

**Title:** BLUE - Optiprex LTD. Ruby Florescence System Mislabeled Laser

**Lesson ID:** 2008-ANL-010 (*Source: User Submitted*)

**Originating Organization or Contracting Company:** Argonne National Laboratory

**Date:** 10/23/2008

**Statement:** A labeled class II laser used in a high resolution ruby fluorescence high pressure measurement system had its beam power level measured and was found to be in the class IIIB power output range.

**Discussion:** The pressure measurement system procured from Optiprex Ltd is housed in a single enclosure and contains a 532 nm laser, high resolution spectrometer, transfer optics, and visual observation capability (microscope). The device also was provided with data acquisition and analysis software and USB port control so it was a single turn-key instrument ready for use within minutes of unpacking. The system was advertised as containing a class II laser and the received device was labeled as containing a class II laser. As such the device was installed and used in accordance with class II laser safety requirements.

During conversations with Easy Lab Technologies, purchaser of Optiprex Ltd, a group member learned that some Optiprex measurement systems contained lasers of higher than class II power level. The group member reported this and arrangements were made to measure the power level of the system. The Argonne laser safety officer measured the laser beam power level and found it to be 18 mW (in the class IIIB power range). The power level was supposed to be 1 mW or less for the class II laser.

**Analysis:** Although there was no personal injury involved in this specific incident, this type of incident has a high potential to have serious consequences. This improper labeling of lasers leads individuals to believing that components are safer than reality and could lead to misuse and personal injury.

**Actions:** Owners of Optiprex ruby fluorescence pressure measuring instruments should be aware that the lasers in systems procured before 2007 may be at a higher class power level than advertised. Confirmation measurements should be made to ensure systems are properly labeled to prevent personal injury

**Savings:** N/A

**Keywords:** laser, OPTIPREXX, RUBY FLOURESCENCE, EASY LABS, ANSI Z136

**Hazard(s):** Lasers

**ISM Code(s):** Analyze Hazards, Develop / Implement Controls

**Work Function(s):** Research & Development

**References:** ANSI Z136, ORPS report # SC--ASO-ANLE -ANLEAPS-2008-0004

**Priority Descriptor:** Blue / Information