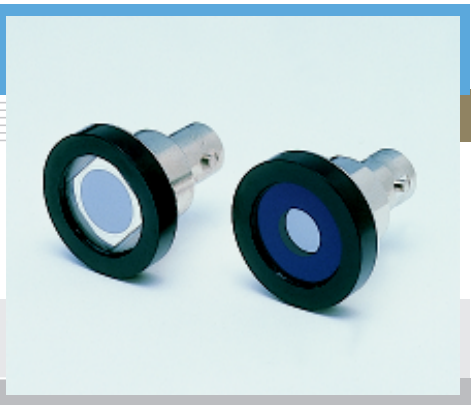

Si photodiode
S2281 series

Si photodiode with BNC connector

S2281 series is Si photodiodes sealed in a metal package with a BNC connector. This configuration allows easy connection to Hamamatsu C9329 photosensor amplifier (S2281-01 has a large terminal capacitance which may cause a gain peaking to occur when C9329 is used with the gain set to the "M" range.). Two different spectral response characteristics are provided and the large active area makes S2281 series well suited for optical power meters. A variant type S9219 with a visual compensation filter is also available.
Hamamatsu also provides E2573 BNC-BNC coaxial cable (length: 1 m) as an option.

Features

- Metal package with BNC connector
- High sensitivity
- High reliability

Applications

- Analytical instruments
- Optical measurement equipment

■ General ratings

Parameter	S2281	S2281-01	S2281-04	Unit
Active area size	φ11.3	φ11.3	φ7.98	mm
Active area	100	100	50	mm^2
Package	Metal package with BNC connector			-
Window material	Quartz glass			-

■ Absolute maximum ratings

Parameter	Symbol	S2281	S2281-01	S2281-04	Unit
Reverse voltage	V_R Max.	5			V
Operating temperature	Topr	-10 to +60			°C
Storage temperature	Tstg	-20 to +70			°C

■ Electrical and optical characteristics (Ta=25 °C, unless otherwise noted)

Parameter	Symbol	Condition	S2281			S2281-01			S2281-04			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ		-	190 to 1100	-	-	190 to 1000	-	-	190 to 1100	-	nm
Peak sensitivity wavelength	λp		-	960	-	-	720	-	-	960	-	nm
Photo sensitivity	S	λ=200 nm	0.10	0.12	-	0.10	0.12	-	0.10	0.12	-	A/W
		λ=λp	-	0.5	-	-	0.36	-	-	0.5	-	
Short circuit current	Isc	100 *lx*	64	80	-	32	40	-	32	40	-	μA
Dark current	ID	V_R=10 mV	-	50	500	-	6	300	-	50	500	pA
Shunt resistance	Rsh	V_R=10 mV	20	200	-	30	1700	-	20	200	-	MΩ
Rise time	tr	V_R=0 V R_L=1 kΩ	-	3	-	-	7	-	-	3	-	μs
Terminal capacitance	Ct	V_R=0 V f=10 kHz	-	1300	-	-	3200	-	-	1300	-	pF
Noise equivalent power	NEP	V_R=0 V, λ=λp	-	1.8×10^{-14}	-	-	8.6×10^{-15}	-	-	1.8×10^{-14}	-	$W/Hz^{1/2}$

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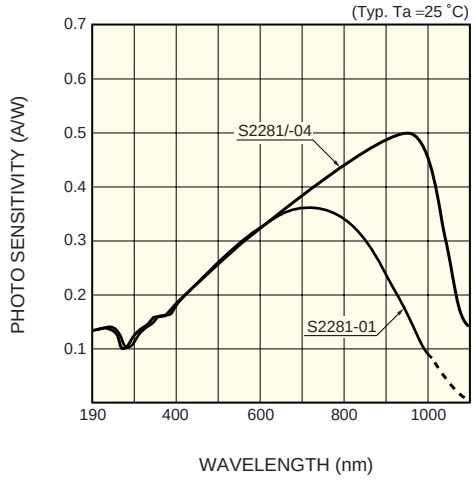
■ Spectral response



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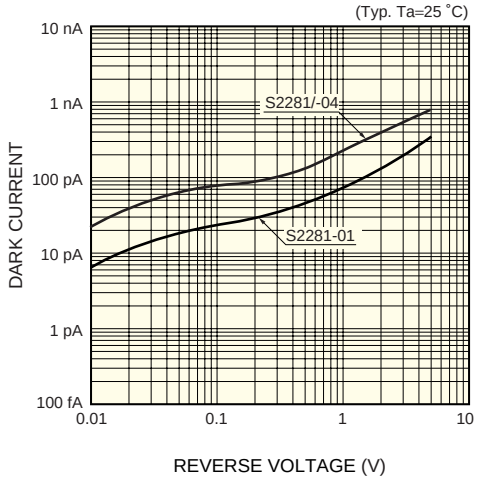
■ Dark current vs. reverse voltage



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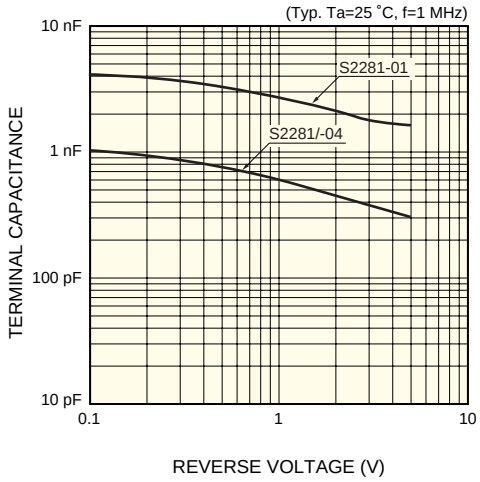
■ Terminal capacitance vs. reverse voltage



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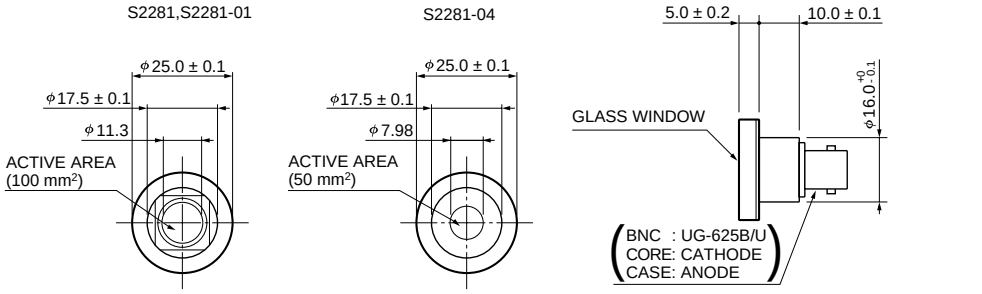
■ Dimensional outlines (unit: mm)



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