

## SA-IRxxxxV6-007

## Infrared temperature sensor



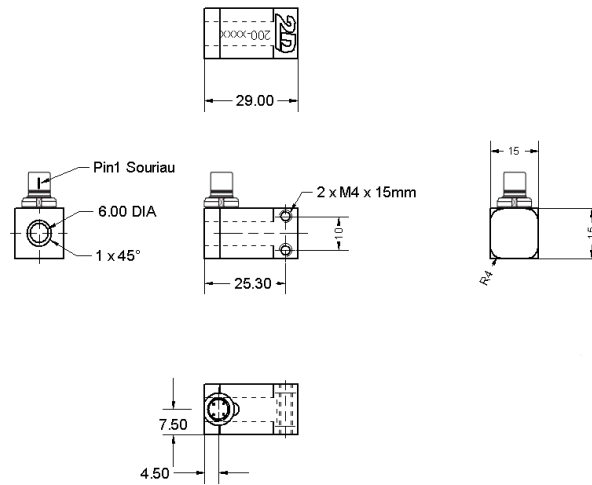
### Key Features

- Fast response time
- Ambient temperature correction
- Housing optimized for best sensor protection without influence of thermal effect
- Internal power stabilization
- Output buffer for driving long cables
- Compact and lightweight design (15g)
- With integrated Souriau connector

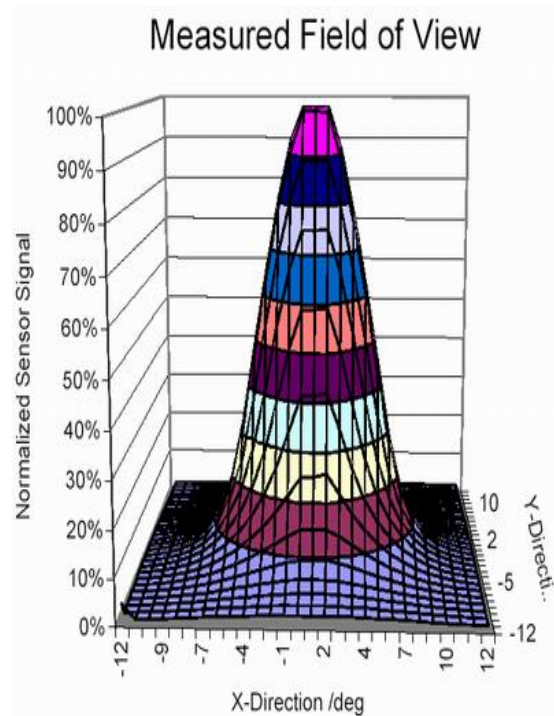
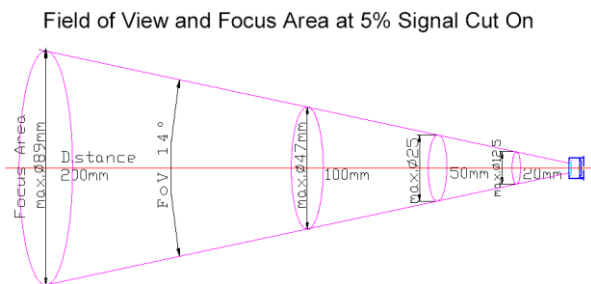
### Technical specifications

<b>Electrical characteristics</b>		<b>Mechanical characteristics</b>		
Supply voltage	V	5 to 16	Housing material	Aluminum
Supply current (typical)	mA	1	Dimensions	mm 24x15x15
Object temperature ranges			Weight	g 15
SA-IR200V6-007	°C	-30 to 200	Connector	Souriau 8STA 1-02-35-PA
SA-IR1000V6-007	°C	0 to 1000		
Accuracy (linearity, hysteresis, repeatability)	FS	± 2%		
Measurement distance	mm	20 to 200		
Response time	ms	10		
Field of View		See below		
<b>Environmental data</b>		<b>Vibration resistance</b>		
Operating class	IP	67	Shock	G 40
Ambient operating range	°C	-40 to +125	During time period of	ms 10
Humidity	%	5 to 95	Vibration tested at	G 12
			Measured with	Hz 1000
			<b>Ordering information</b>	
			Art. No. SA-IR1000V6-007	
			Art. No. SA-IR200V6-007	

## Dimensions



## Field of View



## Calibration

Table	Description	Resolution	Table	Description	Resolution
IR61012B	Blackbody radiator, 1000°C	12 Bit	IR60212B	Blackbody radiator, 200°C	12 Bit
IR61012C	Carbon brake disk, 1000°C	12 Bit	IR60212C	Carbon brake disk, 200°C	12 Bit
IR61012S	Steel brake disk, 1000°C	12 Bit	IR60212S	Steel brake disk, 200°C	12 Bit
IR61012T	Tire, 1000°C	12 Bit	IR60212T	Tire, 200°C	12 Bit
IR61016B	Blackbody radiator, 1000°C	16 Bit	IR60216B	Blackbody radiator, 200°C	16 Bit
IR61016C	Carbon brake disk, 1000°C	16 Bit	IR60216C	Carbon brake disk, 200°C	16 Bit
IR61016S	Steel brake disk, 1000°C	16 Bit	IR60216S	Steel brake disk, 200°C	16 Bit



