Texas Optoelectronics, Inc.

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

T-41-55

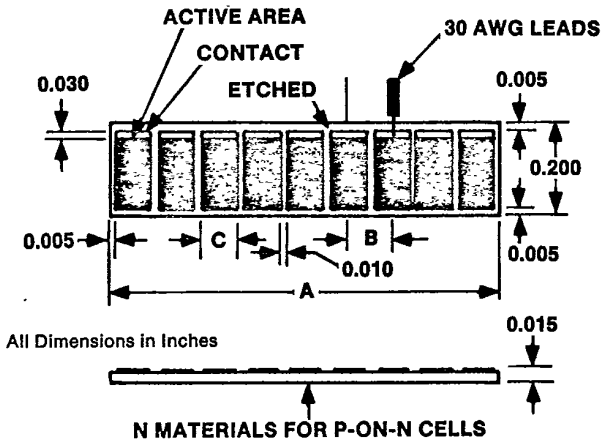
DESCRIPTION

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.

FEATURES

- Common cathode
- Speed response < 2 μs
- 2-10 channels available
- Order with base plate mount
- Optional pig tail leads

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

ORDERING INFORMATION

SPR-1-08 B PL

- PL — 6 INCH PIG TAIL LEADS
- B — BASE PLATE
- 08 — SPACING .08 or .10
- 1 — NO OF CELLS 1 to 10
- SPR — SILICON P-ON-N

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_C = 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	$R_L \leq 50\ \Omega$, See Note 1	I_{SC}	225	250		250	315		μA
Light Current	R_L = 1 KΩ, See Note 1	I_L	145	180		200	270		μA
Load Voltage	R_L = 1 KΩ, See Note 1	V_L	145	180		200	270		mV
Open Circuit Voltage	H_e = 300 fc	V_{OC}		325			325		mV
Rise Time	See Note 2	t_r		2.0			2.0		μSec
Dark Current	V_R = .1 V	I_d			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.

Texas Optoelectronics, Inc.

