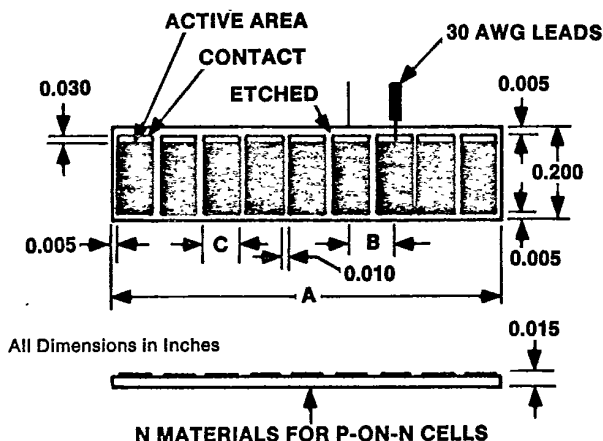


# **SPR-1-08/SPR-1-10** **Silicon Multi-Channel** **Detector Array**

## **DESCRIPTION**

Both the SPR-1-08 and SPR-1-10 are linear arrays of P-ON-N silicon photovoltaic cells. Originally designed for tape and punch cards they find use in many encoding and position sensing applications.

## **DIMENSIONS**



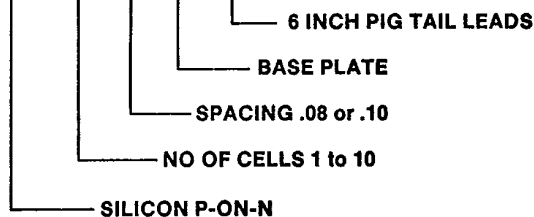
	-08 SERIES	-10 SERIES
<b>A</b>	0.087 X Number of Segments	0.100 X Number of Segments
<b>B</b>	0.087	0.100
<b>C</b>	0.077	0.090

## **FEATURES**

- Common cathode
- Speed response  $< 2 \mu s$
- 2-10 channels available
- Order with base plate mount
- Optional pig tail leads

## **ORDERING INFORMATION**

### **SPR-1-08 B PL**



## **ABSOLUTE MAXIMUM RATINGS**

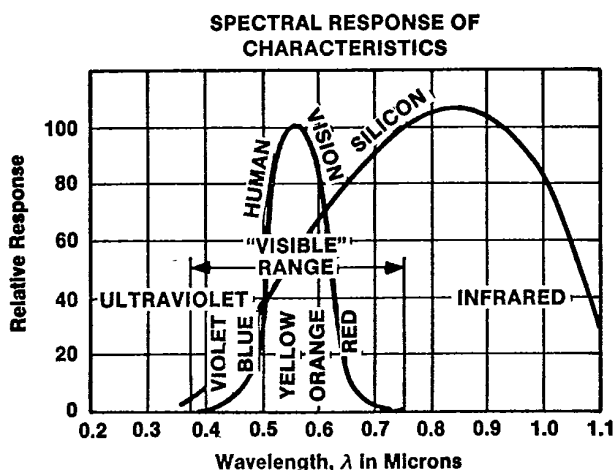
Storage temperature range..... $-0^{\circ}C$  to  $70^{\circ}C$   
 Operating case temperature range..... $-0^{\circ}C$  to  $70^{\circ}C$   
 Lead temperature for 5 seconds..... $240^{\circ}C$

