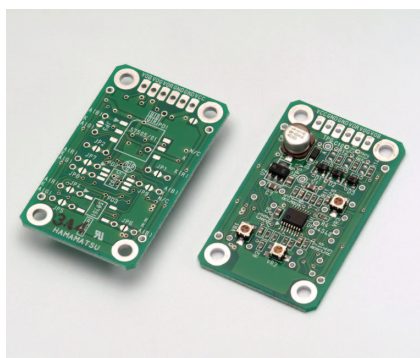




C9331

Color sensor evaluation circuit board

The C9331 is an evaluation circuit board specifically designed for Hamamatsu color sensors. A 3-channel current-to-voltage conversion amplifier is mounted that converts each of RGB photocurrent into voltage signals for output.

Features

- ➔ 3 ch current-to-voltage conversion amplifier for color sensor evaluation
- ➔ Color sensors that mount on C9331:
S7505-01, S9032-02 (optional)

Applications

- ➔ Evaluation of Hamamatsu color sensor

Absolute maximum ratings (Ta=25 °C)

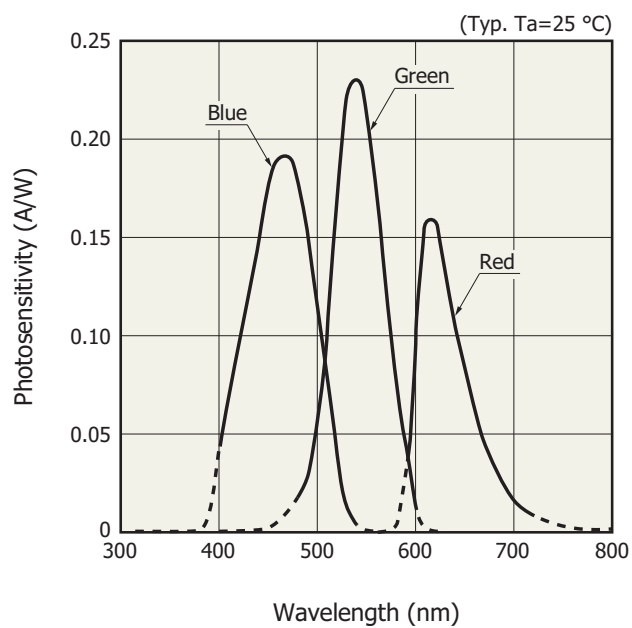
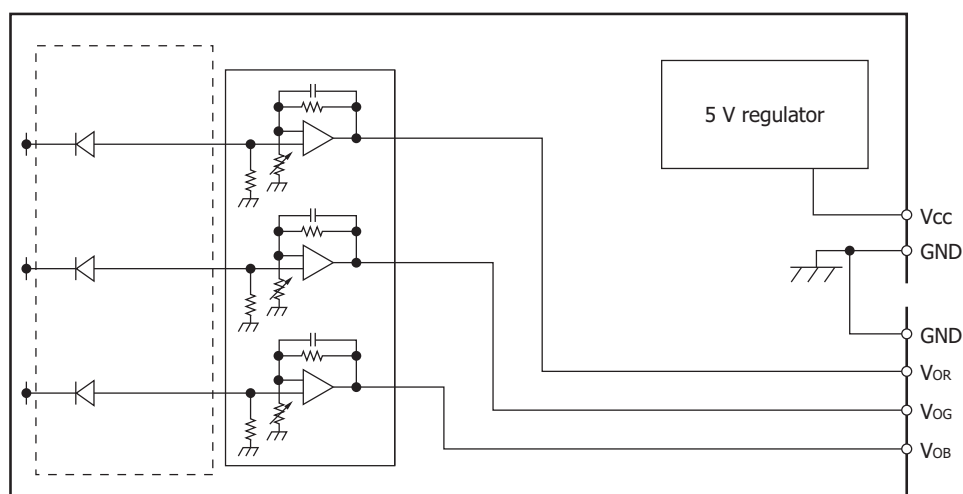
Parameter	Symbol	Value	Unit
Supply voltage	Vcc max.	15	V
Operating temperature	Topr	+10 to +40	°C
Storage temperature	Tstg	-10 to +50	°C

Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

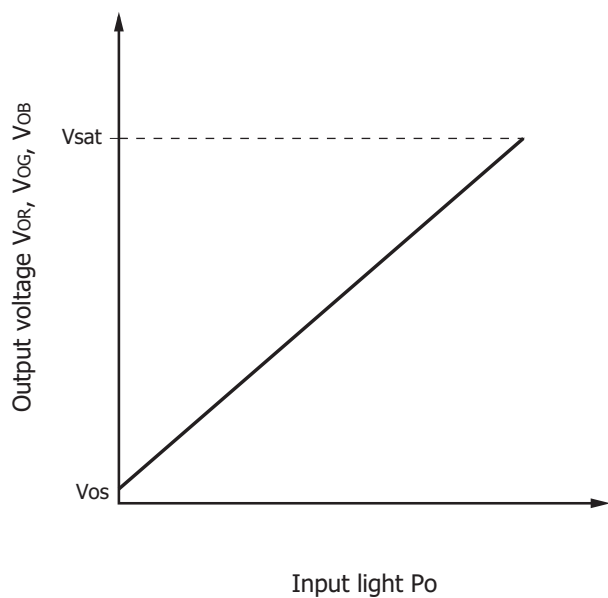
Electrical and optical characteristics (Ta=25 °C, Vcc=9.0 V, common to each RGB channel)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating supply voltage	Vcc		7	9	15	V
Output voltage	VOR, VOG, VOB	Zt=5.1 × 10 ⁵ V/A*	0.95	1.00	1.05	V
Saturation output voltage	Vsat	RI ≥ 100 kΩ	4.6	-	5.35	V
Output offset voltage	Vos	Zt=5.1 × 10 ⁵ V/A Without photodiode	-	±40	±50	mV
Trans-impedance adjustment range	Zt		-	1 × 10 ⁵ to 5.1 × 10 ⁵	-	V/A
Input current range	Is	Zt=1 × 10 ⁵ V/A	-	0.5 to 48	-	μA
		Zt=5.1 × 10 ⁵ V/A	-	0.1 to 9.4	-	
Output impedance	Zo		-	510	-	Ω
Amplifier bandwidth	B	Without photodiode	-	DC to 14	-	kHz

* Output obtained when reference current Iref=1.96 μA is injected between the photodiode connection terminals. Zt can be increased by rotating VR1 to VR3 clockwise.

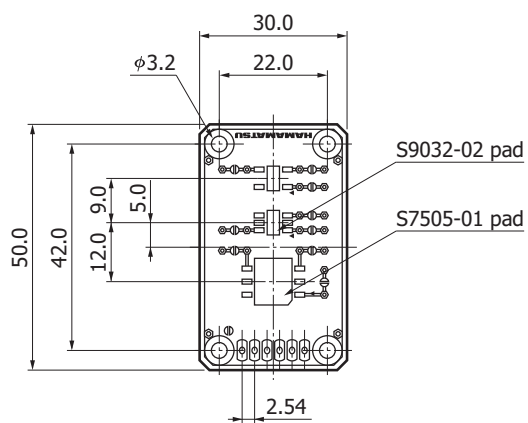
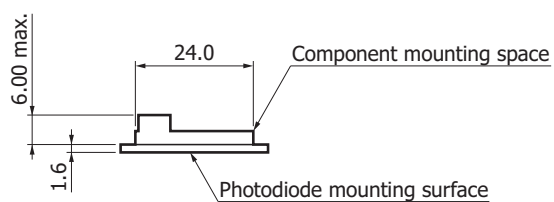
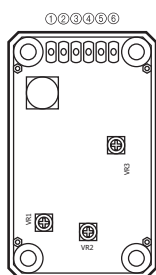
Spectral response (S9032-02)**Block diagram**

Output voltage vs. input light (output example)



KACCC0200EA

Dimensional outline (unit: mm)



- ① Vcc
- ② GND
- ③ GND
- ④ V_{OR}
- ⑤ V_{OG}
- ⑥ V_{OB}

KACCA0128EB

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

- Precautions
- Disclaimer

Information described in this material is current as of October 2017.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use. Copying or reprinting the contents described in this material in whole or in part is prohibited without our prior permission.

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