### Tables

All table files are installed with the 2D Software, they are located in:  
C:\ProgramData\Race20xx\System\Tables



### Calibration

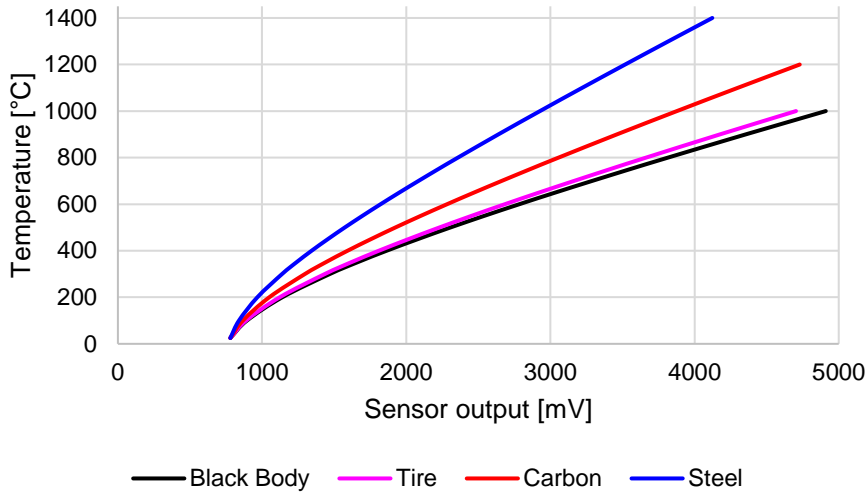
The calibration is only valid if the operating temperature (housing temperature) ≤ object temperature (measurement temperature)!

The output voltage is related to the stated object emissivity without a filter and a distance to object of 30mm at 30mm object diameter.

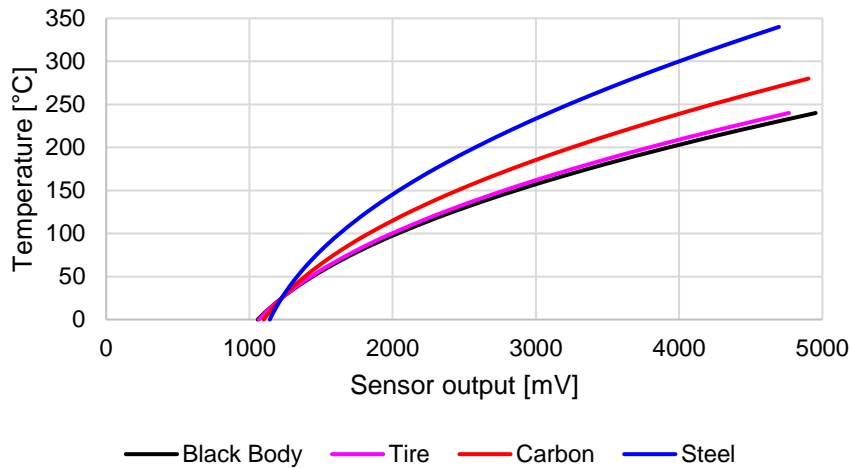
SA-IR1000V6-007				
	Black Body	Tire	Carbon	Steel
Temp [°C]	Output [mv]	Output [mv]	Output [mv]	Output [mv]
	ε = 1	ε = 0,95	ε = 0,75	ε = 0,5
25	780	780	780	780
100	895	889	866	840
200	1140	1122	1050	967
300	1470	1436	1298	1139
350	1660	1616	1440	1238
400	1864	1810	1593	1344
450	2081	2016	1756	1457
500	2307	2231	1925	1574
550	2542	2454	2102	1696
600	2785	2685	2284	1823
650	3034	2921	2471	1952
700	3290	3165	2663	2085
750	3550	3412	2858	2220
800	3815	3663	3056	2358
900	4356	4177	3462	2640
1000	4910	4704	3878	2928
1100			4301	3221
1200			4730	3518
1300				3819
1400				4123

SA-IR200V6-007				
	Black Body	Tire	Carbon	Steel
Temp [°C]	Output [mv]	Output [mv]	Output [mv]	Output [mv]
	ε = 1	ε = 0,95	ε = 0,75	ε = 0,5
0	1058	1066	1100	1142
10	1119	1124	1146	1172
25	1225	1225	1225	1225
30	1264	1262	1254	1245
40	1348	1342	1317	1287
50	1441	1430	1387	1333
60	1542	1526	1463	1384
70	1652	1631	1545	1439
80	1770	1743	1634	1498
90	1898	1864	1730	1562
100	2035	1995	1833	1630
120	2336	2280	2058	1781
140	2676	2603	2313	1951
160	3054	2963	2597	2140
180	3471	3359	2910	2348
200	3927	3792	3252	2576
220	4421	4261	3622	2823
240	4953	4767	4021	3089
260			4449	3374
280			4903	3677
300				4000
320				4339
340				4697

### SA-IR1000V6-007



### SA-IR200V6-007



#### Connector layout

#### Connector type

##### Souriau 8STA 1-02-35-PA 3PM

Pin	Name	Description	Color
1	+12V	Power supply	red
2	Signal	Analog signal	white
3	AGND	Analog ground	black

