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SILICON SENSOR GmbH

Avalanche Photodiodes
High Speed PIN Diodes
UV-Blue PIN Diodes

Quadrant Diodes
Position Sensing
Custom Arrays

SERIES AD

AVALANCHE PHOTODIODES

PART NO	Active Area		Breakdown Voltage		C _T	I _d	Responsivity	Gain	Risettime(pS)	N.E.P.	PACKAGE
	Dia(mm)	Area (mm ²)	V	dv/dt(%/C							
			V	dv/dt(%/C	pF	nA	850nm(A/W)	Min		W/Hz ^{1/2}	
AD230	0.23	0.042	160	0.4	2	0.6	0.45	200	180	1 X 10 ⁻¹⁴	TO52i
AD500	0.50	0.196	160	0.4	3	2	0.45	200	280	3 X 10 ⁻¹⁴	TO52i
AD500NF	0.50	0.196	160	0.4	2.5	2	0.45	200	280	2 X 10 ⁻¹⁴	TO18
AD800	0.80	0.500	160	0.4	5	4	0.45	100	700	4 X 10 ⁻¹⁴	TO5i
AD1100	1.13	1.00	160	0.4	10	6	0.45	100	1ns	8 X 10 ⁻¹⁴	TO5i
AD1900	1.95	3.00	160	0.4	20	10	0.45	100	1.3ns	1.5 X 10 ⁻¹³	TO5i
AD2500	2.52	5.00	150	0.4	40	20	0.45	100	2ns	3 X 10 ⁻¹³	TO5i

SERIES -2

UV ENHANCED PHOTODIODES

PART NO	Active Area		Responsivity (A/W)		Shunt Resistance		Capacitance(pF)		Dark Current(nA)		Risettime(uS)	N.E.P.	PACKAGE
	Dia(mm)	Area (mm ²)	200nm	340nm	10mV(MOhms)	5V	5V	5V	5V	5V			
												W/Hz ^{1/2}	
BL1-2	1.13	1	-	0.4	2000		30		0.2	0.5		8 X 10 ⁻¹⁵	TO5
BL2-2	1.60	2	-	0.4	2000		45		0.4	0.8		9 X 10 ⁻¹⁵	TO5
BL5-2	2.52	5	-	0.4	1000		90		1	1.5		1 X 10 ⁻¹⁴	TO5
BL10-2	3.57	10	-	0.4	500		120		1	2.5		1.2X 10 ⁻¹⁴	TO5
BL20-2	5.05	20	-	0.4	100		170		2	3.5		1.4 X 10 ⁻¹⁴	TO8
BLS33-2	5.5x6.1	33	0.1	0.4	100		270		2	2		1.6 X 10 ⁻¹⁴	Ceramic Flat Pack
BL50-2	7.98	50	0.1	0.4	70		300		5	6		1.8 X 10 ⁻¹⁴	Plastic Flat Pack,BNC
BL100-2	11.28	100	0.1	0.4	40		450		10	10		2.2 X 10 ⁻¹⁴	Plastic Flat Pack, BNC

SERIES -4

LOW SERIES RESISTANCE PHOTODIODES

PART NO	Active Area		Responsivity (A/W)		Series Resistance		Capacitance(nF)		Dark Current(nA)		Risettime(uS)	N.E.P.	PACKAGE
	Dia(mm)	Area (mm ²)	850nm		Ohms		0V		5V				
												W/Hz ^{1/2}	
PDQ30-4	5.4x5.4	30		0.6	<10		30		0.2	0.25		5 X 10 ⁻¹⁴	TO8
PD100-4	11.30	100		0.6	<10		45		0.4	0.5		2 X 10 ⁻¹³	BNC

SERIES -5

HIGH SPEED EPITAXIAL PIN PHOTODIODES

PART NO	Active Area		Responsivity (A/W)		Shunt Resistance		Capacitance(pF)		Dark Current(nA)		Risettime(nS)	N.E.P.	PACKAGE
	Dia(mm)	Area (mm ²)	850nm		MOhms @ 10mV		0V	20V	20V	20V			
												W/Hz ^{1/2}	
PDQ .25-5	.5x.5	0.25		0.5	200		6	1.8	0.5	0.4		6 x 10 ⁻¹⁵	TO18
PDQ 3.6-5	1.9x1.9	3.60		0.5	200		9	20	2	3		5 x 10 ⁻¹⁵	TO5
PDQ 11.9-5	3.45x3.45	11.90		0.5	200		180	40	3	5		1 x 10 ⁻¹³	TO5

