

# 5517CN05 Low Heat Laser Head for Transducer Systems

## Product Description

The Keysight 5517CN05 Laser Head contains an automatically tuned Helium-Neon laser, circuits to control the laser, and a reference optical receiver. The laser generates a coherent, collimated, two-frequency beam of light. This is a Class II Laser Product conforming to U.S. National Center for Devices and Radiological Health Regulations 21 CFR 1040.10 and 1040.11.

## Specifications

<b>Laser Beam Characteristics</b>
Type: Helium-neon, continuous, two frequency
Vacuum wavelength (nominal): 632.991354 nm
Vacuum wavelength accuracy (3 sigma, lifetime): 0.1 ppm
Vacuum wavelength stability (typical 1 hour): 0.002 ppm
Vacuum wavelength stability (typical lifetime): 0.02 ppm
Beam diameter (visible typical): 6 mm
Maximum beam power output: <1 mW
Minimum beam power output at 3 years: >180 microwatts
<b>Power</b>
Warm-Up Time: less than 10 minutes
Power requirements: These heads require the following power inputs: <ul style="list-style-type: none"><li>• +15 Volts <math>\pm</math>0.3 Volts at 2.2 Amperes maximum</li><li>• -15 Volts <math>\pm</math> 0.3 Volts at 0.02 Amperes maximum</li></ul>
Heat Dissipation: <ul style="list-style-type: none"><li>• 23 Watts (during operation)</li><li>• 35 Watts (during warm-up)</li></ul>
<b>Output</b>
Reference frequency: 2.4 MHz to 3.0 MHz
<b>Environmental Conditions</b>
Temperature (operating): 0 to 40 °C (32 to 104 °F)
Relative humidity (operating): 0 to 95% non-condensing
Magnetic field strength (non-operating): <ul style="list-style-type: none"><li>• Does not exceed 5.25 milligauss at a distance of 460 cm (15 ft) from any point on the surface of the packaged laser head.</li></ul>

## Physical Characteristics

Dimensions: 35.9 x 13.2 x 12.8 cm

Weight: 3.4 Kg

Enclosure: Type IP10 per IEC 529

Clearance required for cabling: 10.16 cm (4 in) beyond rear panel.

Cooling modification: vented covers with heat isolation.

- Airflow conditions: 4 m/s (min), exiting head through 50 mm diameter duct at room temperature.
- Duct location: refer to Figure 2. 5517CN05 Laser Head cover dimensions and duct locations (side view) and Figure 3. 5517CN05 Laser Head cover dimensions and duct locations (duct detail).

This is a CE mark product.

## Dimensions

5517CN05 has same dimension as 5517C except the cover design. To find dimension of 5517CN05, refer to Figure 1 in the section 5517C Laser Head Dimensions and Mounting Locations below.

For the cover design of 5517CN05, refer to Figure 2 and Figure 3 in the section of 5517CN05 Laser Head Cover Dimensions.

