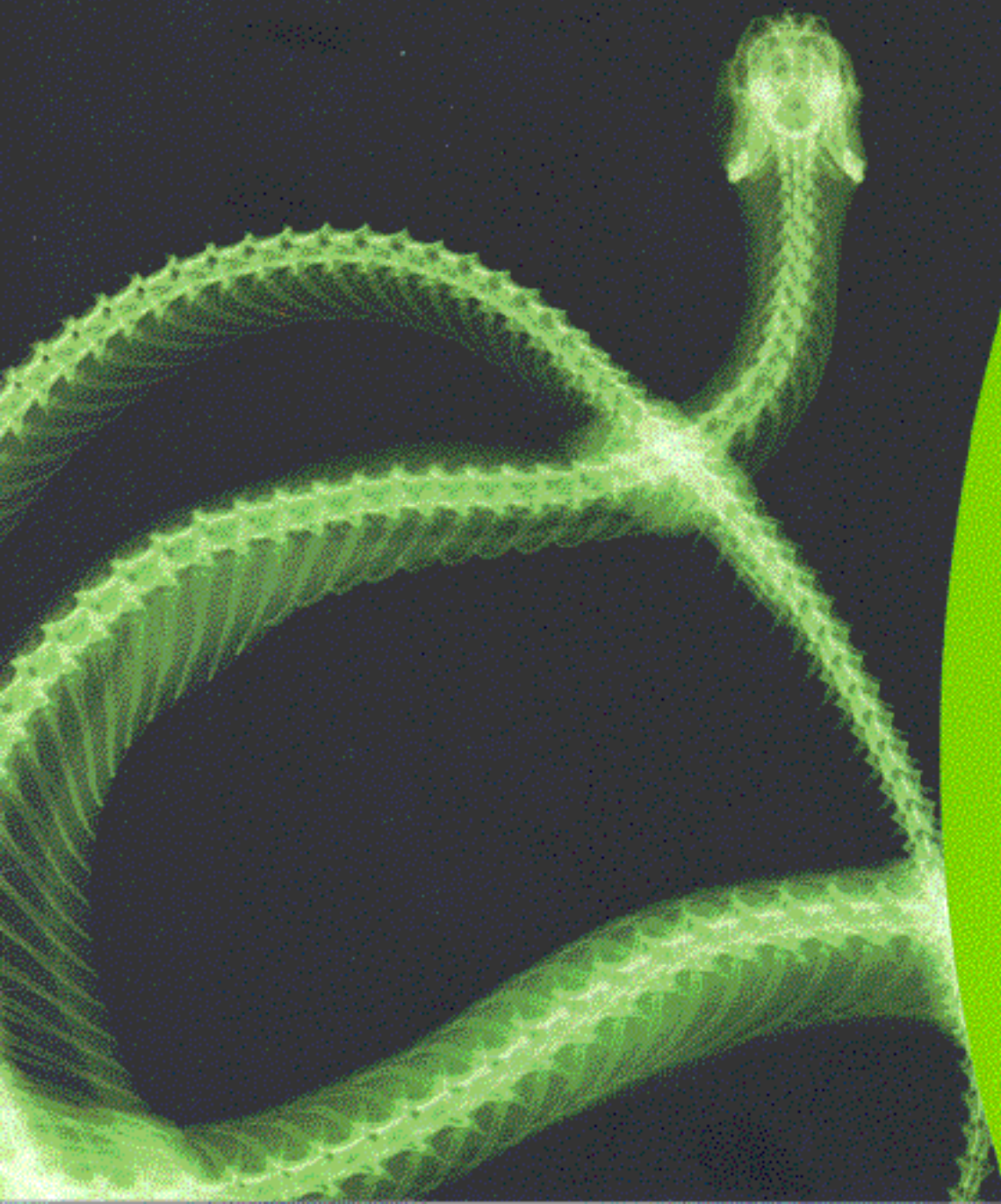


LASERS FOR ENTERTAINMENT
& LIGHTING DISPLAY SYSTEMS

VIPER

SOLID-STATE TECHNOLOGY

VIPER



⊙ HIGH POWER

⊙ COMPACT FOOTPRINT

⊙ SEALED LASER HEAD

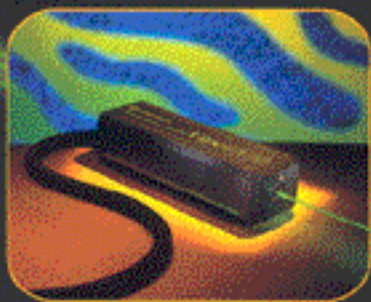
⊙ RUGGED

⊙ HANDS-FREE

⊙ LONG LIFETIME



COHERENT
LASER GROUP

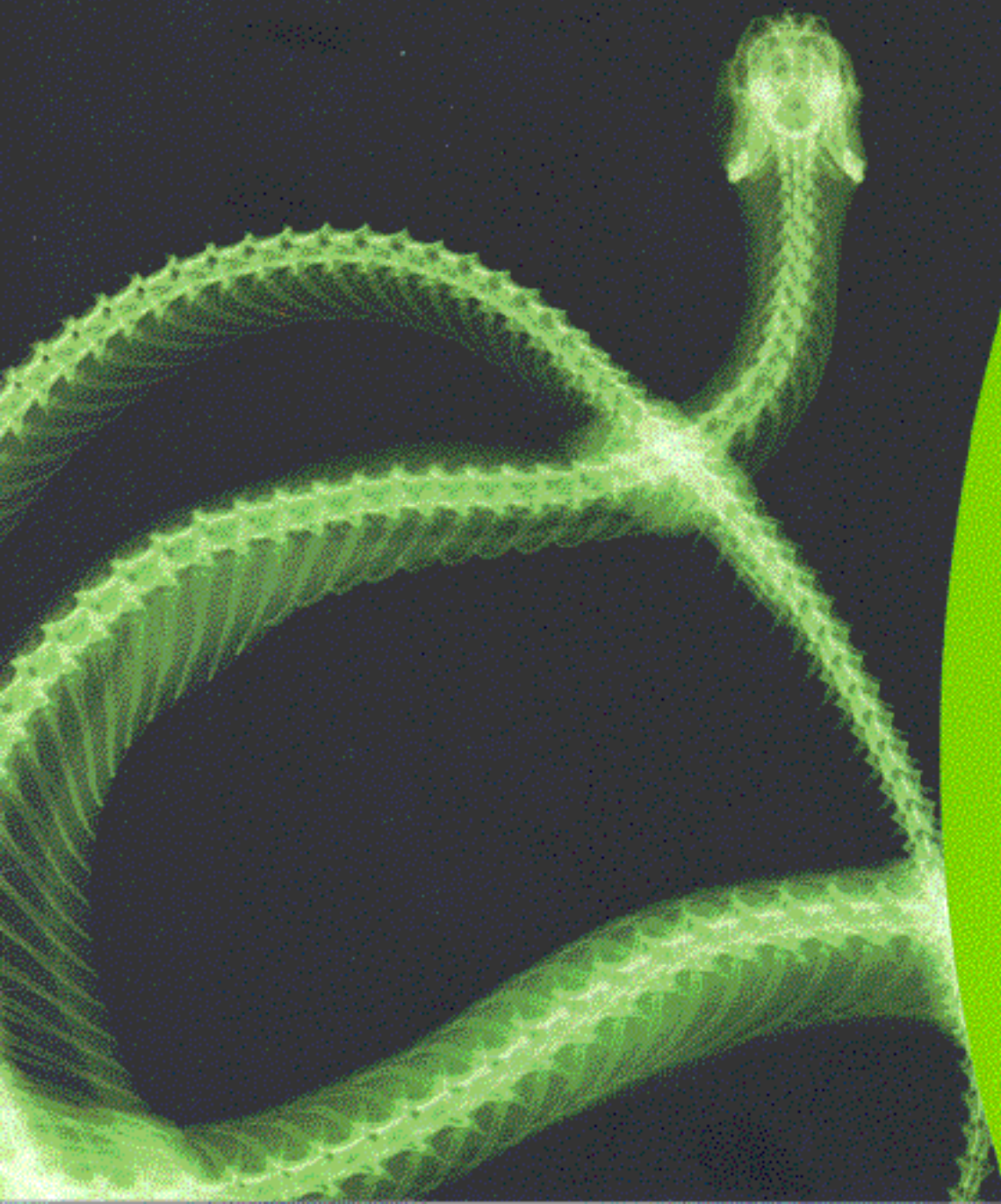


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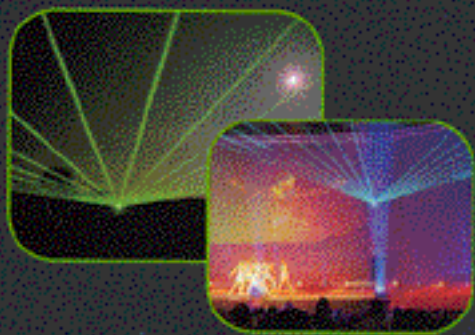
⊙ LONG LIFETIME



COHERENT
LASER GROUP

YOU'VE IDEAL FOR INDOOR OR OUTDOOR DISPLAYS

Imagine the future – the brightest green laser light source you can think of that runs off a standard electrical outlet. A compact package with no knobs to adjust — ever. A laser that can be installed in remote locations and be controlled by computer. A laser that stays aligned even if the temperature changes from 15°C to 35°C. A laser that lasts a long time. The future is here and it is called **VIPER™**



