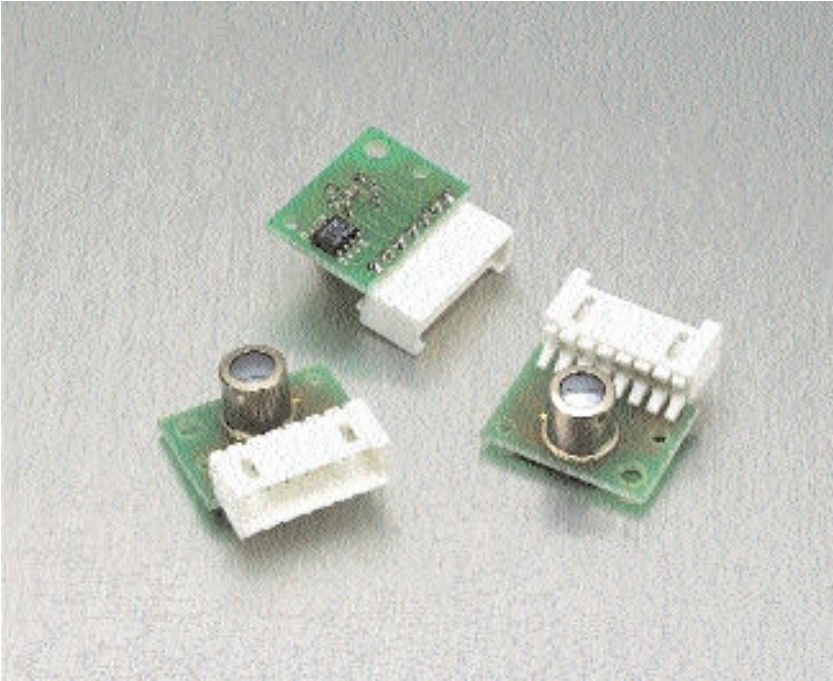


# TPLM 086 L5.5 - Linear Array Module

## Thermopile Linear Array with 8 Elements



### Description

The integrated ThermoPile Array Sensor consists of a 8-element thermopile chip connected to a multiplexing signal conditioning circuit. The sensor is further equipped with an internal temperature reference for correct target temperature determination. All analog signals, including the ambient temperature, are given out in a fixed frame, containing the information in one serial stream. Lenses for different field of views are available on demand. The sensor in a TO-5 housing is mounted on a small PCB with calibration data for this specific sensor stored in a E<sup>2</sup>PROM.

### Features

- Integrated Optics, Multiplexer, Amplifier and Reference
- Plug-in Module with Stored Calibration Data
- Designed for Industrial Temperature Measurements