## 5517C Laser Head Dimensions and Mounting Locations

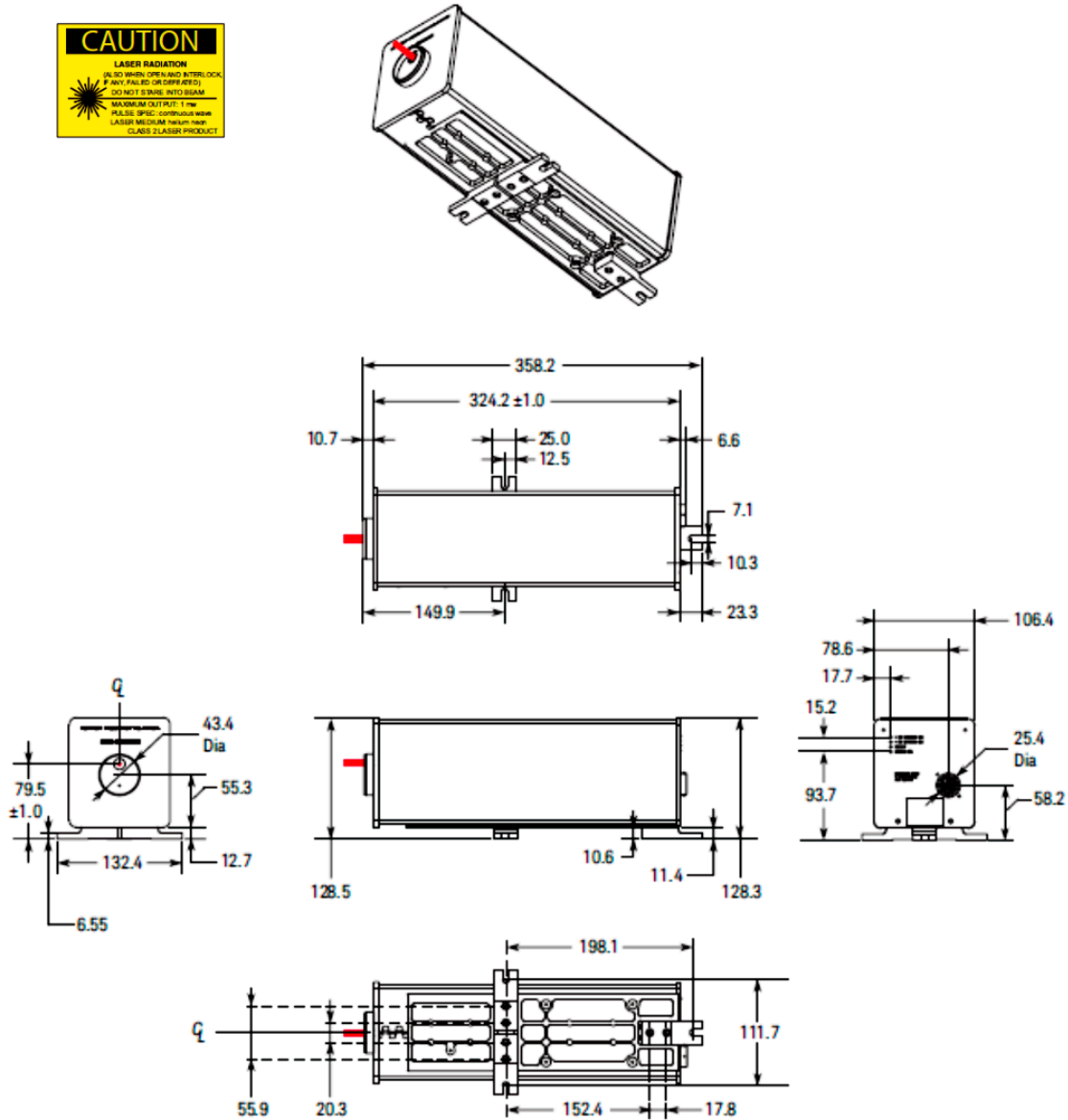


Figure 1. 5517C Laser Head dimensions and mounting locations <sup>1</sup>

1. Reference to 5517 Laser Head User's Guide, 05517-90115.

## 5517CN05 Laser Head Cover Dimensions

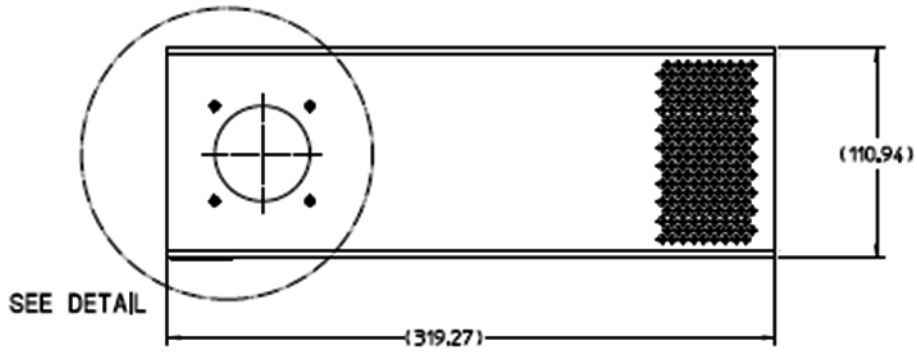


Figure 2. 5517CN05 Laser Head cover dimensions and duct locations (side view) <sup>2</sup>

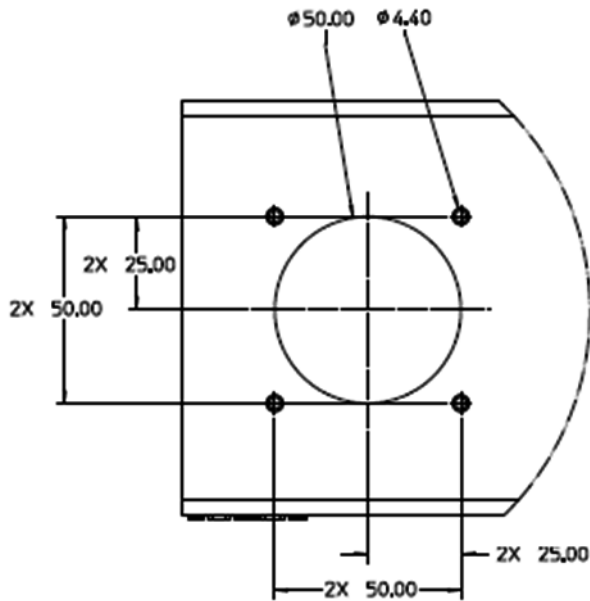


Figure 3. 5517CN05 Laser Head cover dimensions and duct locations (duct detail)

2. The part number of 5517CN05 Laser Head cover is 05517-00052.

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