Lateral Effect Position Sensing Photodiodes

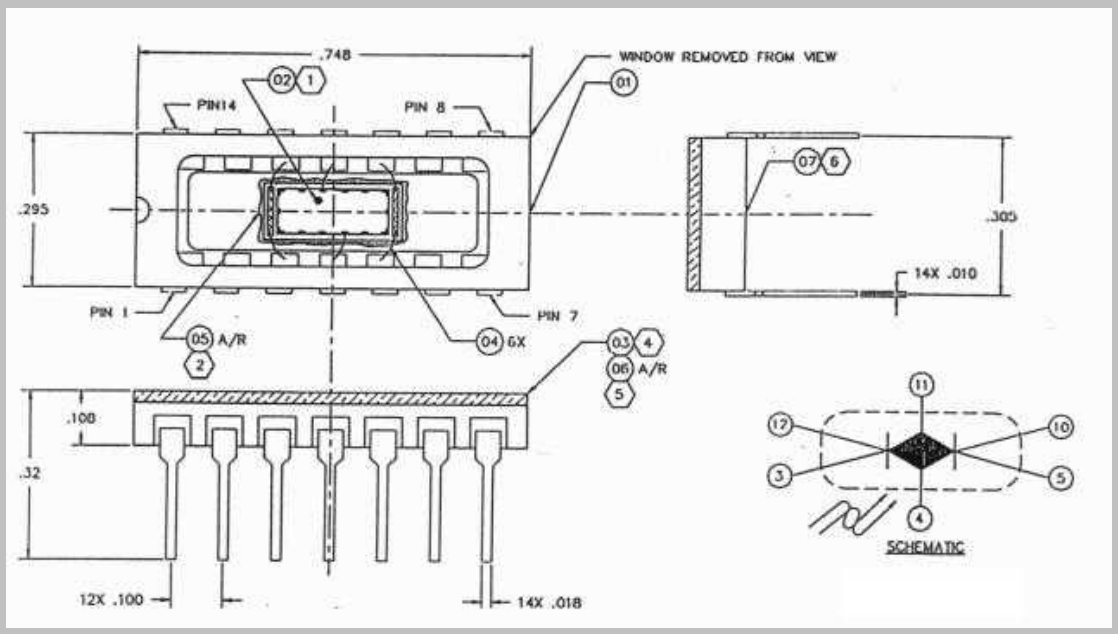
Specifications

Responsivity: 0.40 A/W typical @ 800nm.
Non-Uniformity: ± 5% (1mm spot) typical.

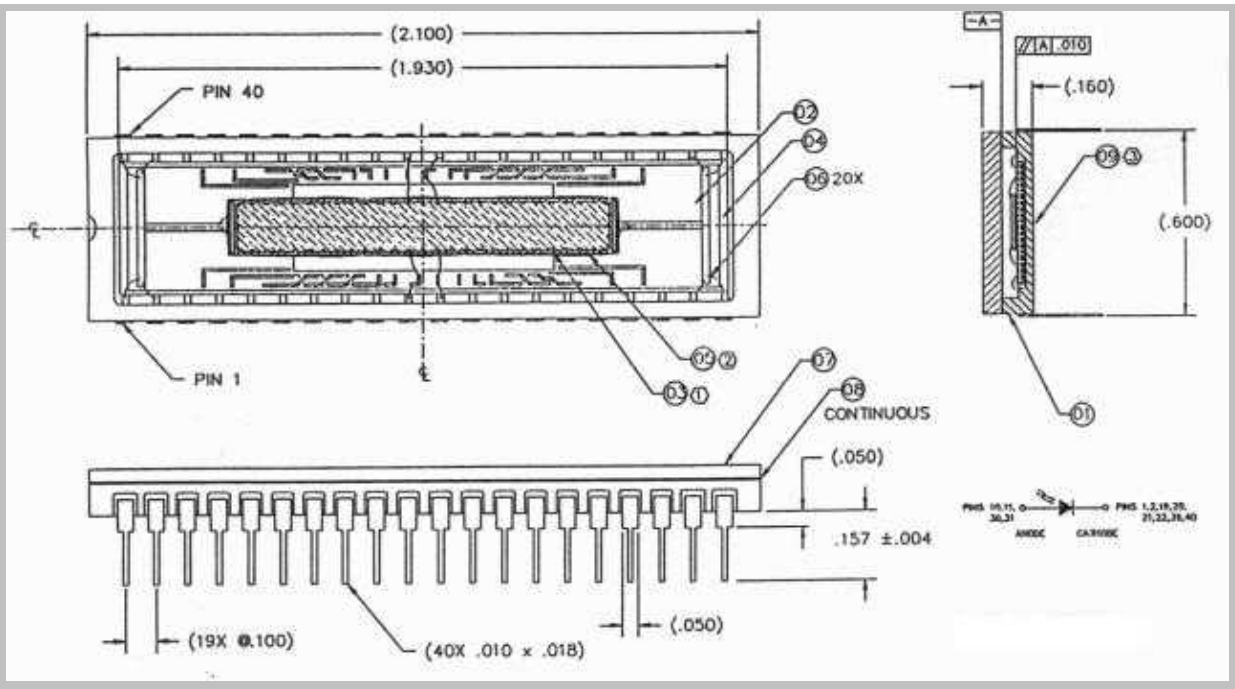
Part Number	Active Area	Storage & Operating Temp.	Position Measurement Accuracy	Position Resolution[1]	Inter-Electrode Resistance	Dark Current[2] @ 5V	Capacitance[3] @ 0V	Response Time[4]
	in. (mm)	(C°)	**(typ)** (cm)	**(typ)** (Å/√ Hz)	(KΩ)	(nA)	**(typ)** (pfd)	**(typ)** (KHz)
SD 200-21-21-301	.20 x .076 (5 x 1.93)	-40 to 80	± .01	1.4	20	200	200	35
SD 1166-21-11-301	1.166 x .146 (29.6 x 3.7)	-40 to 80	± .06	8.3	2	1,000	13,000	12
SD 386-22-21-251	.390 sq. (9.9 sq.)	-40 to 80	± .10	2.8	1.5	1,000	1,500	35

1. Minimum detectable displacement with 100µA signal current (5.6 pA/√ Hz) and position sensitivity defined as $P.S. = \Re \frac{P}{r}$ where $\Re$ is responsivity, P is power (watts) and r is the cell mechanical radius (cm).
2. Dark Current varies with temperature as follows: for T>23° C, $I_D = 1.09^{\Delta T} I_{D23}$, and for T<23° C, $I_D = I_{D23}/1.09^{\Delta T}$, where Δ T is the temperature difference from 23° C, and I_{D23} is the dark current at 23° C.
3. Typical values are listed in the table. Maximum value is 20% higher than the typical value.
4. Response times listed are for the rising or falling edge, and were measured at 830nm with a 50Ω load. Shorter wavelengths will result in faster rise and fall times.

SD 200-21-21-301



SD 1166-21-11-301



SD 386-22-21-251