NEW

MODULE

PSD signal processing circuit
C9068, C9069

Digital output for connection with PC



C9068 (for one-dimensional PSD) and C9069 (for pin-cushion type two-dimensional PSD) are DC signal processing circuits specifically designed for position measurement using PSD. Digital output allows direct connection with a personal computer through a serial (RS-232C) interface. C9068 and C9069 are capable of detecting accurate positions of a spot light regardless of light intensity.
A D/A conversion signal is also output for monitoring, and when a voltmeter is connected to this D/A conversion output, the output voltage value directly represents position data. (Output voltage represents the distance from the center of PSD. 1 V=1 mm)

Features

- Digital output
- Serial (RS-232C) connection with PC
- D/A conversion signal output for monitoring
- Easy handling due to single +12 V supply operation
- No complicated adjustment required

Applications

- Displacement measurement using PSD
- Testing using PSD
- PSD performance evaluation

■ Absolute maximum ratings

Parameter	Symbol	Value	Unit
Supply voltage	Vcc Max.	+18	V
Operating temperature *1	Topr	0 to +40	°C
Storage temperature *1	Tstg	-10 to +60	°C

*1: No condensation

■ Electrical and optical characteristics (Ta=25 °C, Vcc=+12 V)

Parameter		Symbol	Min.	Typ.	Max.	Unit
Conversion impedance		Tz	-	1×10^5	-	V/A
Feedback capacitance		Cf	-	100	-	pF
Input signal current *2	C9068	I_{IN}	1×10^{-5}	-	9×10^{-5}	A
	C9069		1×10^{-5}	-	9×10^{-5}	A
Signal conversion time *3		Tr	5	-	-	ms
Digital output format		-	Conforms to RS-232C (position signal, light level monitor output) 12-bit			-
D/A conversion output amplitude		Vo	-10	-	+10	V
Supply voltage		Vcc	+9	+12	+18	V
Current consumption		Icc	-	200	-	mA

*2: Photocurrent Isc (total input signals) from PSD mounted on the C9068 or C9069 circuit board.
*3: Output response time versus spot light position change.

■ Combination with PSD

The following PSDs can be used by soldering the PSD leads to the through-hole terminals on the circuit board.
NOTE) PSDs sold separately.

PSD signal processing circuit	Compatible PSD	
	Type	Type No.
C9068	One-dimensional PSD	S3979 *4, S3931, S3932, S1352, S3270 *4
C9069	Pin-cushion type two-dimensional PSD	S1880, S1881 *4, S2044, S5990-01 *5, S5991-01 *5

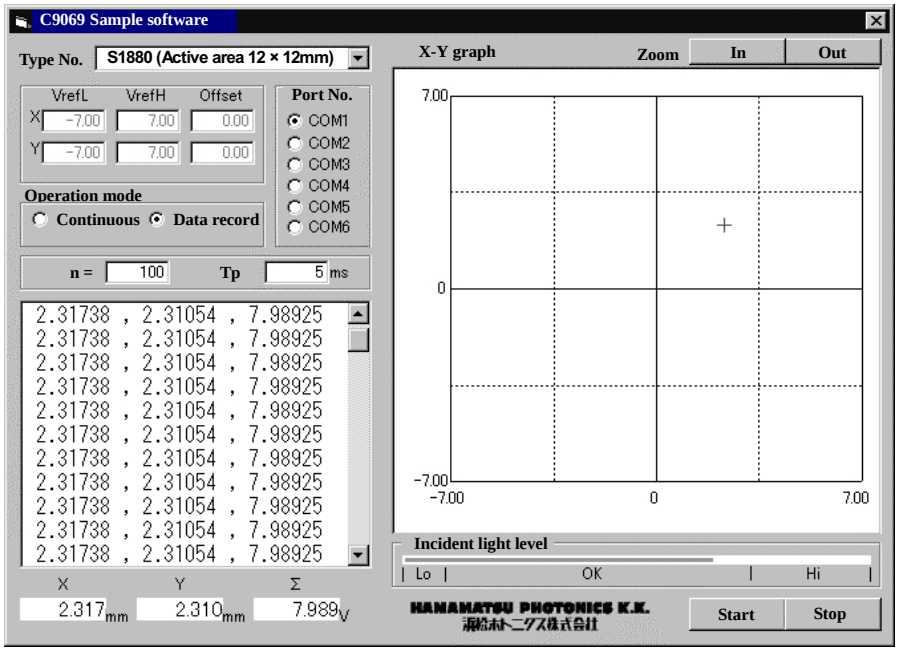
*4: These PSDs cannot be directly mounted on the circuit board. Connect to the through-hole terminals at the edge of the circuit board by external wiring.
*5: An attachment board should be used.

PRELIMINARY DATA
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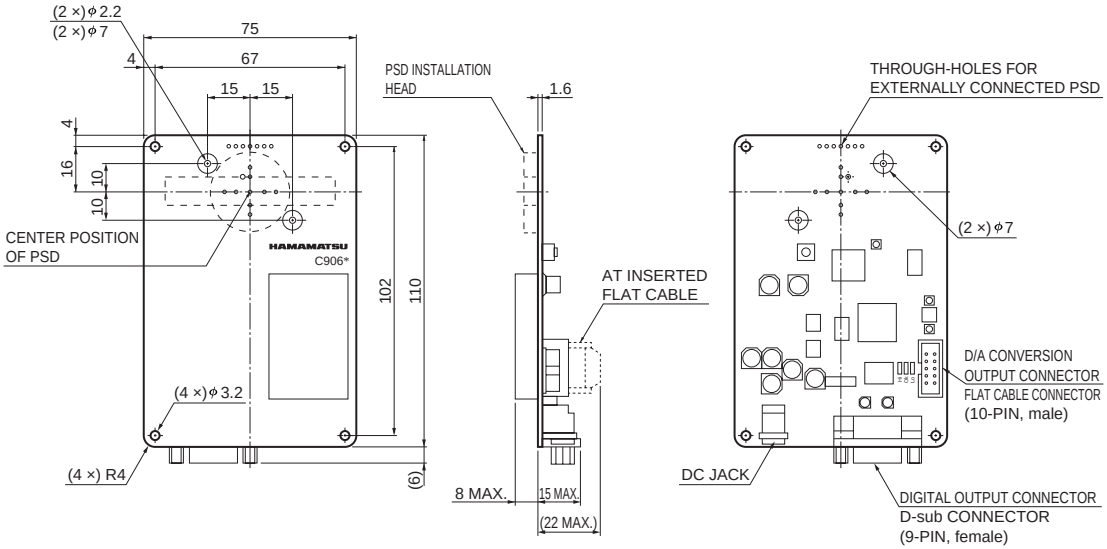
SOLID STATE DIVISION

■ Accessory sample software display example (C9069)

Position data is displayed in numerical values and graphs.
OS: Windows 98SE



■ Dimensional outline (unit: mm)



KACCA0118EB

■ Accessories

- Dedicated AC adapter
- Sample software (CD-ROM)
- Flat cable (48 cm) with connector for D/A conversion signal output
- Attachment board for S5990-01/S5991-01 (C9069 only)

NOTE) RS-232C cable (straight) not supplied.

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