Spectrometer

Features:

High optical resolution
OEM/ODM

Applications:

Wavelength and bandwidth mea-
Surements for laser
High resolution light sensing

PHS-365

Example Specifications:

Parameter	Unit	
Detector		
Detector		Toshiba 1304AP linear CCD array
Detector Range	nm	200-1100
Pixels	pixel	3648
Pixel Sixe	μm	8*14
Pixel Well Depth	electrons	~100,000
Sensitivity		400nm: 130 photons/count 600nm: 60 photons/count
Dynamic Range		300:1
Optical Bench		
Deisgn		f/4, Asymmetric Czerny Turner
Focal Length	mm	100 input; 150 output
Entrance Aperture	μm	2.5
Grating	Lines/mm	2400
Fiber Optic Connector		SMA905, single strand fiber
Spectroscopy		
Optical Resolution (FWHM)	nm	<0.05 【1】
Signal-to-Noise Ratio (at full signal)		300:1
A/D Resolution		16 bit
Stray Light		<0.1%
Electronics		
Power Consumption		450mA@5VDC
Temperature Range	℃	10-40
Wavelength Stability (10-40℃)	nm	<0.01
Computer		
Operating System		Windows XP
Computer Interface		USB 2.0; USB 1.1

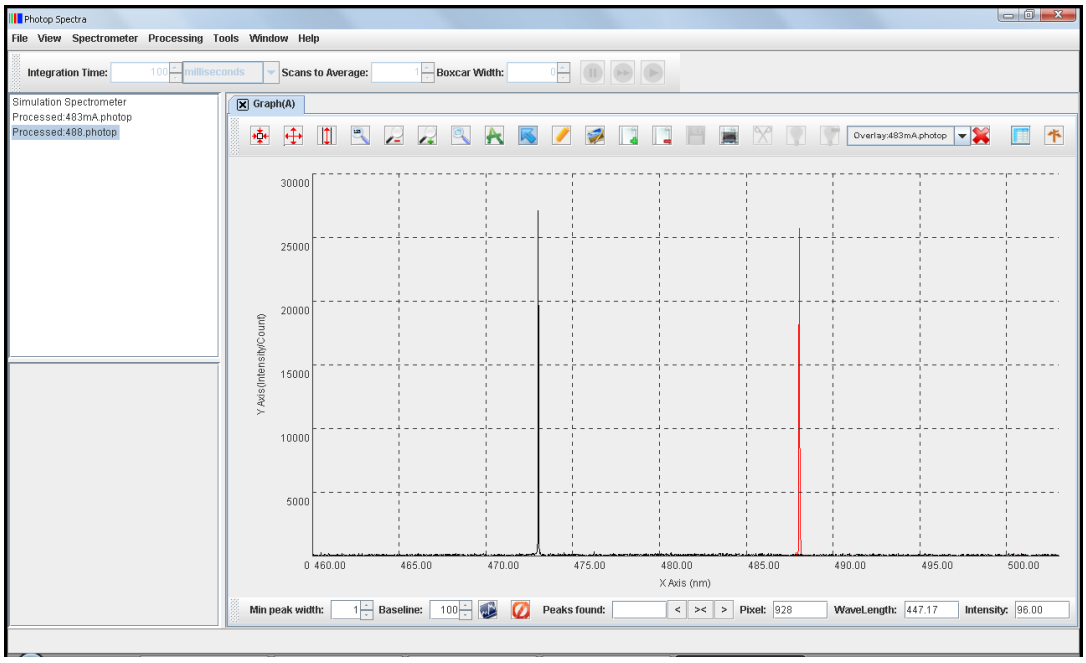
Note 1: Optical Resolution is measured from the spectra of 445nm, 473nm and 488nm lasers.

