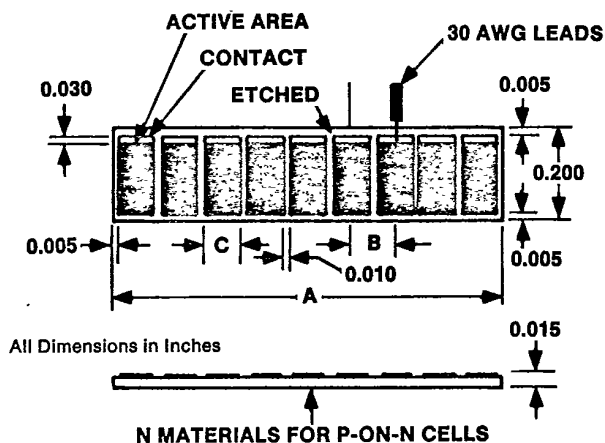


# SPR-1-08/SPR-1-10 Silicon Multi-Channel Detector Array

## 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



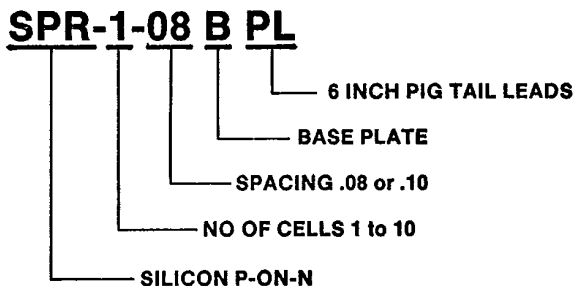
	-08 SERIES	-10 SERIES
A	0.087 X Number of Segments	0.100 X Number of Segments
B	0.087	0.100
C	0.077	0.090

## FEATURES

T-41-55

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

## ORDERING INFORMATION



## ABSOLUTE MAXIMUM RATINGS

Storage temperature range.....-0°C to 70°C  
 Operating case temperature range.....-0°C to 70°C  
 Lead temperature for 5 seconds.....240°C

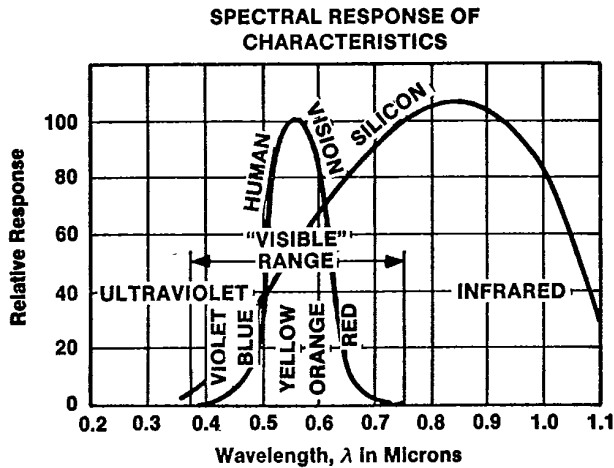
## ELECTRO-OPTICAL CHARACTERISTICS (T<sub>C</sub> = 25°C UNLESS OTHERWISE SPECIFIED)

PARAMETER	TEST CONDITION	SYMBOL	SPR-1-08			SPR-1-10			UNITS
			MIN	TYP	MAX	MIN	TYP	MAX	
Short Circuit Current	R <sub>L</sub> ≤ 50 Ω, See Note 1	I <sub>SC</sub>	225	250		250	315		μA
Light Current	R <sub>L</sub> = 1 KΩ, See Note 1	I <sub>L</sub>	145	180		200	270		μA
Load Voltage	R <sub>L</sub> = 1 KΩ, See Note 1	V <sub>L</sub>	145	180		200	270		mV
Open Circuit Voltage	H <sub>0</sub> = 300 fc	V <sub>OC</sub>		325			325		mV
Rise Time	See Note 2	t <sub>r</sub>		2.0			2.0		μSec
Dark Current	V <sub>R</sub> = .1 V	I <sub>d</sub>			20			20	μA

