

# Built for OEMs - *firestar vi30* combines high performance & small size

With its exceptional beam quality and fast rise times, Synrad's 30W *firestar v30* has established itself as the laser of choice for use in high-performance marking and engraving systems. Synrad's new *firestar vi30* - designed specifically for our OEM customers - features this same proven technology in an even smaller package.

The *vi30*'s resonator is based on the same waveguide design as our *v30* model, producing a circular beam (typical  $M^2 = 1.1$ ) in both the near and far field. This near-perfect beam can be focused to the smallest achievable spot size, creating the maximum possible power density on a work surface. This results in faster processing speeds and higher resolution for most applications. A new, more efficient RF design, operating off 48 VDC, has enabled us to reduce the heat sinks to produce a 30W laser with a smaller overall footprint, and meet increasing market demands for more compact systems.

The *vi30* is available only as an air-cooled model, with a simple interface based on TTL level input and I/O signals via a *DB-9* connector. In its standard configuration, the *vi30* features a simple OEM baseplate modeled after the *v30* - the ideal solution for systems requiring the most compact laser source possible. Synrad offers two optional mounting feet for backwards compatibility with the *v30*: use our tall mounting feet to make the beam exit height identical to the *v30*, or, for complete drop-in replaceability, add our alternate mounting feet to the *vi30* for common mechanical mounting in addition to the beam exit location. Use of either of the optional mounting feet will create a common beam exit height to our *firestar t-series* lasers, allowing for future upgrades to higher powers.



**firestar** series  
**vi30**

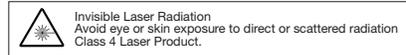
## Specifications

Output Power	30W
Mode Quality	$M^2 \leq 1.2$
Ellipticity	<1.2
Rise Time	<100 $\mu$ secs
Beam Diameter ( $1/e^2$ )	$2.5 \pm 0.5$ mm
Beam Divergence (full angle)	7.0 mRad
Wavelength*	10.57-10.63 $\mu$ m
Power Stability	$\pm 5\%$ - cold start (guaranteed) $\pm 3\%$ - after 2 minutes (typical)
Polarization	Linear (Horizontal)
Cooling	Air
Heat Load (max)	500W
Flow Rate, Air	140 CFM x 2
Input Voltage / Current	48 VDC / 10 A
Dimensions**	16.8 x 3.5 x 5.45 in 427 x 89 x 138 mm
Weight	13 lbs / 5.9 kg

\*Typical. Actual wavelength may vary from 10.2 - 10.8  $\mu$ m

\*\*Dimensions and weight for standard configuration *vi30*  
Beam specifications measured at  $1/e^2$ .

Specifications are preliminary and are subject to change without notice.



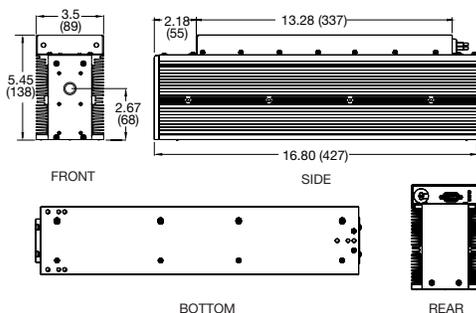
The *vi30* (left) features the same resonator technology as our *v30* (right), in a smaller package.



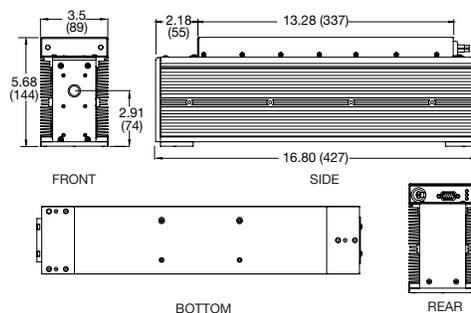
The *vi30* features a simplified user interface

## Outline & Mounting

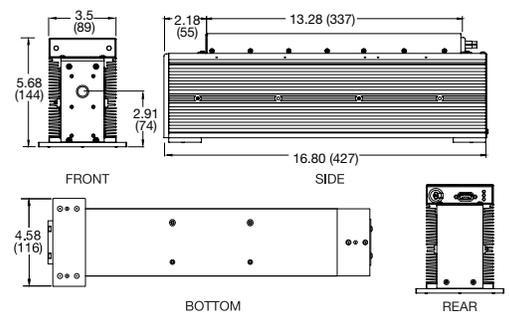
### *vi30*, standard configuration



### *vi30*, with tall mounting feet



### *vi30*, with alternate mounting feet



Dimensions are in inches (millimeters)