



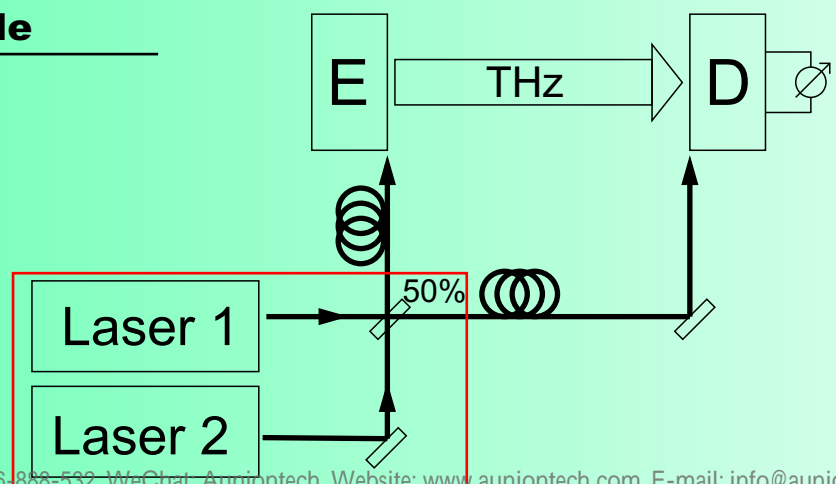
# Twin DFB Laser

## Twin DFB Diode Laser

Two wavelength laser source with internal superposition

- Arbitrarily tunable beat note frequency
- Large tuning range up to 2 THz
- **FiberLock<sup>®</sup>** stabilized single-mode fiber coupling
- Optimized for cw THz generation