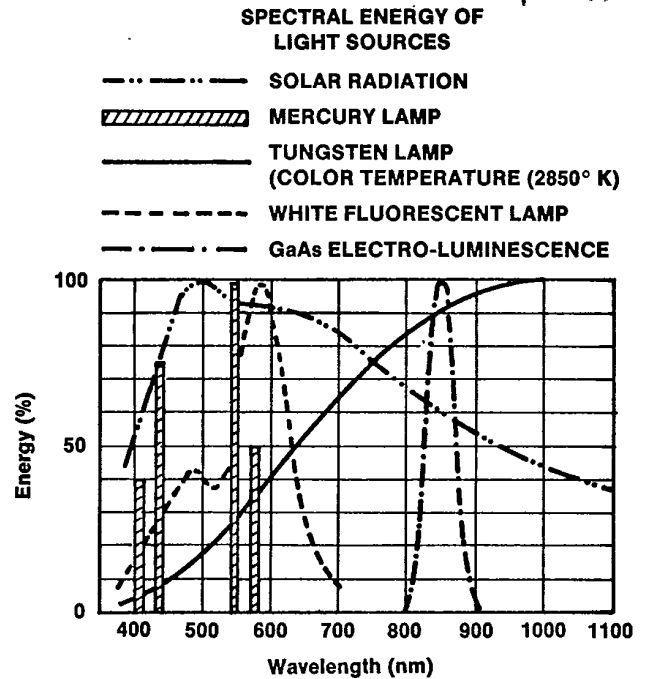
NOTES: 1. Rated at 500 fc, color temp. 2800°K, 25°C ambient.  
 2. Response time value assumes optimum impedance for illumination level.

