk Industries®. However, the BLUE LASER CORE relies upon a *forbidden transition* of Nd:YAG, instead , at a rare, and difficult to obtain LASER output at λ=946 nanometers, which is actually *frequency doubled* to produce the beautiful blue output radiant flux at the λ=473 nm with high efficiency from this single, simple device.

Let's face it, much has been written, talked about, and worked on, to meet the growing demand - to complete the wavelength "Trio" - BLUE, GREEN, and the more so common, RED LASERS to fill the primary color set of LASER wavelengths in the visible wavelength region for humans, especially in full color LASER display applications.

The **Model 473** SLM BLUE LASER is expected to be "Rolled Out" in the second quarter, 2008 (around May of this year) with outputs starting @ 20 milliWatts (minimum). This

will complete the LASER SLM LASER "Trio" from Elk Industries® with the **Model 3200S** and **Model 3400S** Portable semiconductor LASER series in the RED wavelengths (SLM) Spectral region, at λ=635 or λ=670 nanometers wavelength, at ~ 5 milliWatts to 40 milliWatts. The RED wavelength General Purpose Portable LASERS Systems are the mainstay of Elk Industries® in terms of LASER production quantity per annum.

For the GREEN color, at 532 mm, ELK Industries® has the **Model 532** SLM LASER, with AC input. Depending upon demand, Elk Industries® *may* release a portable version of the **Model 532** (also later this year) to operate from batteries which recharge - even from solar cells. And next, the **Model 473** SLM BLUE CDRS/IEC certified LASER is due. "There are many developments slated for this year", remarks Mr. Elkins, "Our line of LASER tubes in the Neon and in the Carbon Dioxide types are reaching new levels of power, unavailable elsewhere in the United States." … "These are very exciting times".

However, with respect to the BLUE LASER cores, "We stand ready to help OEMs and Research & Development Houses to implement the BLUE LASER Cores, to optimize the outputs, collimate them, provide pump LASERS (at 808 nm), focusing optics, mounts, variable power supplies, instrumentation and control circuitry, modulators for either or (both) analog and/or digital types of modulation options for the LASERS, thermal management, metrological instrumentation requirements - just about "anything" you can think of that you might possibly need to harvest your own BLUE LASER outputs, CW, pulsed, or modulated, to high power. And then, if your application happens to be LASER microscopy or LASER light shows, Elk Industries® has all of the "outgear" you will need to do "all the fixins".

Also, Elk Industries® now has larger crystals and mounts to build the next generation of more powerful CW and pulsed mode LASERS in the BLUE @ λ=473 nm. "These can either be CW LASER Diode pumped, pulsed QCW LASER Diode-pumped or Flashlamp-pumped (pulse mode), and/or even Q-Switched", adds Elkins. Prices for the **BLUE LASER CORE** start at (only) $450 (USD) for the 4mm Thick x 8mm Diameter size. Delivery is from stock to 4 weeks, ARO. Contact Elk Industries® for more information or to place your order, today.

NOTE: All LASERS introduced commerce must comply with CDRH/IEC Regulations/Standards.

BLUE LASER CORE SPECIFICATIONS:

OPTICAL-

Input Wavelength ..... 808 nm (collimated and focused to a small spot size)

LASER Material ..... Nd:YAG

Non-Linear Optical Material ..... BBO

Operating Wavelength ..... 946 nm (Frequency Doubled to 473 nm, Internally)

Output Wavelength ..... 473 nm

Beam Diameter ..... < 0.5 mm

Beam Divergence ..... < 3 milliradians (without using external collimator lens or assembly) Beam Pointing Stability ..... < 30 microRadians, Average

Spatial Mode ..... TEMoo (Single Spatial Mode)

Longitudinal Oscillating Mode(s) ... Single Longitudinal Mode

PHYSICAL-

Diameter (overall) ..... 8 mm (In "Holder")

Thickness ..... ~ 4 mm

Weight ..... < 5 Grams

Holder Material ..... Brass or Bronze

Crystal Materials ..... Nd:YAG and BBO

Dimensional Stability ..... < 0.02% variation under all conditions

Storage Temperature ..... -30 Degrees (C) to +140 Degrees (C)

Operating Temperature ..... - 10 Degrees (C) to + 70 Degrees (C)

Shock Tolerance ..... > 15 G's

Additional Specifications are available upon Order Placement.

Specifications are subject to change if Warranted, without Notice.

These Specifications are PRELIMINARY.