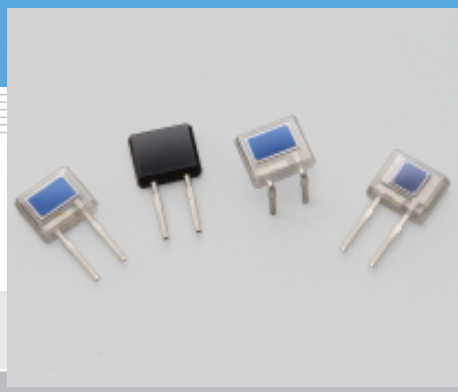


Si PIN photodiode S8385/S8729 series

SIP plastic package



S8385/S8729 series is a family of large area Si PIN photodiodes molded into a miniature plastic SIP package (75 % smaller in cubic volume than conventional types). Also available are lead forming types that save space when mounted on a PC board.

Features

- Small plastic package: $4 \times 4.8 \times 1.8^{\dagger}$ mm
- 2-pin SIP lead type (lead length: 4.9 mm)
- High sensitivity, high speed response
- 2 types of spectral response characteristics available
S8385, S8729, S8729-10: for visible to infrared range ($\lambda=320$ to 1100 nm)
S8385-04, S8729-04: for infrared ($\lambda=760$ to 1100 nm)
- Lead forming type also available (S8729-10)
- Active area
S8385 series: 2×2 mm
S8729 series: 2×3.3 mm

Applications

- Barcode scanners
- Spatial light transmission
- Optical switches
- Laser radar, etc.

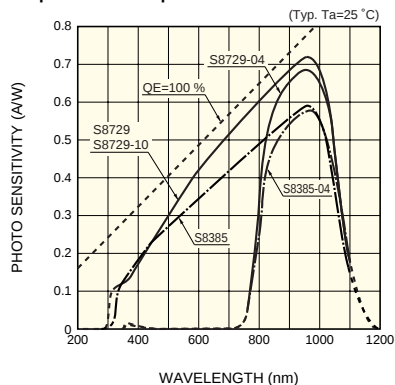
General ratings / Absolute maximum ratings

Type No.	Dimensional outline	Package	Active area size (mm)	Effective active area (mm ²)	Absolute maximum ratings			
					Reverse voltage V _R Max. (V)	Power dissipation P (mW)	Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
S8385	①	Plastic	2 × 2	4	20	50	-25 to +85	-40 to +100
S8385-04			2 × 3.3	6.6				
S8729								
S8729-04								
S8729-10	②							

Electrical and optical characteristics

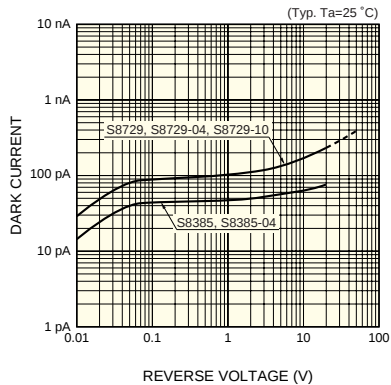
Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λ_p (nm)	Photo sensitivity S (A/W)				Short circuit current I_{sc} 100 lx (μ A)	Dark current I_D VR=5 V		Temperature coefficient of I_D TCID (times/° C)	Cut-off frequency fc VR=5 V λ =780 nm RL=50 Ω -3 dB (MHz)	Terminal capacitance Ct VR=5 V f=1 MHz (pF)	NEP λ = λ_p (W/Hz ^{1/2})	
			λ_p	660 nm	780 nm	830 nm		Typ. (nA)	Max. (nA)					
S8385	320 to 1100	960	0.56	0.4	0.48	0.5	4.2	0.1	1.0	1.15	25	12	1.0×10^{-14}	
S8385-04	760 to 1100			-	-	0.44	2.8						1.1×10^{-14}	
S8729	320 to 1100		0.68	0.7	0.45	0.55	0.6	7.5	0.2			2.0	16	1.1×10^{-14}
S8729-04	760 to 1100			-	-	0.52	5	1.2×10^{-14}						
S8729-10	320 to 1100			0.7	0.45	0.55	0.6	7.5						1.1×10^{-14}