T-41-55

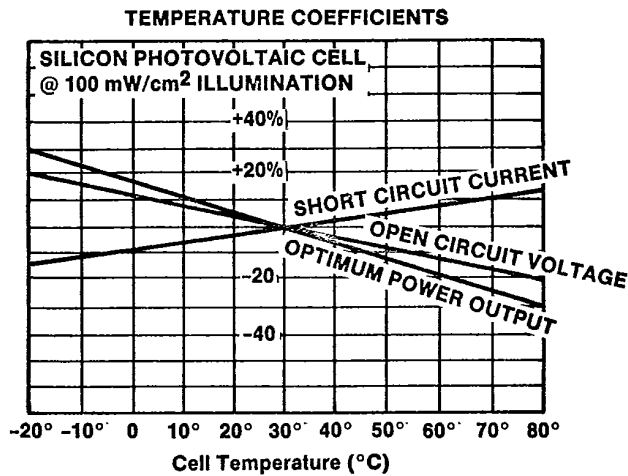
**TYPICAL PERFORMANCE CURVES**



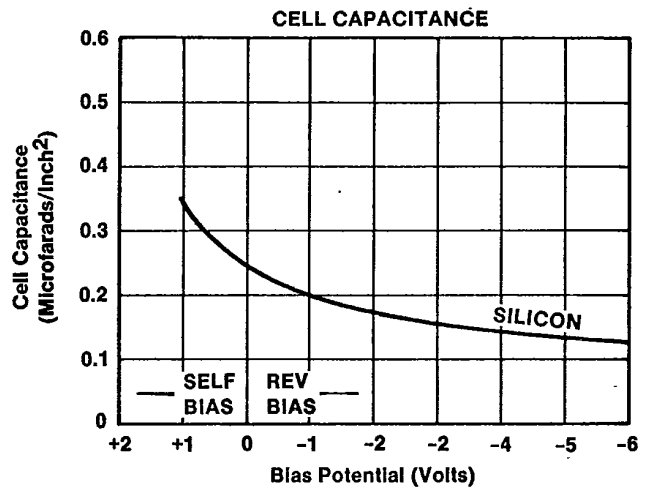
**FIGURE 1**



**FIGURE 2**



**FIGURE 3**



**FIGURE 4**

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

T-41-55

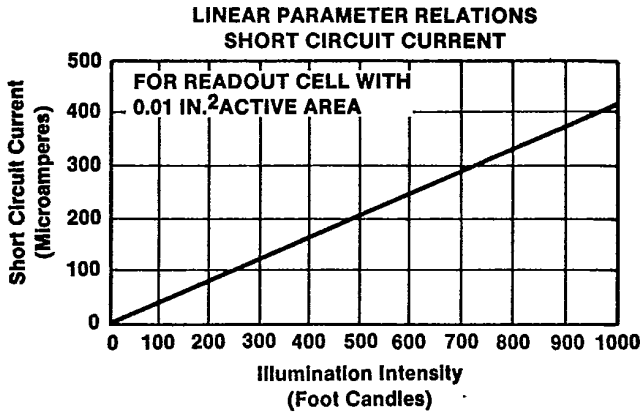


FIGURE 5

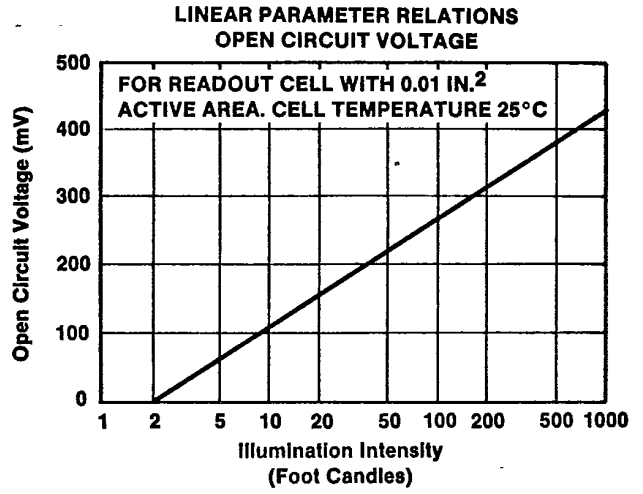


FIGURE 6

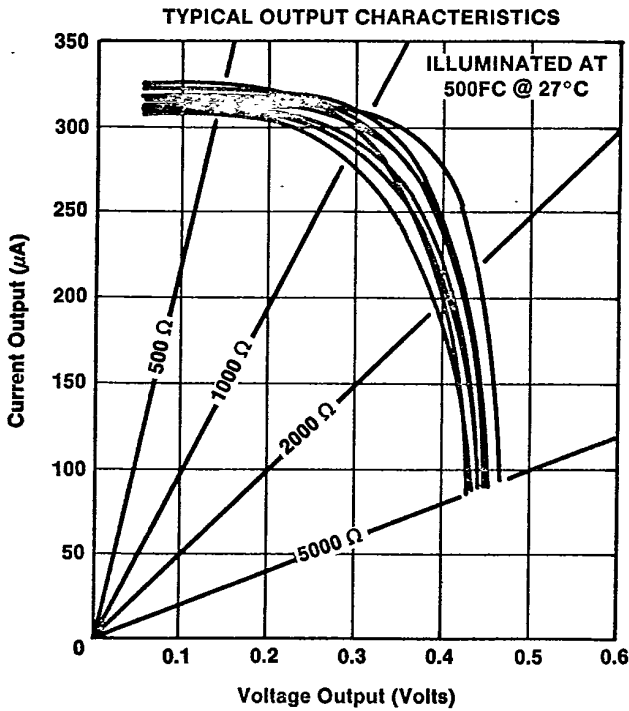


FIGURE 7

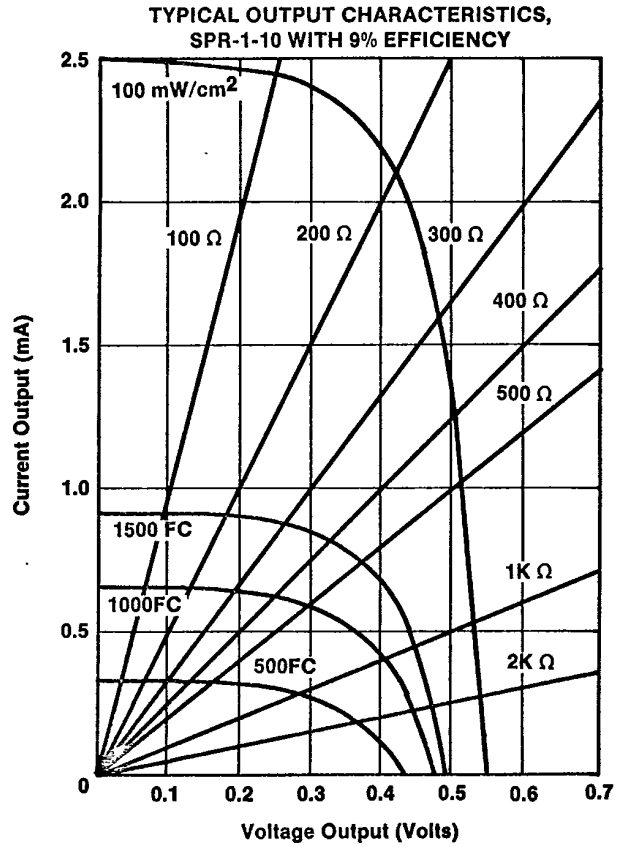


FIGURE 8

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