

PDA Series

Features

- Linearity Over Wide Dynamic Range
- Cross Talk Between Elements <1%
- Wide Spectral Range
- Planar Diffused Structure

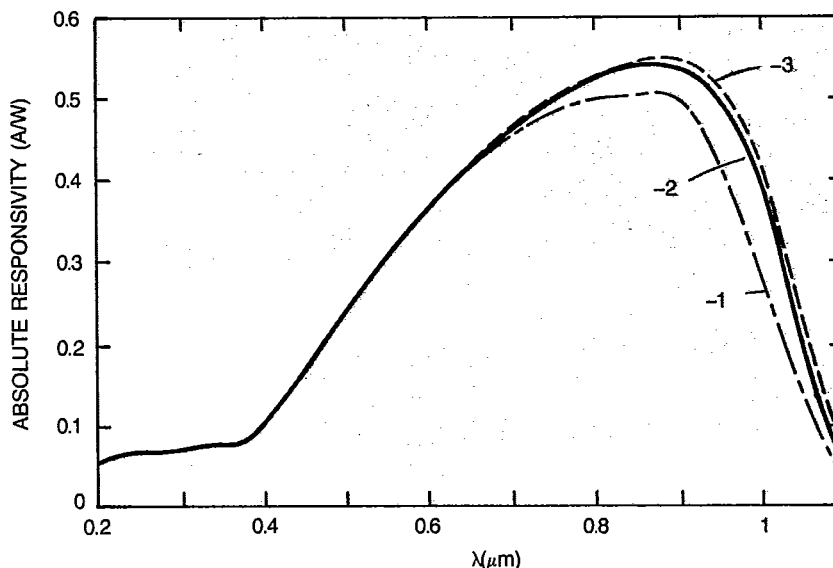
Operating Data and Specifications at 23°C Typical Performance at 0 V Bias

Characteristic	-1	-2	-3	Units and Conditions
Active Area ¹	←————→	3.8	←————→	Sq. mm
Element Size	←————→	4.0 x 0.94	←————→	mm
Element Spacing	←————→	1.0	←————→	mm (center-to-center)
Spectral Range	←————→	200-1100	←————→	nm
Responsivity	0.50	0.55	0.55	A/W at 900 nm
Responsivity	0.36	0.36	0.36	A/W at 600 nm
Responsivity	0.07	0.07	0.07	A/W at 250 nm
Capacitance	1400	570	90	pF
Shunt Resistance	1000	1000	100	Megohms
Noise Current	4	4	13	fA/Hz ^{1/2}
NEP (900,10,1)	8	7	23	fW/Hz ^{1/2}
NEP (600,10,1)	11	11	34	fW/Hz ^{1/2}
NEP (250,10,1)	58	100	160	fW/Hz ^{1/2}
Response Linearity	<1%	<1%	<1%	Over 7 decades
Surface Uniformity ²	<1%	<1%	<1%	With 0.18 mm spot
Crosstalk	<1%	<1%	<1%	At 633 nm
Temperature Coefficient of:				
Response (900 nm)	+0.22	+0.22	+0.22	%/°C
Response (600 nm)	+0.04	+0.04	+0.04	%/°C
Response (250 nm)	-0.16	-0.16	-0.16	%/°C
Shunt Resistance	12	12	12	%/°C
Operating Temperature	←————→	-55 to 70	←————→	°C
Package Style	←————→	22 to 48	←————→	Pin Ceramic DIP

Notes

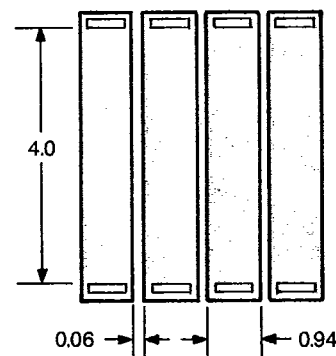
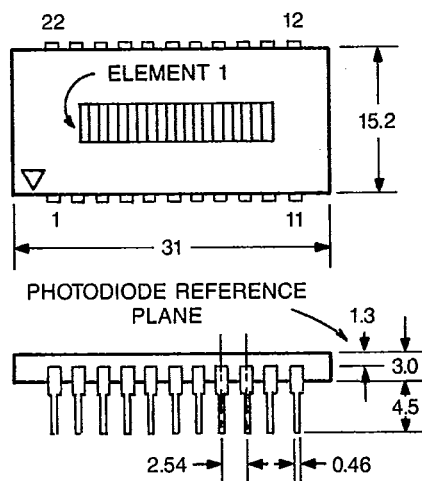
1. Active area and all characteristics are listed per element.
2. Surface uniformity at 633 nm.

