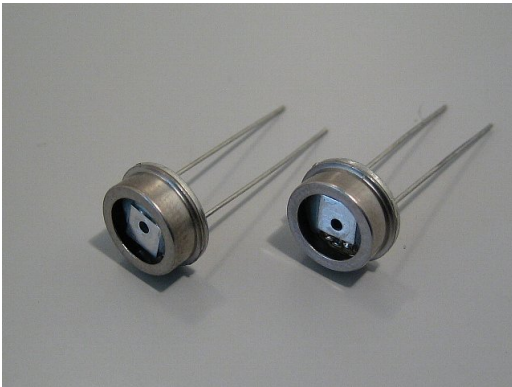


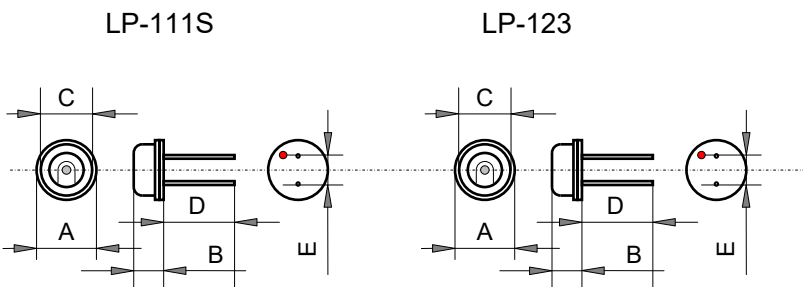
**THERMOPILE, RADIATION POWER SENSING DEVICES  
LP111S, LP123**



**Features and Applications**

Thin film thermopiles for such radiation power sensing as CO<sub>2</sub> laser and infra-red optical power. Fast response (LP-111S, LP-123), and including incident power calibration system are distinctive feature. Optical chopper that is always prepared in pyro-electricity sensor is unnecessary. Stable +/-DC output voltage is observed without influence from ambient temperature change. Wide and flat sensitivity characteristics at 0.2 to 20 micro-meter wave length are available. Low output impedance less than 10 K ohm gives easy amplifier circuit construction. None-contact temperature measurement, laser power measurement, power stabilization of laser generator and radiation optical power measurements.

**Dimension and Pin Configurations (mm)**



(mm)	A	B	C	D	E
LP-111S	9.05 dia.	3.5	8.1 dia.	17+/-2	5.0
LP-123	9.05 dia.	3.5	8.1 dia.	17+/-2	5.0

**Ordering Information**

Type	TCR	Resistance	Tolerance	Code	Note
LP-111S	---	---	---	000	Not RoHS
LP-123	---	---	---	---	

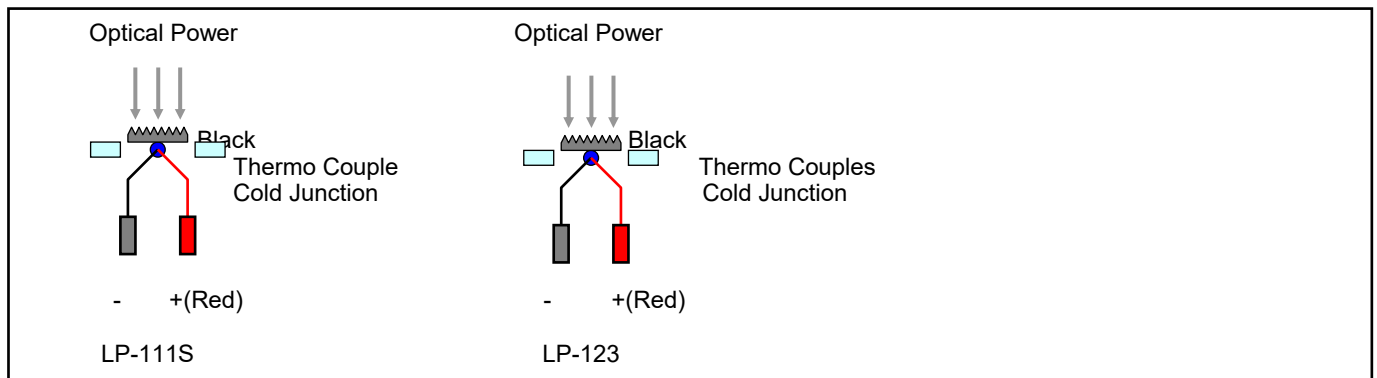
**THERMOPILE, RADIATION POWER SENSING DEVICES**

**LP111S, LP123**

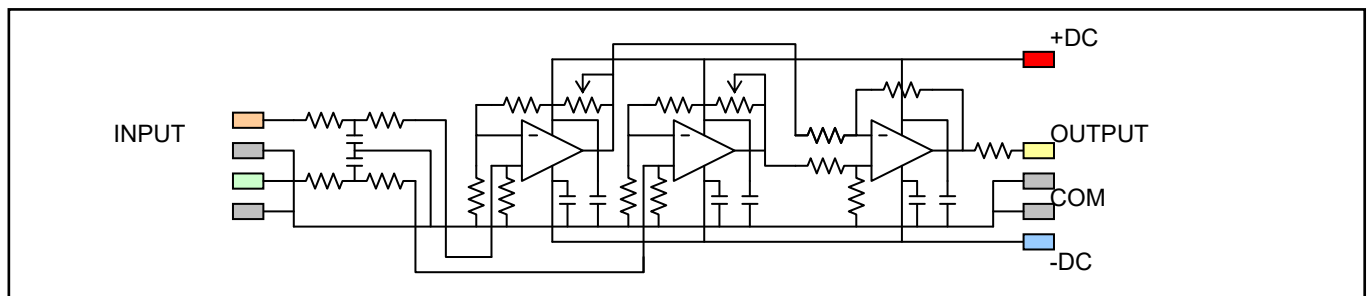
**Specifications**

		P/N	LP-111S	LP-123
INPUT	Range of Detecting Wave Length (um)		0.4-20.0	0.4-20.0
	Material of Absorption Black		Metal Black	Metal Black
	Continuous Max. Input Power(mW)		10	10
	Warning Input Power(mW)		20	20
	Diameter of Detecting Aperture, (mm dia.)		1.0	1.0
OUTPUT	Sensitivity (mV/mW)		10.0	5.0
	Error from Linearity		-	-
	Internal Resistance (kohms)		2.0+/-1.0	2.0+/-1.0
	63% Response Time (ms)		45	45
	Number of Thermo Couple (pairs)		22	11
CALIBRATION	Resistance of Calibration Resistor (ohms)		---	---
MECHANICAL	Storage Temperature (deg C)		0-40	0-40
	Operation Temperature (deg C)		0-40	0-40

**Schematics and Pin Connections**



**Typical Sensing Amplifier**



Note : Since thermopile LP-231S was discontinued, please use a fast response type LP-111S as an alternative.