■ Spectral response



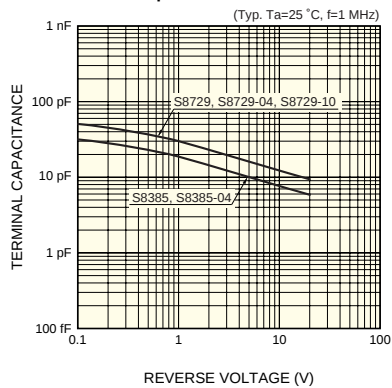
KPINB0271EB

■ Dark current vs. reverse voltage



KPINB0273EA

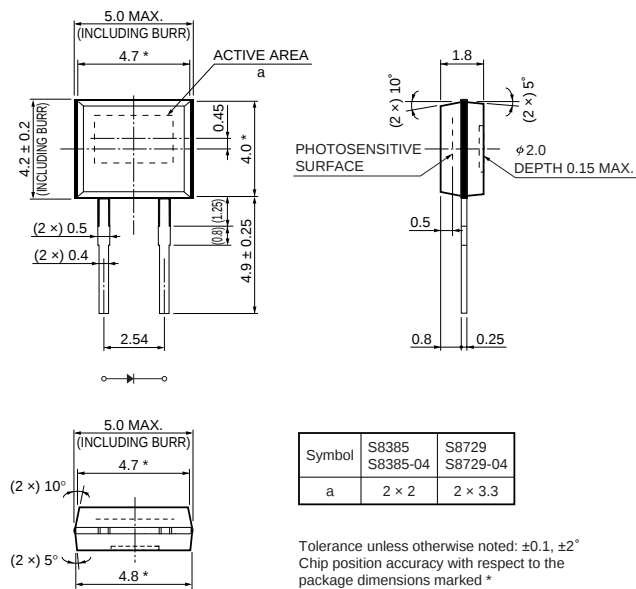
■ Terminal capacitance vs. reverse voltage



KPINB0272EA

■ Dimensional outlines (unit: mm)

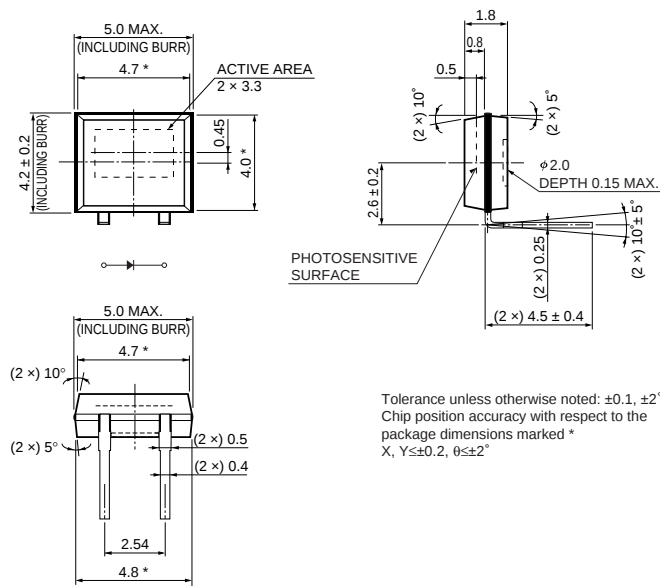
S8385, S8385-04, S8729, S8729-04



Tolerance unless otherwise noted: ± 0.1 , $\pm 2^\circ$
Chip position accuracy with respect to the
package dimensions marked *
X, Y $\leq\pm 0.2$, $\theta\leq\pm 2^\circ$

KPINA0090EA

S8729-10



Tolerance unless otherwise noted: ± 0.1 , $\pm 2^\circ$
Chip position accuracy with respect to the
package dimensions marked *
X, Y $\leq \pm 0.2$, $\theta \leq 2^\circ$

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