



PSH-3 AND PSH-5 SINGLE AXIS POSITION SENSING HYBRIDS

This product features the super single axis position sensing photodiodes (SL3/SL5) along with the associated electronics in one hybridized package (TO-8). The output is in the form of sum/difference voltage signals which with the use of an external precision divider provides position information.

PDH-4 TWO DIMENSIONAL POSITION SENSING HYBRID

The Position Sensing Hybrid is an optical sensor capable of position detection of a moving spot of <0.5 mm dia. over a 2. dim. space defined by the sensor geometry (4 x 4 sq. mm). The detector part of the hybrid sensor consists of a two dimensional super linear lateral effect sensor with optical sensitivity in the range: 500 nm–1100 nm and peak sensitivity of 0.5 A/W at 880 nm (DLS4).

The sensor is part of the hybrid supported by a series of A.C. coupled precision amplifiers providing position information in both X and Y directions.

POSITION SENSING HYBRID DETECTOR SPECIFICATIONS

Typical at 22°C

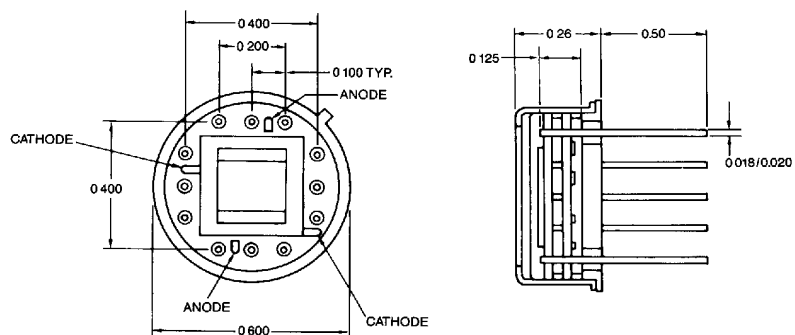
MODEL #	EFFECTIVE SENSING AREA (mm)	POSITION NON-LINEARITY OVER 80% OF ACTIVE AREA	MAXIMUM POSITION DETECTION RESOLUTION (μm)	RESPONSIVITY		CAPACITANCE pF @ 15V	DARK CURRENT @ 15V	BREAKDOWN VOLTAGE	MAXIMUM RISE TIME 900nm @ 15V BIAS	INTER-ELECTRODE RESISTANCE (KΩ)
				633nm	900nm					
PDH-4 (Dual Axis)	4 x 4	0.5%	100	0.35	0.5	25	500	80	660	15
PSH-3 (Single Axis)	3 x 1	0.5%	45	0.3	0.5	4.0	50	50	250	25
PSH-5 (Single Axis)	5 x 1	0.5%	45	0.3	0.5	6.0	100	50	400	40

INTEGRATED AMPLIFIER SPECIFICATIONS

Typical at 22°C

MODEL #	SENSITIVITY V/W (900nm)	FREQUENCY OF RESPONSE (Hz)	OUTPUT NOISE VOLTAGE (mV-rms)	SUPPLY VOLTAGE (Volts)	DYNAMIC RANGE (Watts)	D.C. OFFSET mV P-P	SUPPLY CURRENT (mA)
PDH-4 (Dual Axis)	5.0	200-30K	10	± 15	1 x 10 ⁻⁶ to 1 x 10 ⁻³	—	9.3
PSH-3 (Single Axis)	5.0	DC-30K	10	± 15	1 x 10 ⁻⁶ to 1 x 10 ⁻³	2.0	10
PSH-5 (Single Axis)	5.0	DC-30K	20	± 15	1 x 10 ⁻⁶ to 1 x 10 ⁻³	2.0	10

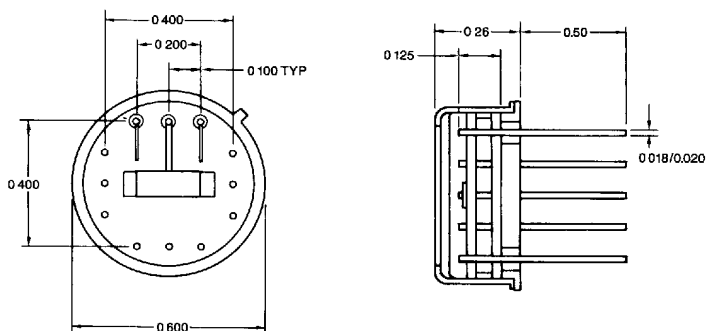
PDH-4



PSH-3

PIN CONNECTIONS:

- 1) + V_{CC} (15V)
- 2) N.C.
- 3) N.C.
- 4) Out 1
- 5) N.C.
- 6) N.C.
- 7) - V_{CC} (-15V)
- 8) GND
- 9) N.C.
- 10) Out 2
- 11) N.C.
- 12) N.C.



PSH-5

PIN CONNECTIONS:

- 1) + V_{CC} (15V)
- 2) N.C.
- 3) N.C.
- 4) Out 1
- 5) N.C.
- 6) N.C.
- 7) - V_{CC} (-15V)
- 8) GND
- 9) N.C.
- 10) Out 2
- 11) N.C.
- 12) N.C.