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

T-41-55

TYPICAL PERFORMANCE CURVES

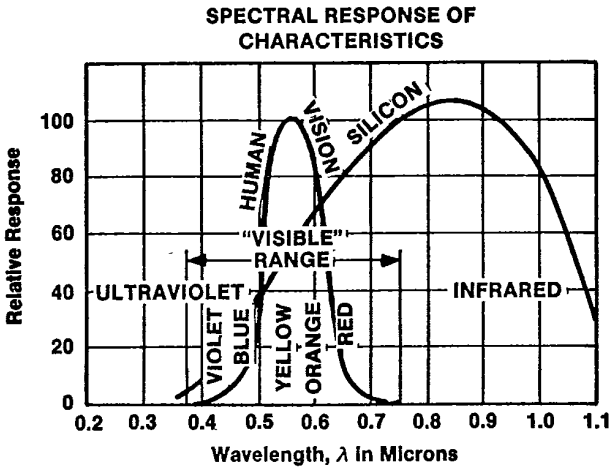


FIGURE 1

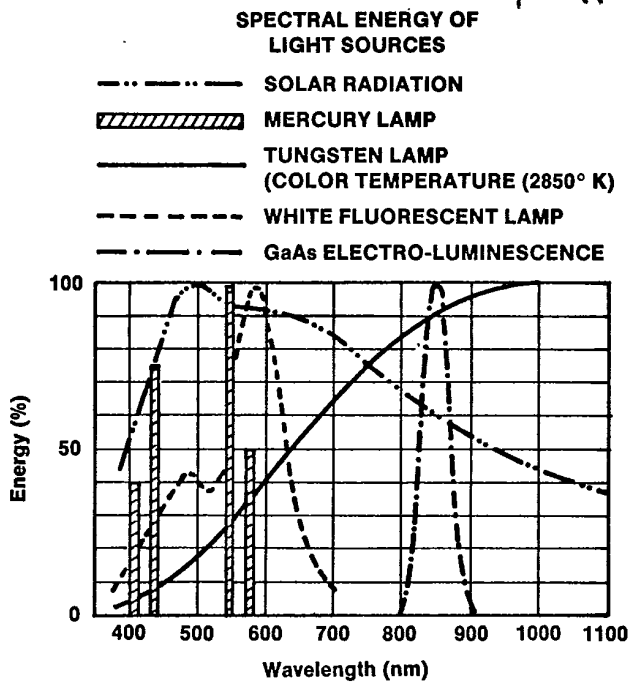


FIGURE 2

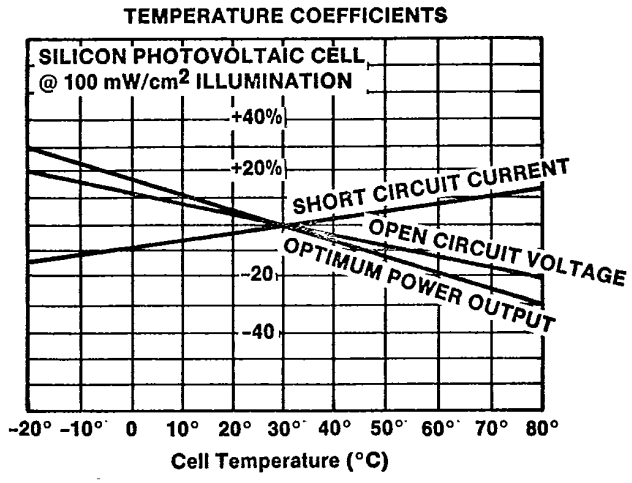


FIGURE 3

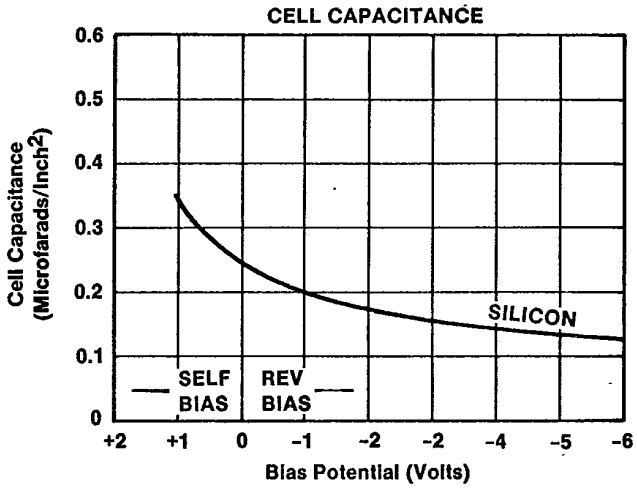


FIGURE 4

7

Texas Optoelectronics, Inc.

