

## Full Evaluation Kit

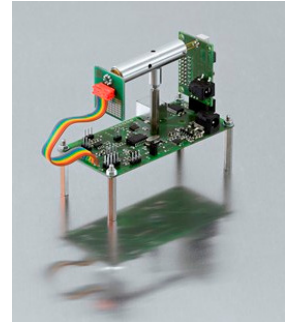
*For Micro-Hybrid IR-sources*

### General Description

The kit is designed for Micro-Hybrid's thermopile / pyroelectric detectors and IR-sources. It provides an easy way to evaluate these parts and get started in NDIR gas analysis without developing an electrical circuit and software. The system is flexible. It optimizes the operating parameters for each specific usage. Flexibility includes easy control of the IR-source and reading / monitoring of the output data from the detectors. Evaluation of all components made easy: a fast and simple process.

Possible applications are: gas analysis; contactless temperature measurement; flame detection; laboratory and test set-ups

- Independent system for the operation of our IR-sources / for reading all MHE-detectors
- Proprietary constant power circuit
- Eliminates drift effects in radiation intensity – caused by aging-related changes in the resistor
- Electrical stress on the source is diminished
- Sources can be operated constantly or in chopped mode
- Operated by external frequency up to 50Hz
- Emitting power adjustable from 0.3 to 1.7 W
- Pyropiles and thermopiles in single, dual and quad configuration
- Maximum capture of two channels simultaneously
- Double-stage amplifier circuit with variable amplification and activatable signal conditioning
- USB interface for communication with the supplied PC-software (for visualization, processing and storage of signals)
- Additional analog output of detector signals on the board
- Amplification adjustable from 2 to 4150
- The entire process is microprocessor-controlled, with 12-bit analog/digital conversion
- Additionally, frequency, duty cycle and emission power can be controlled directly through software
- An additional measuring cuvette allows for initial measurements within a very short time



*Micro-Hybrid Electronic GmbH*

*Heinrich-Hertz-Straße 8  
D-07629 Hermsdorf*

*Tel +49 366 01 592 100  
Fax +49 366 01 592 110*

*Email: [infrared@micro-hybrid.de](mailto:infrared@micro-hybrid.de)  
Web: [www.micro-hybrid.de](http://www.micro-hybrid.de)*

**LIVING MICROWORLDS.**



## Full Evaluation Kit

For Micro-Hybrid IR-sources

### Source board specifications

Parameter	Min.	Typ.	Max.	Unit	Comment
Supply voltage	10	12	16	V	
Current consumption		5		mA	without IR source
Reference voltage		3.3		V	
Power consumption		0.3 – 1.7		W	adjustable defined by jumper(FB) or potentiometer
Emitter resistance	10	50	70	Ohm	
Operating temperature	0		40	°C	
Frequency range*	0		50	Hz	
Output power accuracy**		≤ ±5%			

\* duty cycle discrepancy >5% at higher frequencies

\*\* depends on used emitter resistance and power

### Detector board specifications

Parameter	Min.	Typ.	Max.	Unit	Comment
Supply voltage	10	12	16	V	
Current consumption		60		mA	
Amplification	2 155	- -	55 4150		pyrodetector thermopile
Reference voltage		1.65		V	
Detector supply		±1.65 / +5		V	
Operating temperature	0		40	°C	
Band Width (-3 dB)		1 – 60 0 – 20		Hz	pyrodetector thermopile
Signal acquisition	12Bit, 0... 3.3V, 500Sa/s				
Interface	USB 2.0				

Micro-Hybrid Electronic GmbH

Heinrich-Hertz-Straße 8  
D-07629 Hermsdorf

Tel +49 366 01 592 100  
Fax +49 366 01 592 110

Email: [infrared@micro-hybrid.de](mailto:infrared@micro-hybrid.de)  
Web: [www.micro-hybrid.de](http://www.micro-hybrid.de)

LIVING MICROWORLDS.