Typical Spectral Response



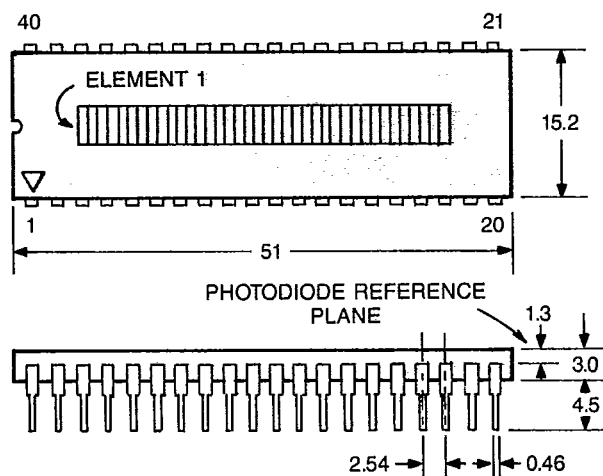
Parallel Output Arrays

PDA-20

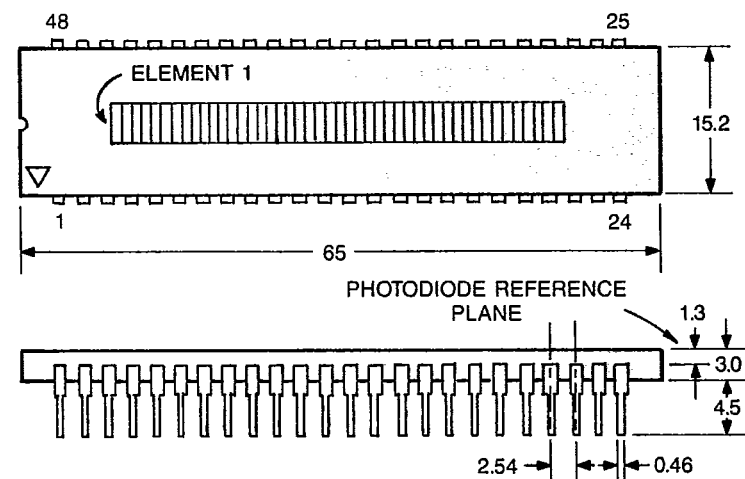


Element Detail

PDA-32; 35; 38



PDA-46



Pin No.	PDA-20	PDA-32	PDA-35	PDA-38	PDA-46
1	C	C	C	C	C
2	2	2	2	2	2
3	4	4	4	4	4
4	6	6	6	6	6
5	8	8	8	8	8
6	10	10	10	10	10
7	12	12	12	12	12
8	14	14	14	14	14
9	16	16	16	16	16
10	18	—	18	18	18
11	20	—	—	20	20
12	C	—	20	22	22
13	19	18	22	24	24
14	17	20	24	26	26
15	15	22	26	28	28
16	13	24	28	30	30
17	11	26	30	32	32
18	9	28	32	34	34
19	7	30	34	36	36
20	5	32	—	38	38
21	3	C	C	C	40
22	1	31	35	37	42
23		29	33	35	44
24		27	31	33	46
25		25	29	31	C
26		23	27	29	45
27		21	25	27	43
28		19	23	25	41
29		17	21	23	39
30		—	19	21	37
31		—	17	19	35
32		—	15	17	33
33		15	13	15	31
34		13	11	13	29
35		11	9	11	27
36		9	7	9	25
37		7	5	7	23
38		5	3	5	21
39		3	1	3	19
40		1	—	1	17
41					15
42					13
43					11
44					9
45					7
46					5
47					3
48					1

C (Cathode): Common to all elements