THE ULTIMATE

BEEN BITTEN

NO CLEANING NO TWEAKING

HIGH POWER Bright green (532 nm) continuous-wave laser light in three versions: 10W, 8W or 5W output. The output beam is guaranteed TEM₀₀ and has very low divergence making it an ideal source for modulation with minimal losses in the scanning optics.

COMPACT FOOTPRINT Viper consists of a small laser head and power supply connected with a 10-foot umbilical. The laser diode-packs are located in the power supply for easy exchange without disturbing the laser head. The diode light is delivered through the umbilical to the laser head with fiberoptic cables.

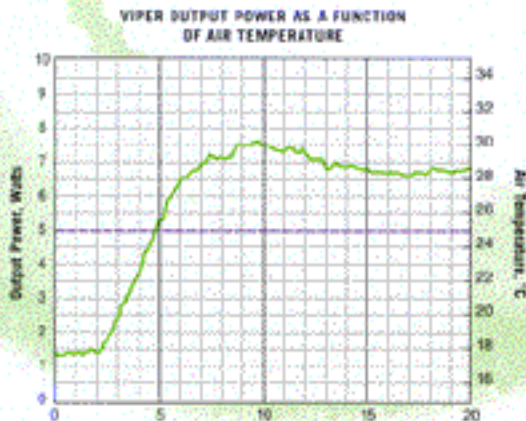
SEALED LASER HEAD The laser head is sealed and has no adjustments. The optics are prealigned at the factory using our (Permalign™) manufacturing technique and need no adjustment throughout the laser's life. This ensures that the optics inside the laser are not affected by dusty environments.

RUGGED Inside the laser head, each of the optic mounts is soldered into place on a heavy metal baseplate. Many thousands of Coherent lasers manufactured with this technology have been shipped worldwide without misalignment resulting from rough handling during shipment. The laser design also makes it impervious to large temperature changes in the environment with no system misalignment or change in mode quality.

LONG LIFE The only consumables in the Viper are the diode-packs. Coherent uses its own Aluminum-free technology which have very long typical lifetimes.

COMPLIANT WITH ALL REGULATIONS Viper lasers are designed to meet all U.S. and international safety standards. They also comply with European Community CE mark requirements.