### Application example

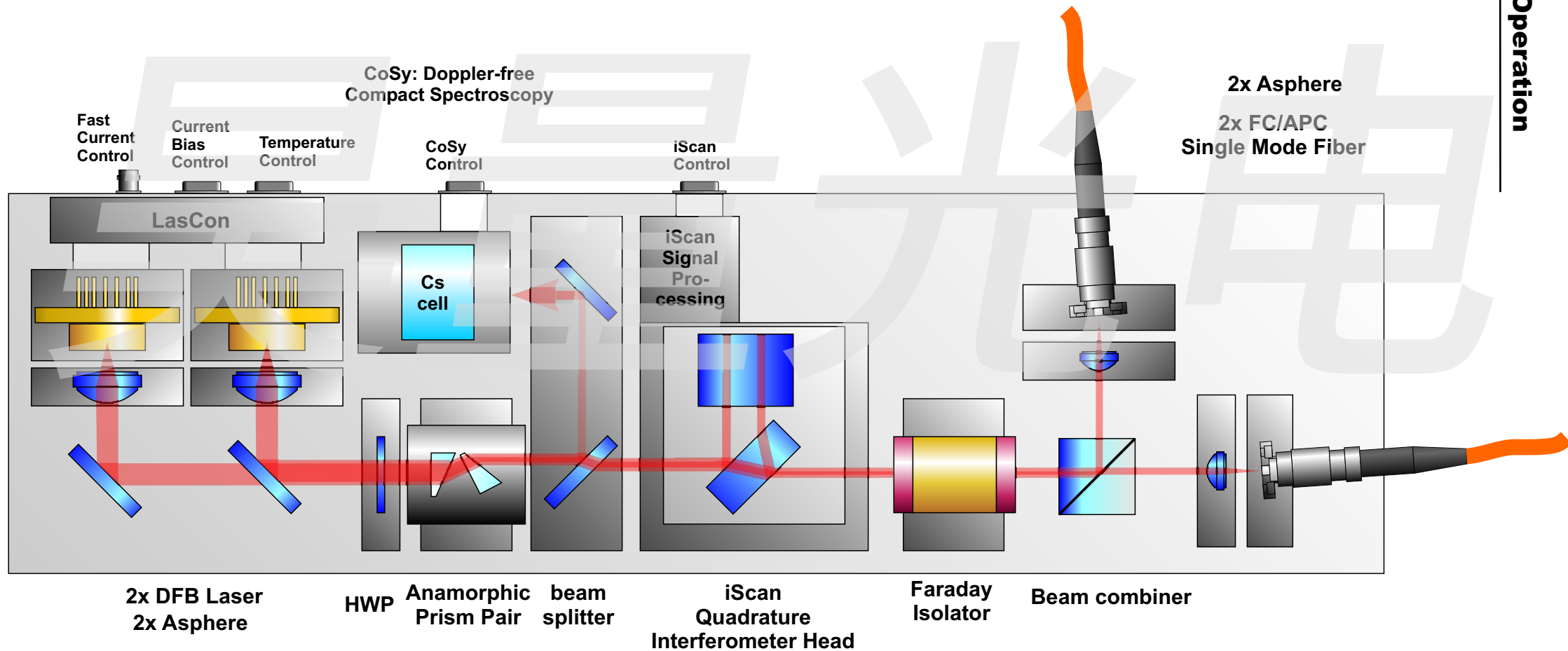


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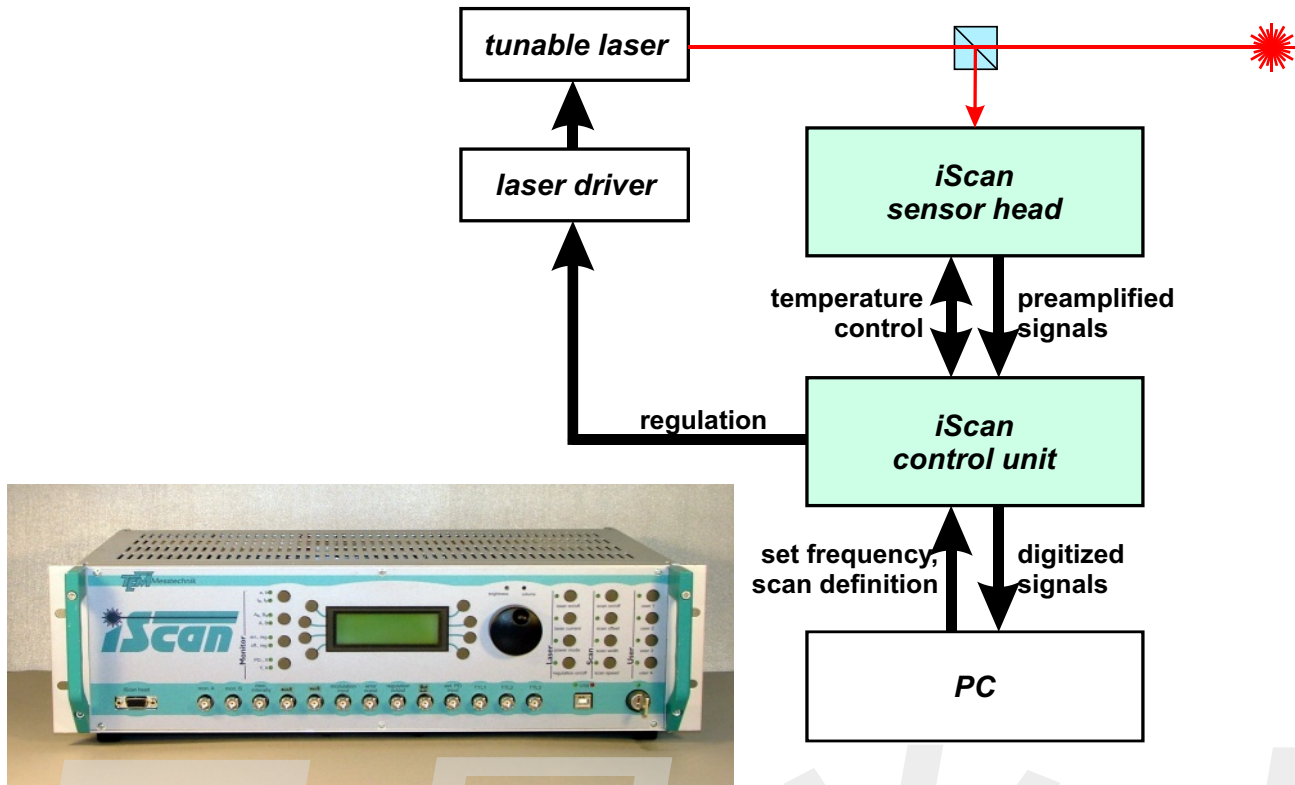
Superposition of two diode laser waves

The laser beams emitted from two distributed feedback laser diodes is superimposed and then coupled to a pair of single-mode fibers. The wavelengths of the individual lasers is measured and controlled by an iScan<sup>®</sup> interferometer head. An absolute spectroscopic wavelength reference CoSy<sup>®</sup> is available as an option.

Principle of Operation



## Driver & control unit



# Twin DFB Laser

## Description

The driver unit is included in the iScan<sup>®</sup> control unit. It comprises two CCTC modules. Each module controls both laser current and temperature of one laser diode. The laser frequency tuning is accomplished by changing either the current (for fast but small steps) or the temperature (for large scans). The control unit is ready for remote control via RS-232 or USB.

For details concerning the frequency stabilization systems, please refer to the respective product information of iScan<sup>®</sup> and CoSy<sup>®</sup>.

## Product options

CoSy<sup>®</sup>:

Compact saturation spectroscopy module for absolute wavelength reference

## Technical Data (preliminary)

### Laser data:

Wavelength: selectable in the range 760nm ... 2740nm,  
Output power: 50mW per output at 853 nm  
Tuning range: typ. 1THz, (2THz at 853nm)

### Frequency stabilization:

Frequency resolution: 1 MHz  
Frequency stability: 10MHz per 10min, 100MHz per 8hrs.  
(please note that absolute stabilization is available as an option)

### Drivers:

Laser current range: 0..200mA (typ., others on request)  
Laser temperatur range: 0..70°C

### Housing (H x W x L):

*laser:* 100 mm x 250 mm x 400mm  
*driver:* 132 mm x 482 mm x 340 mm  
(19" standard, 2 height units)

**Power supply:** 100...120 VAC / 200...240 VAC, 50...60 Hz

Subject to change without notice.

## Development, Manufacturing and Distribution



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