

76-element Si photodiode array

S3954

High UV sensitivity photodiode array mounted in DIP



Features

- High UV sensitivity: QE 75 % ($\lambda=200$ nm)
- Half pitch 78-lead DIP
- Element size: 3.175×0.3175 mm
- Entire active area: 3.175×25.6875 mm
- Element pitch: 0.3425 mm

Applications

- Spectrophotometers

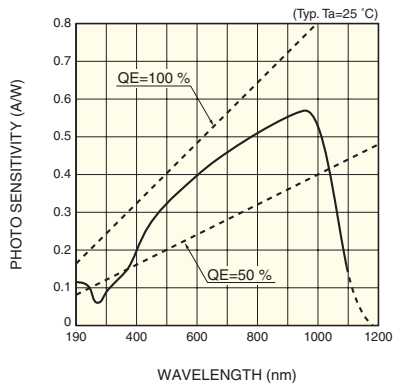
■ Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	5	V
Operating temperature	T_{opr}	-20 to +60	°C
Storage temperature	T_{stg}	-20 to +80	°C

■ Electrical and optical characteristics ($T_a=25$ °C)

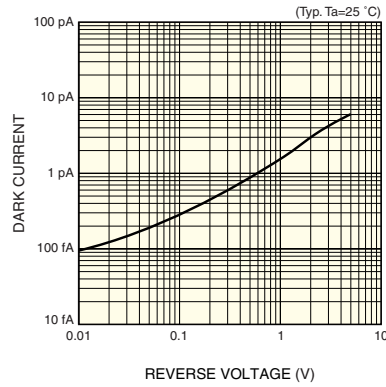
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	190 to 1100	-	nm
Peak sensitivity wavelength	λ_p		-	960	-	nm
Photo sensitivity	S	$\lambda=200$ nm	-	0.10	-	A/W
		$\lambda=633$ nm	-	0.43	-	
		$\lambda=\lambda_p$	-	0.58	-	
Dark current	I_D	per 1 element $V_R=10$ mV	-	0.1	30	pA
Temperature coefficient of dark current	T_{CID}		-	1.12	-	times/°C
Rise time	t_r	$V_R=0$ V, $R_L=1$ k Ω $\lambda=655$ nm	-	0.4	-	μ s
Terminal capacitance	C_t	per 1 element $V_R=0$ V, $f=10$ kHz	-	150	-	pF
Noise equivalent power	NEP	$V_R=10$ mV, $\lambda=\lambda_p$	-	2×10^{-15}	-	W/Hz ^{1/2}

■ Spectral response



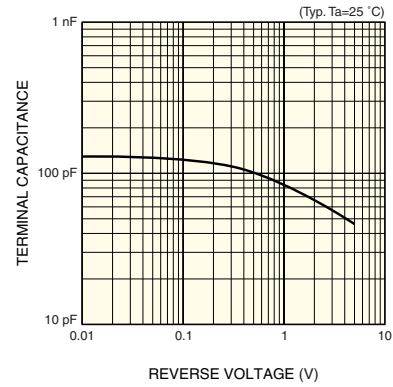
KMPDB0130EA

■ Dark current vs. reverse voltage



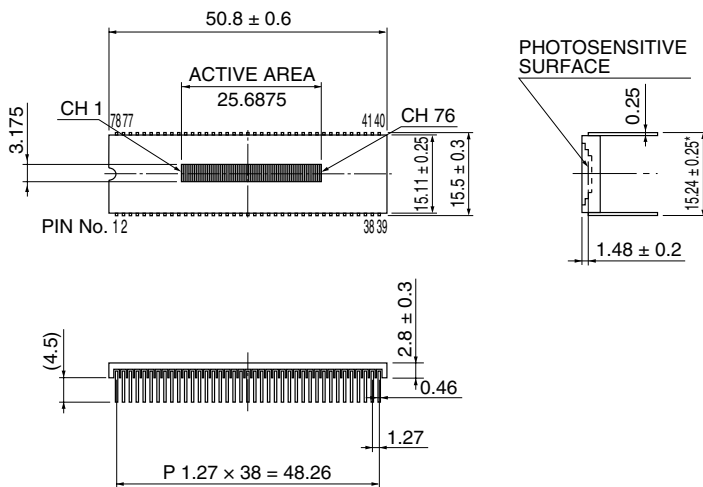
KMPDB0131EA

■ Terminal capacitance vs. reverse voltage



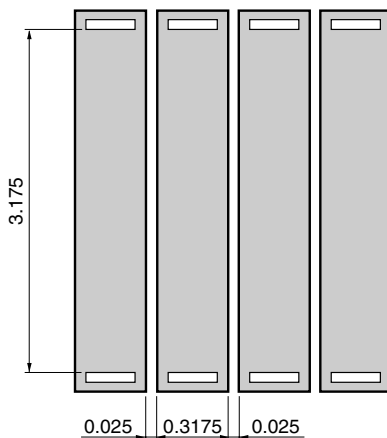
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■ Dimensional outline (unit: mm)



KMPDA0115EA

■ Details of elements (unit: mm)



KMPDA0116EA

■ Pin connection

Pin No.	Element No.	Pin No.	Element No.
1	KC	40	KC
2	2	41	75
3	4	42	73
4	6	43	71
5	8	44	69
6	10	45	67
7	12	46	65
8	14	47	63
9	16	48	61
10	18	49	59
11	20	50	57
12	22	51	55
13	24	52	53
14	26	53	51
15	28	54	49
16	30	55	47
17	32	56	45
18	34	57	43
19	36	58	41
20	38	59	39
21	40	60	37
22	42	61	35
23	44	62	33
24	46	63	31
25	48	64	29
26	50	65	27
27	52	66	25
28	54	67	23
29	56	68	21
30	58	69	19
31	60	70	17
32	62	71	15
33	64	72	13
34	66	73	11
35	68	74	9
36	70	75	7
37	72	76	5
38	74	77	3
39	76	78	1

HAMAMATSU

HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Hamamatsu City, 435-8558 Japan, Telephone: (81) 053-434-3311, Fax: (81) 053-434-5184, <http://www.hamamatsu.com>

U.S.A.: Hamamatsu Corporation, 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218

Germany: Hamamatsu Photonics Deutschland GmbH, Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49) 08152-3750, Fax: (49) 08152-2658

France: Hamamatsu Photonics France S.A.R.L.: 8, Rue du Saule Trappu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: 33-(1) 69 53 71 00, Fax: 33-(1) 69 53 71 10

United Kingdom: Hamamatsu Photonics UK Limited, 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44) 1707-294888, Fax: (44) 1707-325777

North Europe: Hamamatsu Photonics Norden AB, Smidesvägen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741

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