

## FPAS-0144 Spectrometer System

Complete Calibrated Dual Beam Spectrometer system including Detector Array, Spectrograph, Software and Computer.

### Input Specifications:

Laser Pulse Spectrometer for Pump/Probe Measurements  
Laser Pulse Widths from 10 fsec to 5 usec  
Laser Repetition Rate from Single shot to 50Khz (100Khz Optional)

### Detector Specifications:

128 Element PC MCT Dual Row 2 x 64 Elements  
2-10 um Optimization Range 11 um peak response  
D\* peak  $>3 \times 10^{10}$   
0.2mm Width x 0.5 mm Height 0.25mm Pitch  
ARZnSe Wedged Window 20 mr Vertical  
30 Degree Array FOV  
Liquid Nitrogen Cooled  
100% operational elements

### Spectrograph Specifications:

Focal Length 190mm  
Dual exit ports – Array and Single  
Motorized Flip Mirror  
Motorized Input and Output Slit 0 to 2 mm in 2 um steps  
Corrected Cross Czerny Turner with On Axis Grating  
12 x 32 mm Uniform Output Field  
3 Grating Turret with 300, 100 and 75 l/mm Gratings  
f/3.9 15 degree Input Angle  
X-Axis Calibration  
Detector Array Mounting

### Pulse Acquisition System Specifications:

144 Independent Channels 128 Array and 16 External Inputs  
Simultaneous Acquisition of all channels  
Single shot to 50 Khz standard Repetition rate, 100 Khz optional  
Spectral Acquisition Rate Single to 50,000 Spectra per second  
8 Gain settings per channel and 256 position gain trim  
Adjustable Integration Gate delay 10 nsec to 1.25 usec  
Adjustable Integration Gate Width 50 nsec to 5 usec  
Continuous Data Acquisition with 20 Mhz Parallel Data transfer  
Full 16 bit Resolution with ADC on each channel  
USB Controlled Configuration, Gain and Trim  
Detector Preamps, Bias and Gain stages included  
Labview LASPEC™ Data Acquisition software  
External Inputs +/- 2.5V Integrated, Direct Detector and 0-5V Sampled  
Source Code included