SUPPORT Coherent provides a worldwide support network with Viper lasers in inventory locations in Europe, Asia and the U.S. This allows a repair-by-replacement strategy to significantly minimize downtime.



VIPER

- ⊕ HIGH POWER
- ⊕ COMPACT FOOTPRINT
- ⊕ SEALED LASER HEAD
- ⊕ RUGGED
- ⊕ HANDS-FREE
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 **COHERENT**
LASER GROUP

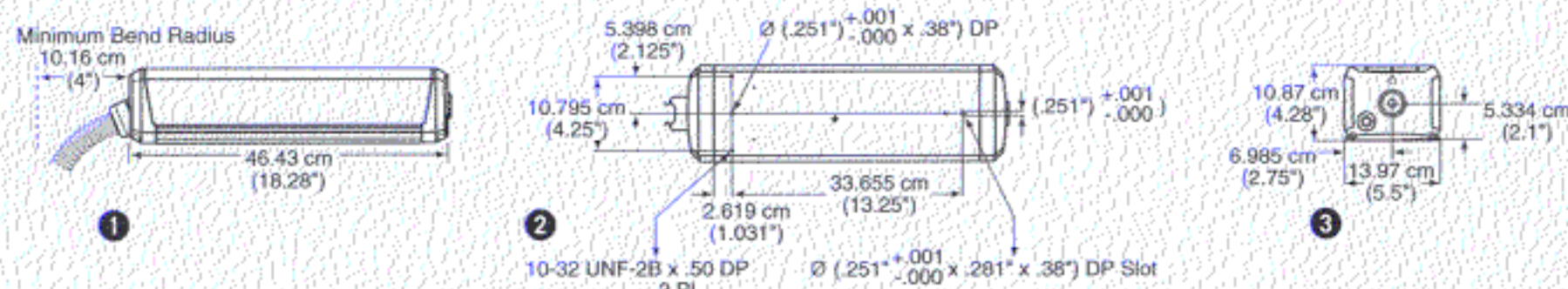
RELIABILITY

UTILITY AND ENVIRONMENTAL REQUIREMENTS

Operating voltage	90 to 250 vac
Operating current	15.5A max. @ 85 vac
Power consumption (typical)	V5 — 500W V8 — 600W V10 — 700W
Voltage line frequency	47-63 Hz
Laser head cooling requirements	V5 — air-cooled riser V8 — water-cooled riser V10 — water-cooled riser
Power supply cooling requirements	V5 & V8 air-cooled V10 — water-cooled
Range of operating temperature	15 to 35°C. (59 to 95°F.)
Weight of laser head	10 kg (22.2 lbs)
Weight of laser power supply	V5 — 31.5 kg (70 lbs) V10 — 40.82 kg (90 lbs)
Weight of heat sink	Air-cooled — 7 kg (15.4 lbs) Water-cooled — 11.9 kg (29.6 lbs)
Weight of umbilical	1.8 kg (4 lbs)
Length of umbilical	3 m (10 ft)
Diameter of umbilical	3.75 cm (1.5 in)
Wavelength	532 nm
Power Viper-V5	5W
Viper-V8	8W
Viper-V10	10W
Beam Divergence (full-angle)	0.5 mrad $\pm 10\%$
Beam Diameter ($1/e^2$ measured at exit port)	2.25 mm $\pm 10\%$
Spatial Mode	TEM ₀₀ ($M^2 < 1.1$)