SERIES -6

LOW DARK CURRENT PIN DIODES

PART NO	Active Area		Responsivity (A/W)		Shunt Resistance		Capacitance(pF)		Dark Current(nA)		Risettime(nS)	N.E.P.	PACKAGE
	Dia(mm)	Area (mm ²)	900nm		10mV(MOhms)		0V	10V	10V	10V			
												850nm	
PD1-6	1.13	1	0.62		>2000		40	3	0.05	10		6.5 x 10 ⁻¹⁵	TO18
PD2-6	1.60	2	0.62		>2000		50	5	0.1	12		1 x 10 ⁻¹⁴	TO5
PD5-6	2.52	5	0.62		>2000		90	10	0.25	13		1.5 x 10 ⁻¹⁴	TO5
PD10-6	3.57	10	0.62		1500		150	18	1	20		2.9 x 10 ⁻¹⁴	TO5
PD20-6	5.05	20	0.62		750		220	35	2	25		4 x 10 ⁻¹⁴	TO8
PD50-6	7.98	50	0.62		300		480	100	5	30		6.5 x 10 ⁻¹⁴	Plastic Flat Pack,TO8S
PD70-6	9.44	70	0.62		250		650	130				8 x 10 ⁻¹⁴	Plastic Flat Pack,BNC
PD100-6	11.28	100	0.62		150		900	170	10	40		1 x 10 ⁻¹³	Plastic Flat pack,BNC

SERIES -7

LOW CAPACITANCE PIN PHOTODIODES

PART NO	Active Area		Responsivity (A/W)		Capacitance(pF)		Dark Current(nA)		Risettime (nS)		Risettime (nS)	N.E.P.	PACKAGE
	Dia(mm)	Area (mm ²)	@ 900nm	@ 1100nm	12V	80V	12V	80V	12V	80V			
												850nm	
PD1-7	1.13	1	0.62	0.2	2		1		40			1 x 10 ⁻¹⁴	TO52i
PD5-7	2.52	5	0.62	0.2	5		1		80			2 x 10 ⁻¹⁴	TO5
PD10-7	3.57	10	0.62	0.2	10		1		90			3 x 10 ⁻¹⁴	TO5
PD20-7	5.05	20	0.62	0.2	20		2		100			4 x 10 ⁻¹⁴	TO8
PD50-7	7.98	50	0.62	0.2	35		0.5		60			3 x 10 ⁻¹⁴	TO8S
PDH50-7	7.98	50	0.62	0.2	35	20	0.5	2		20		3 x 10 ⁻¹⁴	TO8S
PDS80-7	8x10	80	0.62	0.2	45		5		45			5 x 10 ⁻¹⁴	Ceramic Flat Pack
PD100-7	11.28	100	0.62	0.2	80		10		200	20		6 x 10 ⁻¹⁴	Plastic Flat Pack
PDS200-7	10x20	200	0.62	0.2	140		2		60			6 x 10 ⁻¹⁴	Ceramic Flat pack
PDHS200-7	10x20	200	0.62	0.2	140	65		4	60	25		6 x 10 ⁻¹⁴	Ceramic Flat Pack

SERIES -WS

WAVELENGTH SELECTIVE

PART NO	Active Area		Responsivity (A/W)		Capacitance(nF)		Dark Current(nA)		Risettime (nS)		Spectral resolution	PACKAGE
	Size(mm)	Area (mm ²)	550nm	890nm	0V	0V	5V		D1 @0V	D2 @ 0V		
					Diode 1 Diode 2							
WS 7.56	2.75 x 2.75	7.56	0.2	0.45	1	0.1	10		10	1	.01nm	TO5
WS 7.56i	2.75 x 2.75	7.56	0.2	0.45	1	0.1	2		10	1	.01nm	TO5i

POSITION SENSING

PART NO	Active Area		Responsivity (A/W)		Capacitance(pF)		Dark Current(nA)		Risettime (uS)		Position Error%	Resolution(um)	PACKAGE
	Dim(mm)	Area (mm ²)	@ 633nm	@ 850nm	10V		10V		10V				
EL3.5-7	3.5 x 1	3.5	0.4	0.62	7		5		0.2		0.2	0.05	Ceramic

EL6-7	6 x 1	6	0.4	0.62	10	5	0.2	0.2	0.05	Ceramic
TL100-4	10 x 10	100	0.34	0.57	40	50	6	1	0.5	U1
DL16-7	4 x 4	16	0.4	0.62	15	30	.5/1	1	0.06	Ceramic
DL100-7	10 x 10	100	0.4	0.62	75	50	3	1	0.15	Ceramic
DL400-7	20 x 20	400	0.4	0.62	350	800	4	1	0.3	Ceramic

QUADRANT ARRAYS

PART NO	Active Area		Responsivity (A/W)	Capacitance(pF)	Dark Current(nA)	Risetime (nS)	Gap(um)	Breakdown	PACKAGE
	Dia(mm)	Area (mm ²)	@ 633nm	10V	10V	10V		Voltage	

Differential

DP3.22-6	.7 x 2.3	1.6	0.45	20	0.3	30	50	15	TO5i
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Quadrant

QP4.16-6	1.1 x 1.1	4.16	0.45	15	0.3	60	50	15	TO5
QP50-6	7.8	50	0.45	70	5	40	42	15	U1
QP100-6	11.2	100	0.45	130	10	50	50	15	U1