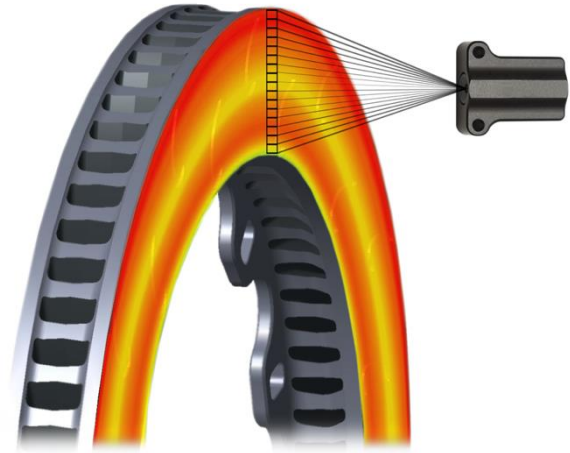




## Multichannel Brake IR Temperature Sensor (IRTS)

The Multichannel Brake Infrared Temperature Sensor is specifically designed to measure the highly transient surface temperature of a brake disc at multiple points, making it possible to acquire the time-based temperature distribution across a disc's surface in order to evaluate & optimize the pad pressure distribution, cooling efficiency, braking efficiency, and hot spot formation from thermoelastic instabilities.

The sensor is capable of measuring temperature at 16, 8, or 4 points at a sampling frequency of up to 100Hz, object temperature between -20 to 950°C, using CAN 2.0A protocol, enclosed in a compact IP66 rated aluminum enclosure. Sensor configuration can be changed using the Brightwater setup software tools.



### SENSOR SPECIFICATIONS

Temperature Measurement Range, $T_o$	-20 to 950°C
Package Temperature Range, $T_p$	-20 to 85°C
Accuracy	< ±2.0% FS
Uniformity	±1.0% FS for -20°C < $T_p$ < 85°C
Noise Equivalent Temperature Difference, NETD	0.8°C at 32Hz, $\epsilon = 0.85$
Field of View, FOV	60°x 8°
Number of Channels	16, 8, 4, or 1
Sampling Frequency	100 <sup>1</sup> , 64 <sup>1</sup> , 32, 16, 8, 4, 2, or 1Hz
Thermal Time Constant	2 ms
Emissivity	0.01 to 1.00 (default = 0.55)
Spectral Range	8 to 14 µm

1 – Optional Extra, 100Hz limit

### ELECTRICAL SPECIFICATIONS

Supply Voltage, $V_s$	5 to 8 V
Supply Current, $I_s$ (typ)	30 mA
Features	<ul style="list-style-type: none"><li>• Reverse polarity protection</li><li>• Over-temperature protection (125°C)</li></ul>

### MECHANICAL SPECIFICATIONS

Weight	20 g
L x W x H (max)	36.6 x 26.0 x 12.3 mm
Protection Rating	IP66