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

T-41-55

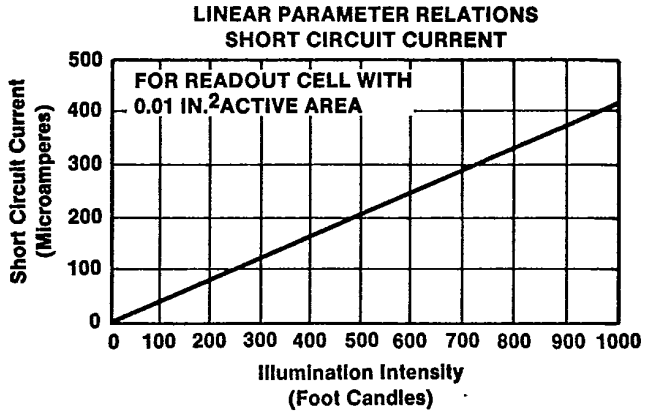


FIGURE 5

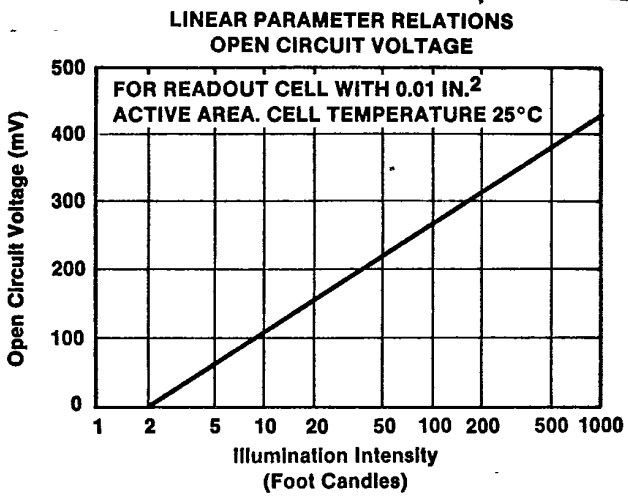


FIGURE 6

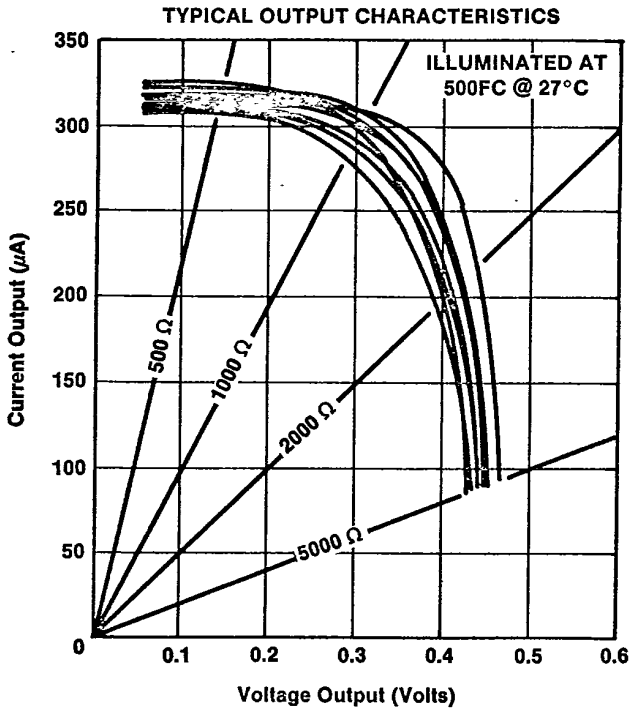


FIGURE 7

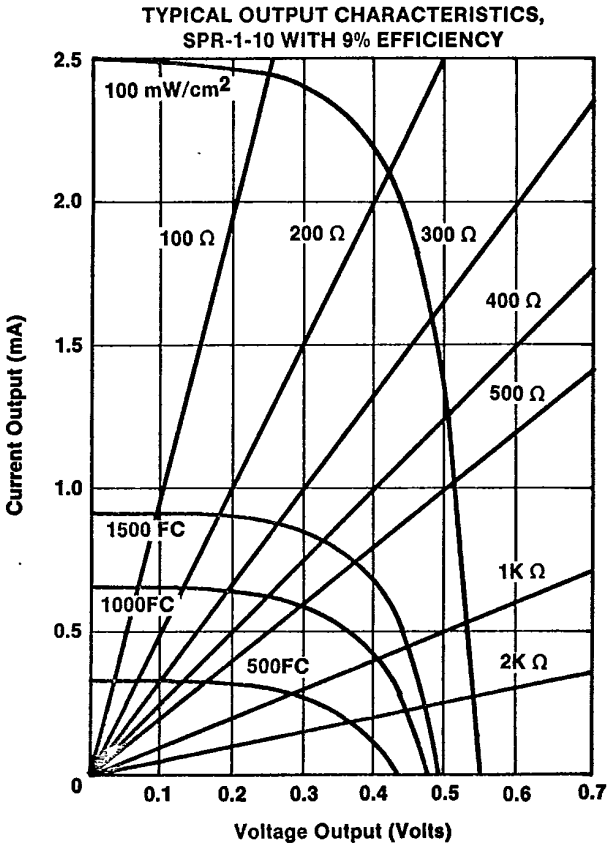


FIGURE 8

7