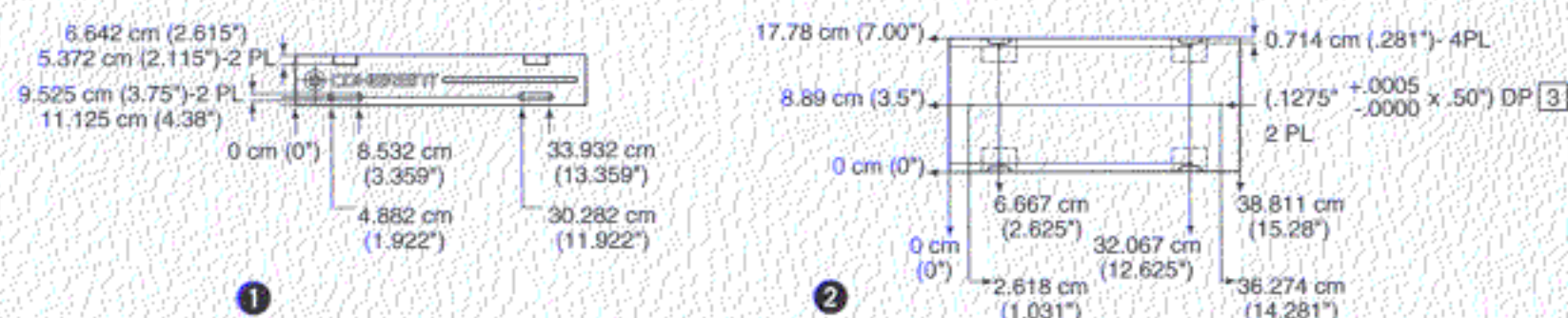
LASER HEAD

- 1 side view
- 2 bottom view
- 3 front view



WATERCOOLED HEATSINK FOR VIPER V8 & V10

- 1 side view
- 2 bottom view



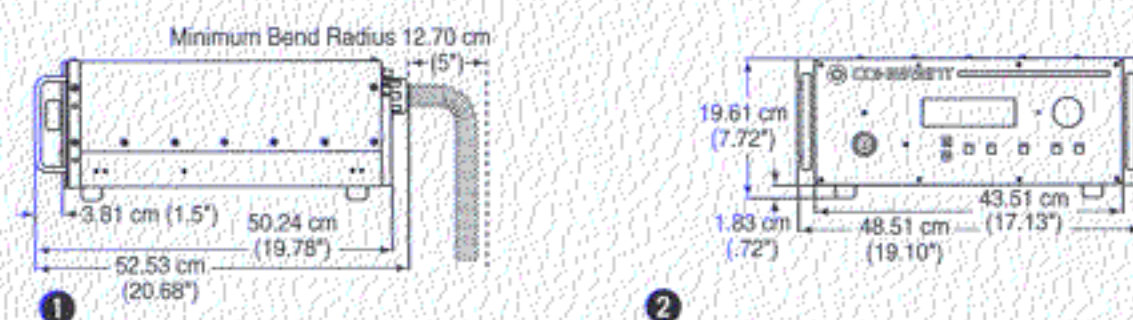
AIR-COOLED HEATSINK

- 1 side view
- 2 top view



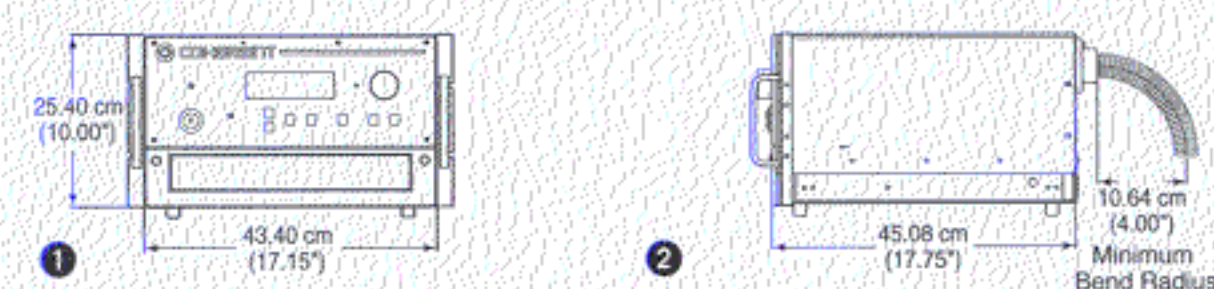
POWER SUPPLY FOR VIPER V5

- 1 side view
- 2 front view



POWER SUPPLY FOR VIPER V8 & V10

- 1 side view
- 2 front view



Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.



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