## **ELECTRO-OPTICAL CHARACTERISTICS ( $T_C = 25^{\circ}C$ UNLESS OTHERWISE SPECIFIED)**

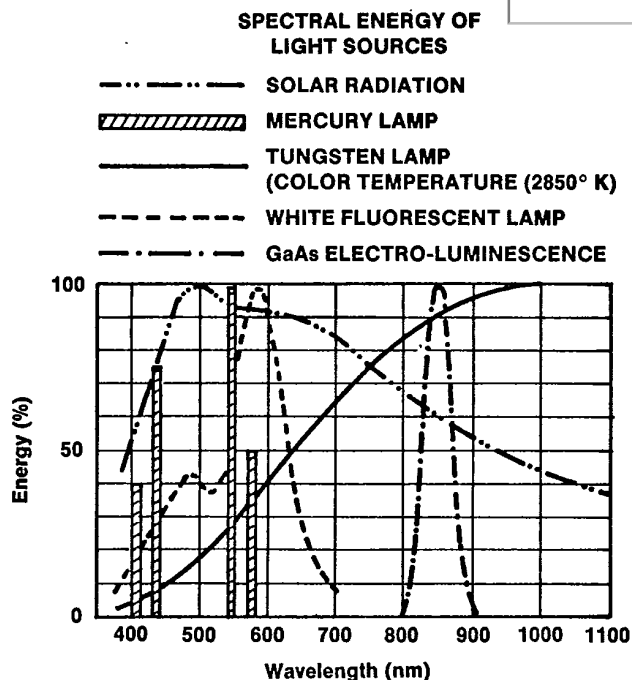
PARAMETER	TEST CONDITION	SYMBOL	SPR-1-08			SPR-1-10			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
Short Circuit Current	$R_L \leq 50 \Omega$ , See Note 1	$I_{SC}$	225	250		250	315		$\mu A$
Light Current	$R_L = 1 K\Omega$ , See Note 1	$I_L$	145	180		200	270		$\mu A$
Load Voltage	$R_L = 1 K\Omega$ , See Note 1	$V_L$	145	180		200	270		mV
Open Circuit Voltage	$H_g = 300 fc$	$V_{OC}$		325			325		mV
Rise Time	See Note 2	$t_r$		2.0			2.0		$\mu Sec$
Dark Current	$V_R = .1 V$	$I_d$			20			20	$\mu A$

NOTES: 1. Rated at 500 fc, color temp. 2800°K, 25°C ambient.  
 2. Response time value assumes optimum impedance for illumination level.

