



530 Main Street, Acton, MA 01720

**Phone:** (978)263-3584, **Fax:** (978)263-5086

**Web Site:** [www.acton-research.com](http://www.acton-research.com)

**Operating Instructions  
for  
ID-444  
M-C-T IR Detector**

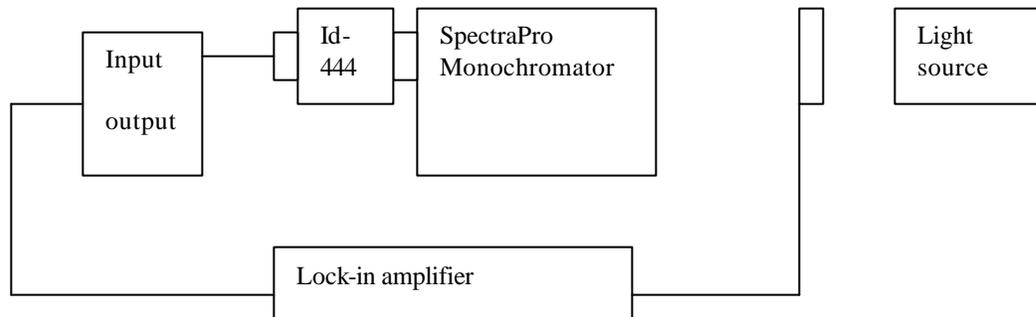
# **ID-444: Mercury Cadmium Telluride (M-C-T) IR Detection Assembly Instruction Manual**

## **I. Description**

The ID-444 IR Detection Assembly is a Mercury-Cadmium-Telluride photoconductive detector operated at 77 degrees Celsius by liquid nitrogen cooling. It operates over the wavelength range of 2.0 to 12 microns. The ID-444 consists of a J15D12 detector and PA-100 preamplifier from Judson with a power supply and mounting flange for operation with Acton Research Corporation SpectraPro monochromator.

## **II. Installation**

Shown below is the set-up for a typical application using the ID-444 with the SpectraPro monochromator. The detector is attached to the exit slit assembly of the SpectraPro monochromator with the four 8-32 hex screws provided. With the power to the preamplifier module switched off, connect the output of the detector to the input of the preamplifier using the 12 inch cable provided.



Typical ID-444 application

## **III. Operation**

Refer to the instructions provided by Judson on the detector and preamplifier before switching on the power to the preamplifier. The detector must be cooled with liquid nitrogen before operation.

**CAUTION: THE DETECTOR MUST BE CONNECTED TO THE PREAMPLIFIER INPUT BEFORE TURNING ON THE PREAMPLIFIER POWER SUPPLY.**