

Cobolt Dual Combiner

A permanently aligned combination of any 2 wavelengths in a compact package



Compact laser combiner

Permanently aligned with very high level of precision and stability in beam overlap

Choice of any 2 wavelengths (04-01 Series lasers)

Drop-in Ar+ laser replacement

Expand current light engine wavelength offering

Suitable for coupling into SM fiber

The Cobolt Dual Combiner is a unit which offers any combination of two 04-01 model lasers at any power level in a permanently aligned package.

Built on a compact and stable platform with optimized thermo-mechanical properties, the Cobolt Dual Combiner™ provides a perma-

nently aligned beam overlap.

The very small dynamical tolerances of the beam overlap ($<20 \mu\text{rad}/\text{oC}$) combined with a robust and compact platform make any adjustment at installation or over time unnecessary.

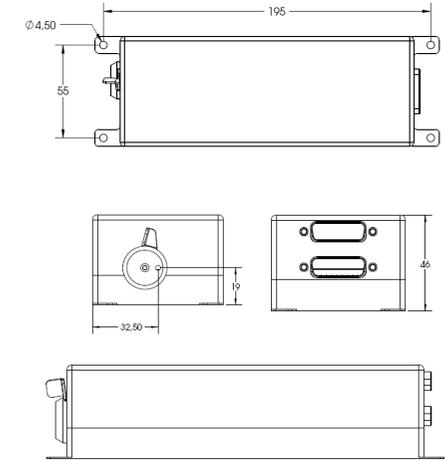
The Cobolt Dual Combiner is intended for

use in a laboratory environment as a drop-in replacement to Ar+ & Kr+ gas lasers or for integration as OEM component module for use in demanding bio-analytical applications such as flow cytometry, laser scanning cytometry, DNA sequencing and confocal microscopy.

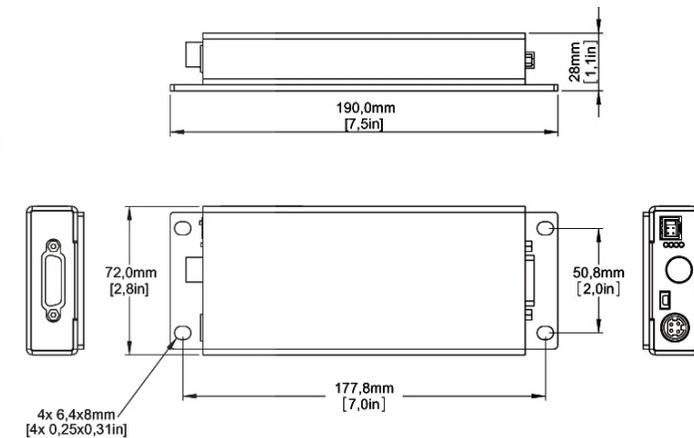
Specifications

Suitable for combining 04-01 laser models 457nm-594nm:	Wavelength [nm]	Power [mW]	
Cobolt Twist™	457 ± 0.3	25, 50	
Cobolt Blues™	473 ± 0.3	25, 50	
Cobolt Calypso™	491.5 ± 0.3	25, 50, 75, 100	
Cobolt Fandango™	515 ± 0.3	25, 50, 100, 150	
Cobolt Samba™	532 ± 0.3	25, 50, 100, 150, 300	
Cobolt Jive™	561 ± 0.3	25, 50, 75, 100, 150	
Cobolt Mambo™	594 ± 0.3	25, 50, 100	
Spectral linewidth	<1 MHz (<0.01 pm)		
Spatial mode	TEM ₀₀ M ² <1.1		
Beam diameter at aperture	700 μm		
Beam divergence (full angle)	<1.2 mrad		
Beam overlap	<250 urad		
Long-term stability (8 hr)	<3% (±3°C)		
Beam pointing stability (over 10-40 °C)	<25 μrad/°C		
Polarization ratio (linear)	>100:1, vertical		
Total system power consumption	<70 W, typical <30 W		
Operating temperature	10-40°C		
Recommended heat sink thermal resistance	0.5 K/W		
Dual Combiner dimensions [mm] [inches]	190 x 65 x 46 7.6 x 2.6 x 1.8		
Controller dimensions [mm] [inches]	190 x 72 x 28 7.6 x 2.9 x 1.1		
Communication	RS-232/USB		
Model number structure		CDRH (key-switch for on/off)	OEM (key-switch for on/off)
	RS-232 communication	wavel1 wavel2-DLC-01-pwr1 pwr2-300	wavel1 wavel2-DLC-01-pwr1 pwr2-400
	USB communication	wavel1 wavel2-DLC-01-pwr1 pwr2-700	wavel1 wavel2-DLC-01-pwr1 pwr2-800
Warranty	12 months (24 months on included laser heads)		

Combiner



Laser controller



Options & Accessories

- Customized interface cable
- RS-232 communication cable
- Mounting block for permanent SM/PM fiber coupling



Cobolt Dual Combiner with laser controllers



HTCure™ is a Cobolt proprietary technology for manufacturing of ultra-robust and reliable laser sources, allowing Cobolt to offer market leading warranty terms. Lasers built using HTCure™ Technology have shown to withstand 60G mechanical shocks in operation as well as extreme storage temperature shocks (-30 to >100 degC) without any sign of degraded performance, and they are also insensitive to pressure and humidity.