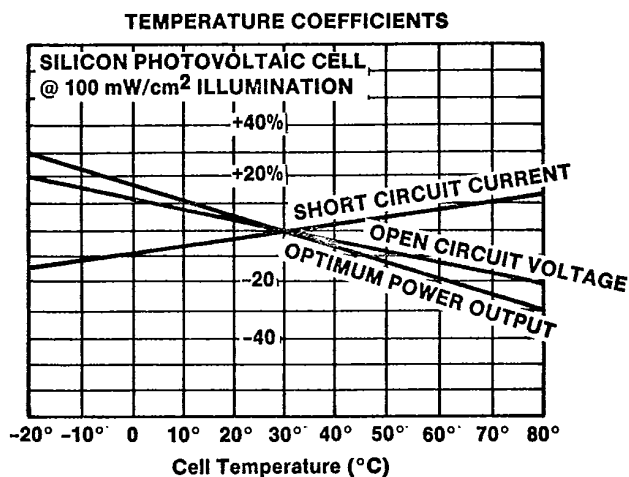
**TYPICAL PERFORMANCE CURVES**



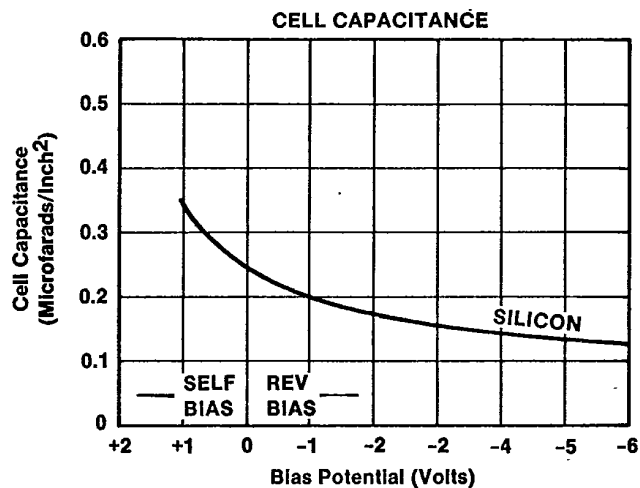
**FIGURE 1**



**FIGURE 2**



**FIGURE 3**



**FIGURE 4**

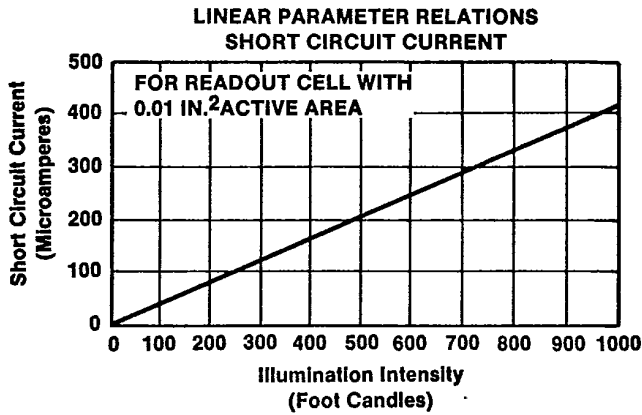


FIGURE 5

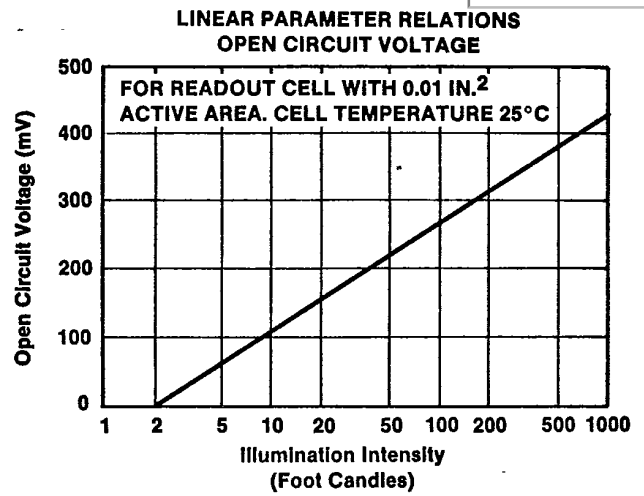


FIGURE 6

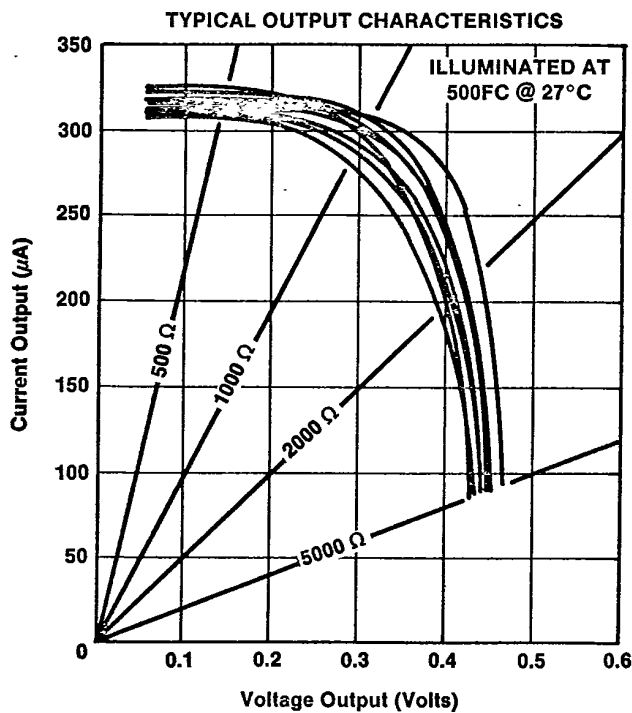


FIGURE 7

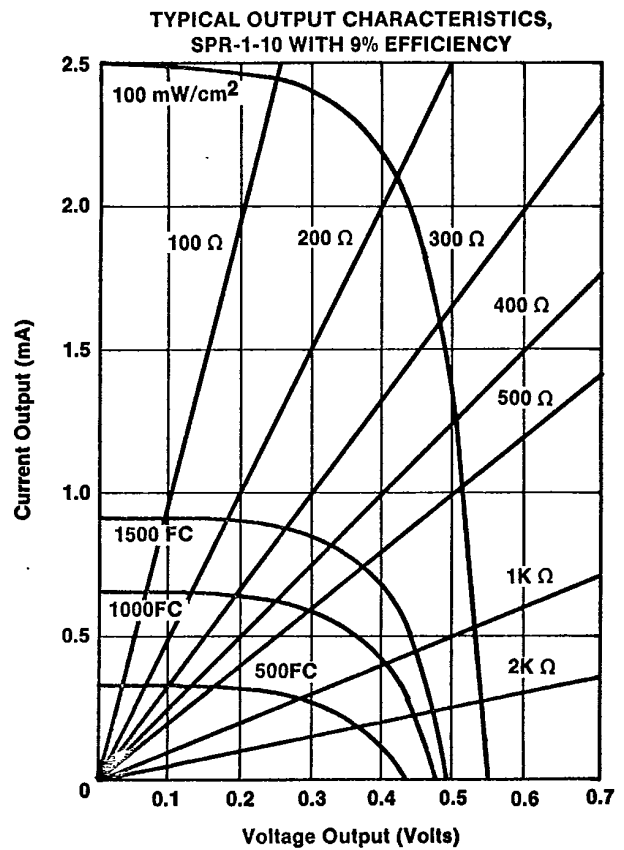


FIGURE 8