

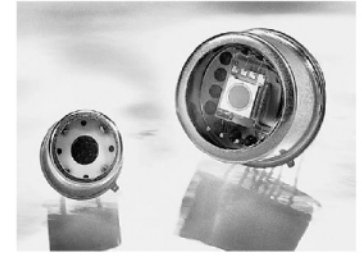
### Dual Sandwich Detector Series

#### Features

- Compact
- Hermetically Sealed
- Low Noise
- Wide Wavelength Range
- Remote Measurements
- w/ TEC

#### Applications

- Flame Temperature sensing
- Spectrophotometer
- Dual-wavelength detection
- IR Thermometers for Heat Treating, induction heating, and other metal parts processing



Model Number	Detector Element	Active Area	Spectral Range (nm)	Peak Wavelength	Responsivity	Capacitance	Shunt Resistance		NEP	D* @ peak	Reverse Voltage	Rise Time (μs)	Temp.* Range (°C)		Package Style
				nm	$\lambda_p$	0 V	-10 mV	0 V, $\lambda_p$	0 V, $\lambda_p$	V	0V 50Ω $\lambda_p$	Operating	Storage		
				typ.	typ.	typ.	min.	typ.	typ.	max.	typ.				
					A/W	pF	MΩ	(W/√Hz).	(cm√Hz/W).						

#### Non-Cooled

PIN-DSS	Si (top)	2.54 Ø	400-1100	950	0.45	70	50	500	1.3e-14	1.7e+13	5	10	-40 ~ +100	-55 ~ +125	TO-5
	Si		950-1100	1060	0.12				4.8e-14	4.7e+12		150			
PIN-DSIn	Si (top)	2.54 Ø	400-1100	950	0.55 <sup>(2)</sup>	450	150	1.0	1.9e+14 <sup>(2)</sup>	1.2e+13 <sup>(2)</sup>	5	4	-40 ~ +100	-55 ~ +125	TO-5
	InGaAs	1.50 Ø	1000-1800	1300	0.60				300	2.1e+13		8.4e+11			

#### Two stage Thermoelectrically Cooled<sup>(1)</sup>

PIN-DSIn-TEC	Si (top)	2.54 Ø	400-1100	950	0.55 <sup>(2)</sup>	450	150	1.0	1.9e-14 <sup>(2)</sup>	1.2 e+13 <sup>(2)</sup>	5	4	-40 ~ +100	-55 ~ +125	TO-8
	InGaAs	1.50 Ø	1000-1800	1300	0.60				300	2.1e-13		8.4 e+11			

<sup>(1)</sup> Thermo-Electric Cooler and Thermistor Specifications are specified in the tables below.

<sup>(2)</sup> at 870nm

\* Non-Condensing temperature and Storage Range, Non-Condensing Environment

#### Thermistor Specifications

PARAMETER	CONDITION	SPECIFICATION
Temperature Range	-	-100°C to +100°C
Nominal Resistance	-	1.25 KW @ 25°C
Accuracy	-100°C to -25°C	±6.5°C
	-25°C to +50°C	±3.5°C
	@ 25°C	±1.5°C
	+50°C to +100°C	±6.7°C

#### Two Stage Thermo-electric Cooler Specifications

PARAMETER	SYMBOL	CONDITION	SPECIFICATION
Maximum Achievable Temperature Difference	$\Delta T_{MAX}$ (°C)	I = I <sub>MAX</sub> QC=0 Vacuum	91
		Dry N2	83
Maximum Amount of Heat Absorbed At The Cold Face	Q <sub>MAX</sub> (W)	I = I <sub>MAX</sub> , $\Delta T=0$	0.92
Input Current Resulting In Greatest $\Delta T_{MAX}$	I <sub>MAX</sub> (A)	-	1.4
Voltage At $\Delta T_{MAX}$	V <sub>MAX</sub> (V)	-	2.0