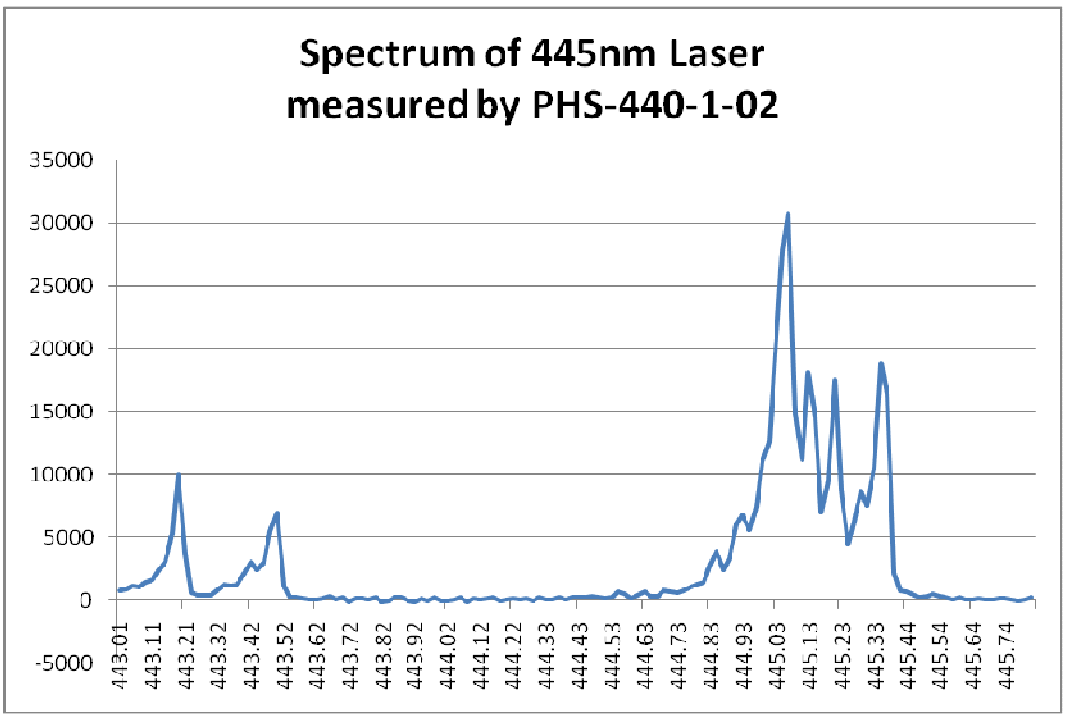
Example Product:

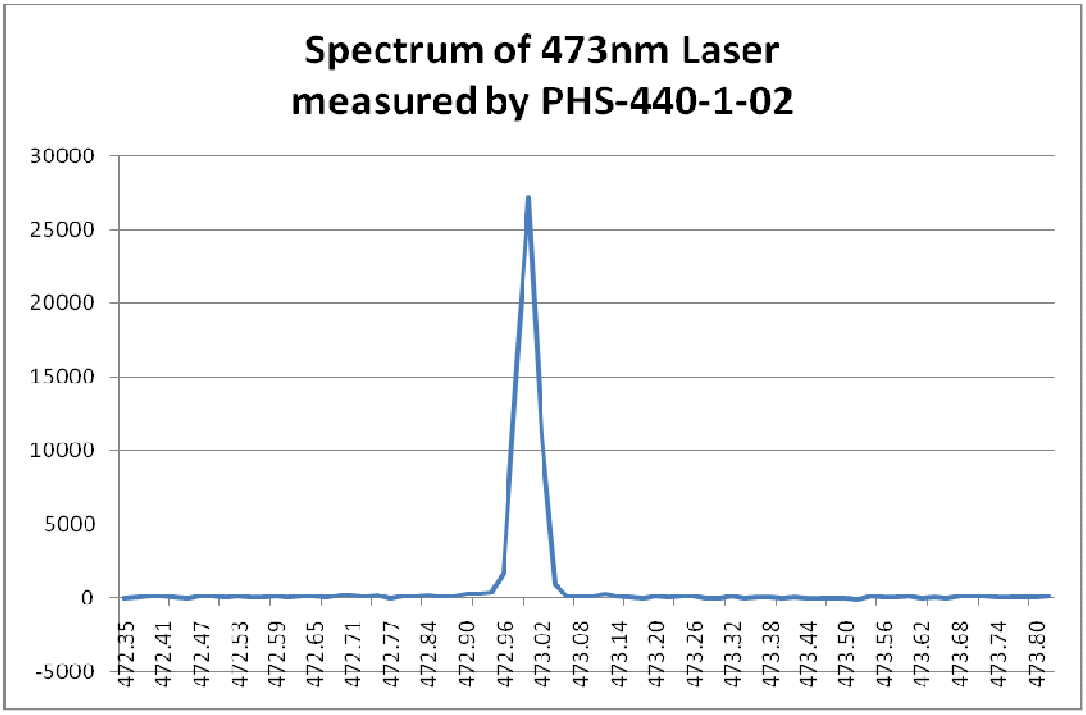
Part No.	Spectral Range	Size	Weight	Optical Bench Design
PHS-365-1-02	365nm-435nm	210*140*45mm	1050g	Uncrossed
PHS-440-1-02	440nm-510nm	210*140*45mm	1050g	Uncrossed

