Case Study

Patient Alignment

Industry: Medical &Dental
Product: Custom Laser Diode Module
Description: Robust, Compact, Cost-effective 635nm Laser Diode Module for Patient Alignment



ProPhotonix designs & manufactures custom laser modules for some of the world's leading healthcare equipment manufacturers for use in CT scanners, MRI systems, PET scanners, extra-oral scanners and other medical instruments.

Requirements:

To accurately position a patient for scanning, radiologists and other medical practitioners require a highly visible (green or red) laser line or cross in a robust, compact housing.

Solution

ProPhotonix Custom Laser Solution

When searching for a new supplier for a custom laser module to be built into a CT scanner, one of the world's largest healthcare equipment providers contacted ProPhotonix due to our reputation for providing high quality, cost-effective custom laser solutions. The result was a robust, compact 635nm laser module, thousands of which are now operating effectively in the field.

Wavelength

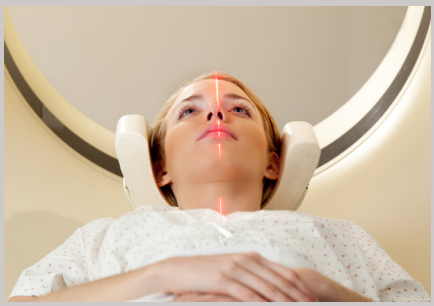
Patient-positioning systems typically use a laser mounted alongside the imaging instruments, clearly showing where images will be taken and allowing the instruments and patient to align to get the best image. Usually a red (635nm) laser line or cross is used, to give a high level of visibility. In some cases green is used because of the human eye's sensitivity to green and the need for clarity when projected onto the skin of patients. ProPhotonix' position as a laser diode supplier as well as a custom laser solutions provider ensures that we have a wide range of diodes from high quality vendors in stock providing you the optimum design flexibility.

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Accurate, Clean lines

Patient positioning applications require excellent bore sighting (alignment of the laser beam with the body of the laser housing) and clean lines without breaks, bright spots or other irregularities. ProPhotonix can offer bore-sighting to <0.25° and our experience with designing and manufacturing laser diode modules means that we can produce lasers with extremely clean lines.



Robust & Reliable

As you would expect, robustness and reliability are key considerations when deciding on a laser for patient alignment. If the lasers do not perform, a high cost piece of equipment is not being utilised and patients aren't being treated. The custom laser product underwent significant product testing including ESD, vibrational, shock and thermal testing. In addition, each laser module is thoroughly tested before it is shipped to the customer.



A cost-effective solution - Fast

ProPhotonix has the ability to deliver cost-effective solutions; fast. Our relationships with laser diode suppliers and our ability to manufacture parts in-house, allows us to deliver excellent value in custom solutions. Our laser module design bank, developed over our many years of experience, , ensures that we can deliver designs quickly for your approval. ProPhotonix is ISO-certified and our production facilities and processes have been audited by some of the world's most demanding and leading manufacturers of medical equipment.

For more information visit www.prophotonix.com
or contact sales @prophotonix.com

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