Figure 1. Package Drawing

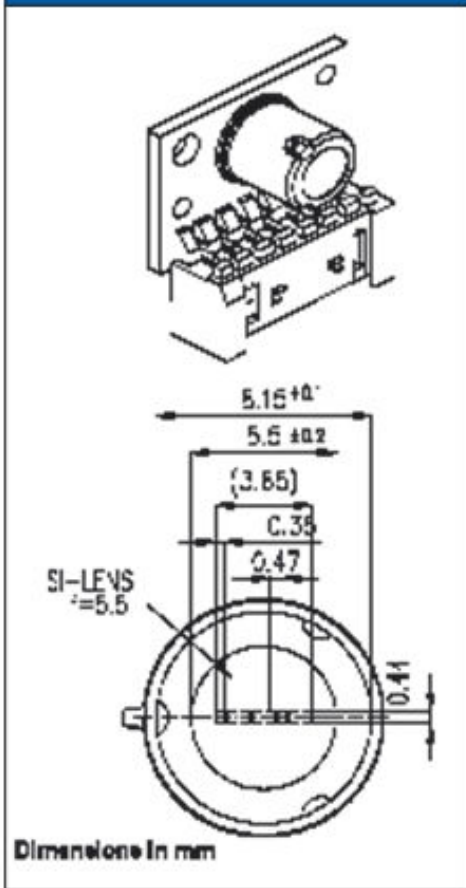


Figure 2. Output Sequence

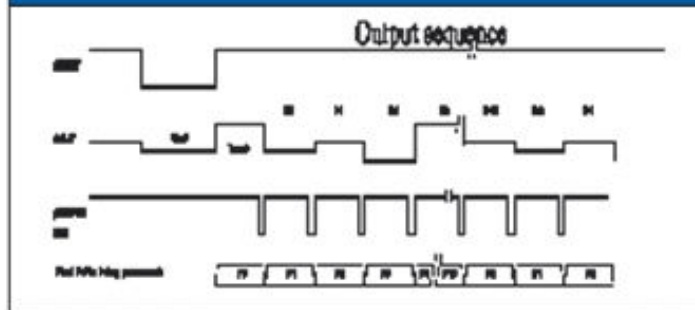


Figure 3. Top View Package Dimension

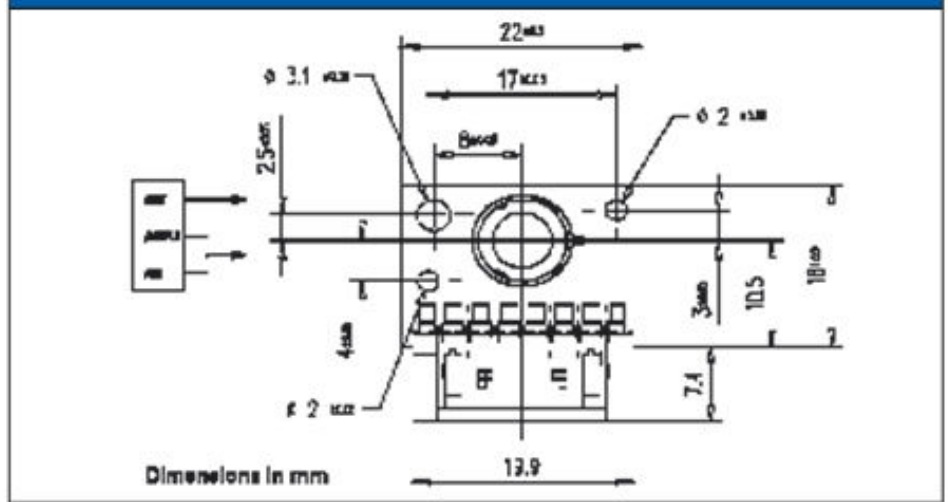
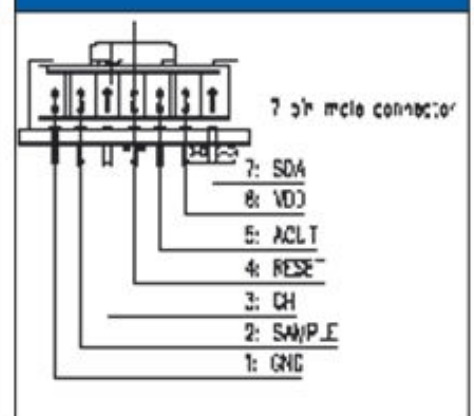


Table 1. TPLM 086 L5.5

Parameter	Typical	Units	Condition
Field of view	41	°	f/1, f = 5.5 mm
Output voltage	0.95	V	T <sub>BB</sub> = 80°, T <sub>amb</sub> = 20°
Output noise	0.4	mV/√Hz	0.5 ... 20 Hz
Object temperature	-20 to 100	°C	
Operating voltage V <sub>DD</sub>	5	V	
Operating current	1	mA	
Zero signal offset V <sub>ref</sub>	V <sub>DD</sub> /2	V	
Output resistance	200	Ω	
Power up time	0.3	s	
Sample frequency	3	kHz	
Storage temperature	-40 to 100	°C	
Operating temperature	-20 to 100	°C	
Temperature ref slope S <sub>T</sub>	10	mV/K	V <sub>Temp</sub> = S <sub>T</sub> T <sub>amp</sub> /K + V <sub>0</sub>
Temperature ref offset V <sub>0</sub>	0	mV	

Figure 4. Pinout Diagram



For more information email us at [generalinquiries@excelitas.com](mailto:generalinquiries@excelitas.com) or visit our website at [excelitas.com](http://www.excelitas.com)  
All values are nominal; specifications subject to change without notice.

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