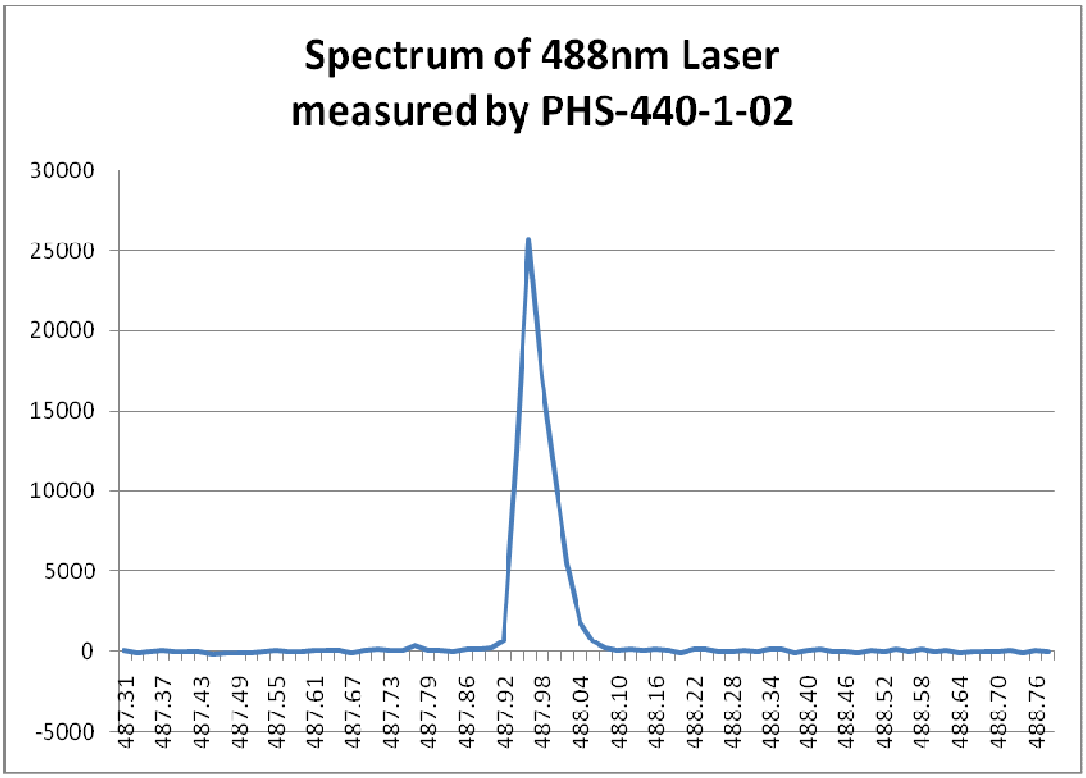
Note: Other spectral ranges and optical resolution types are also available upon request.

Spectra of 473nm and 488nm Lasers Measured by PHS-440-1-02:






Spectrum of 473nm Laser
measured by PHS-440-1-02
30000
25000
20000
15000
10000
5000
0
-5000
472.35
472.41
472.47
472.53
472.59
472.65
472.71
472.77
472.84
472.90
472.96
473.02
473.08
473.14
473.20
473.26
473.32
473.38
473.44
473.50
473.56
473.62
473.68
473.74
473.80


Spectrum of 488nm Laser
measured by PHS-440-1-02
30000
25000
20000
15000
10000
5000
0
-5000
487.31
487.37
487.43
487.49
487.55
487.61
487.67
487.73
487.79
487.86
487.92
487.98
488.04
488.10
488.16
488.22
488.28
488.34
488.40
488.46
488.52
488.58
488.64
488.70
488.76