

# IndyStar

## Fast Pulse, High Precision Processing

IndyStar is a rugged high-duty cycle excimer laser designed for fast pulse frequency applications as high as 2000 Hz. Based on proven ALMETA tube technology, the Semi-S2 certified IndyStar operates over many billion pulses at ultra-short 193 nm and 248 nm wavelengths. The IndyStar series is engineered to meet the highest demands in every aspect of an industrial laser.

### FEATURES & BENEFITS

- Repetition rate of 1 and 2 kHz for fast processing
- TimeLok and Powerok functionalities for ultimate pulse control
- ALMETA tube design to ensure most efficient processing
- Semi-S2 compliance and premix gas supply to facilitate production floor integration

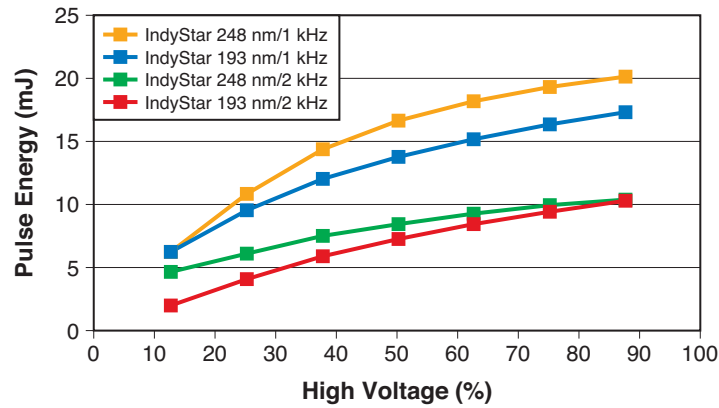
### APPLICATIONS

- Photomask Inspection
- Inkjet Nozzle Drilling
- Optics Testing



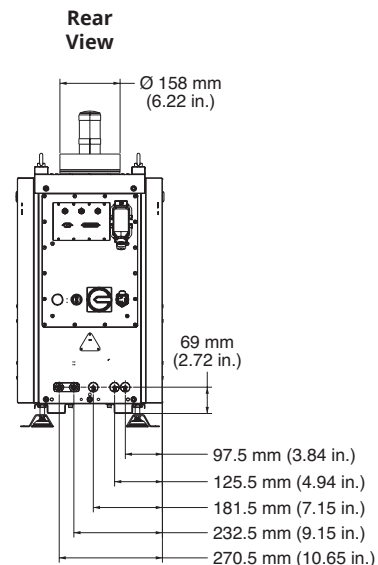
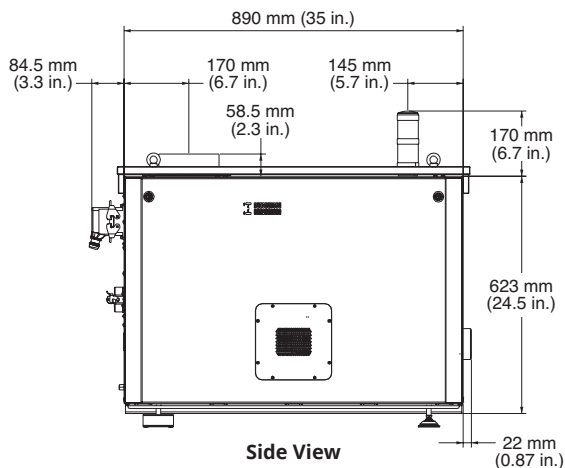
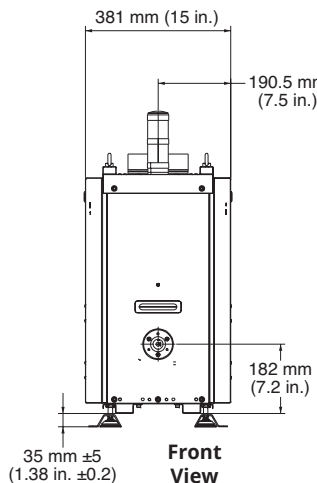
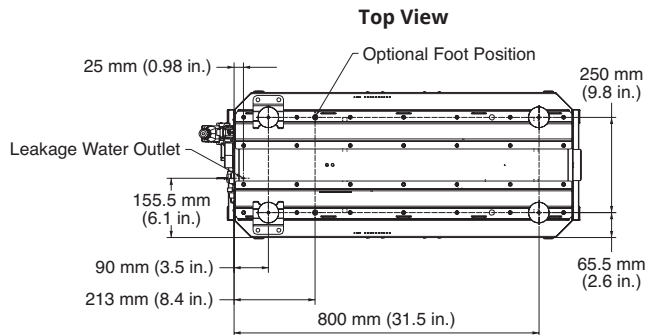
| SPECIFICATIONS                           | IndyStar 193<br>1 kHz                          | IndyStar 193<br>2 kHz | IndyStar 248<br>1 kHz | IndyStar 248<br>2 kHz |
|--|--|-----------------------|-----------------------|-----------------------|
| Wavelength (nm)                          | 193  | 193                   | 248                   | 248                   |
| Recommended Stabilized Pulse Energy (mJ) | 8  | 4                     | 12                    | 6                     |
| Recommended Stabilized Pulse Power (W)   | 8  | 8                     | 12                    | 12                    |
| Energy Stability (sigma, %)              | <2   | <2                    | <2                    | <2                    |
| Max. Repetition Rate (Hz)                | 1000   | 2000                  | 1000                  | 2000                  |
| Beam Dimension (FWHM, mm, V x H)         | 5.7 x 2.5                                      | 5.5 x 2.3             | 5.7 x 2.7             | 5.5 x 2.6             |
| Beam Divergence (FWHM, mm, V x H)        | <3.5 x 1.5                                     | <3.5 x 1.5            | <3.0 x 2.3            | <3.5 x 1.5            |
| Pulse Duration (FWHM, ns)                | 5 ±2   | 4 ±1                  | 6 ±2                  | 4 ±1                  |
| Cooling                                  | Air/Water                                      | Water                 | Air/Water             | Water                 |
| Weight                                   | 135 kg (297 lbs.)                              |                       |                       |                       |
| Laser Dimensions                         | 974 x 381 x 838 mm (48.23 x 7.8 x 8.96 in.)    |                       |                       |                       |
| Electrical                               | 230 V, 50/60 Hz, 2000 VA, single or two phases |                       |                       |                       |

IndyStar Series Energy Performance



**MECHANICAL SPECIFICATIONS**

**IndyStar**




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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all IndyStar Lasers. For full details of this warranty coverage, please refer to the Service section at [www.Coherent.com](http://www.Coherent.com) or contact your local Sales or Service Representative. MC-038-08-0M0618Rev.B Copyright ©2018 Coherent, Inc.





VISIBLE AND INVISIBLE LASER RADIATION.  
 AVOID EYE OR SKIN EXPOSURE TO  
 DIRECT OR SCATTERED RADIATION.  
 CLASS IV LASER RADIATION PRODUCT  
 PER EN/IEC 60825-1 (2014)

MAX. AVERAGE POWER: 36 W  
 MAX. OUTPUT ENERGY: 25 mJ/pulse  
 PULSE DURATION: 3 to 15 ns  
 WAVELENGTH: 193 to 248 nm