HAMAMATSU

HIGH VOLTAGE POWER SUPPLY SOCKET ASSEMBLY WITH TRANSIMPEDANCE AMPLIFIER C6271

The C6271 is a high voltage power supply socket assembly for 28 mm (1-1/8 inch) diameter side-on photomultiplier tubes(PMT), incorporating a regulated high voltage power supply, an active voltage divider, and a transimpedance amplifier. It enables simple yet stable PMT operations by only supplying +15 Vdc and connecting to a potentiometer or a 0 to +5 V for high voltage adjustments.

FEATURES

- **Fast High Voltage Programming Response**
- **Low Power Consumption**
- **Wide High Voltage Output Range**
- **Low Cost**

● GENERAL

Parameter	Description / Value	Unit
Applicable PMT	28 mm(1-1/8 inch) diameter side-on types	–
Input Voltage	+15 ± 1	Vdc
Input Current at Maximum High Voltage	60	mA Max.
Operating Temperature	0 to +50	°C
Storage Temperature	-20 to +60	°C

● HIGH VOLTAGE POWER SUPPLY SECTION

Parameter	Description / Value	Unit
Output Voltage Range	0 to -1250	Vdc
Line Regulation Against ± 1 V Input Change	±0.01	% Typ.
Ripple/Noise in High Voltage Output	0.008	% p-p Typ.
High Voltage Control	0 to +5 V or external 50 kΩ potentiometer	–
High Voltage Programming Response ⓐ	80	ms Typ.
Temperature Coefficient of High Voltage Output	± 0.01	%/°C Typ.

NOTE: ⓐ For 0 to 99 % high voltage change

● TRANSIMPEDANCE AMPLIFIER SECTION

Parameter	Value	Unit
Current to Voltage Conversion Factor	0.3	V/ μA
Maximum Linear Signal Output Voltage	+13(Anode Current=43 μA)	V Typ.
Bandwidth	DC to 10	kHz
Signal Output Offset Voltage	-0.3 to +0.3	mV Typ.
Induced Ripple on Signal Output	2	mVp-p Typ.
Load Resistance	2	kΩ Min.

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Figure 1: High Voltage Controlling Characteristic

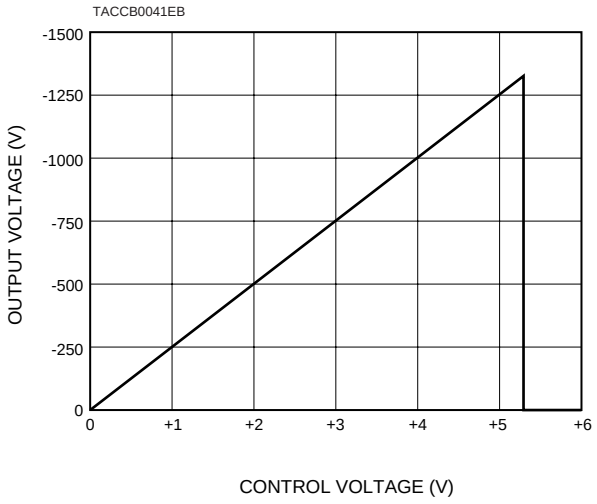


Figure 2: Schematic Diagram

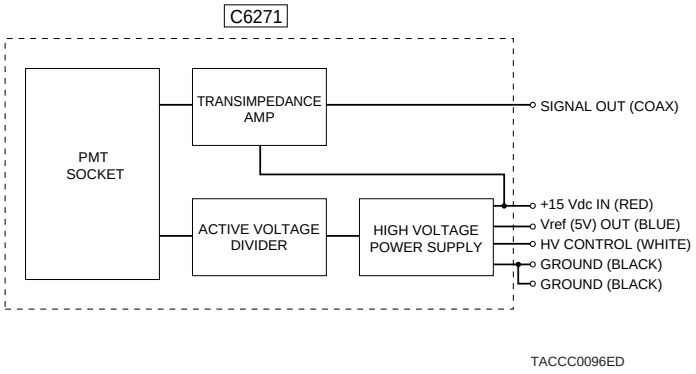
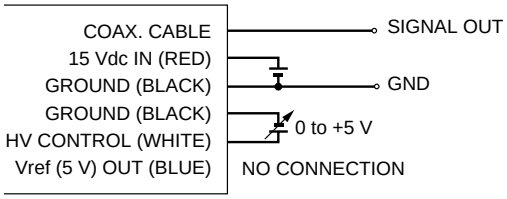
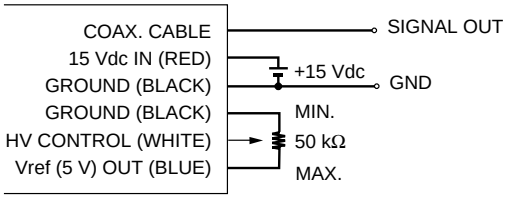


Figure 3: Wire Connection

● By external voltage



● By external potentiometer



• The case is internally connected to black (GND) wires.
• Two black wires are internally connected.

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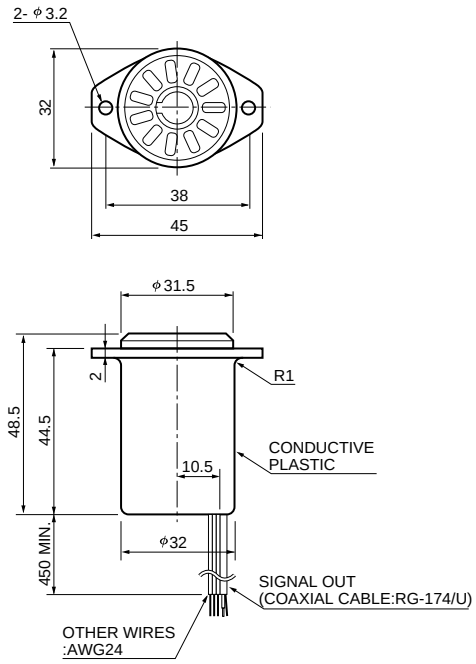
Figure 4: Dimensional Outlines (Unit: mm)



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HAMAMATSU

HAMAMATSU PHOTONICS K.K., Electron Tube Center
314-5, Shimokanzo, Toyooka-village, Iwata-gun, Shizuoka-ken, 438-0193 Japan, Telephone:(81)539/62-5248, Fax:(81)539/62-2205

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone:(1)908-231-0960, Fax:(1)908-231-1218
Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone:(49)8152-375-0, Fax:(49)8152-2658
France: Hamamatsu Photonics France: S.A.R.L.: 8, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone:(33)1 69 53 71 00, Fax:(33)1 69 53 71 10
United Kingdom: Hamamatsu Photonics UK Limited: Lough Point, 2 Gladbeck Way, Windmill Hill, Enfield, Middlesex EN2 7JA, United Kingdom, Telephone:(44)181-367-3560, Fax:(44)181-367-6384
North Europe: Hamamatsu Photonics Norden AB: Färögatan 7, S-164 40 Kista, Sweden, Telephone:(46)8-703-29-50, Fax:(46)8-750-58-95
Italy: Hamamatsu Photonics Italia S.R.L.: Via della Moia, 1/E 20020 Arese, (Milano), Italy ,Telephone: (39)2 935 81 733 Fax: (39)2 935 81 741

TACC1011E03
MAY. 1998 SI
Printed in Japan (500)