

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 <sup>Ⓐ</sup>	80	ms Typ.
Temperature Coefficient of High Voltage Output	± 0.01	%/°C Typ.

**NOTE:** <sup>Ⓐ</sup> 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.

# HIGH VOLTAGE POWER SUPPLY SOCKET ASSEMBLY WITH TRANSIMPEDANCE AMPLIFIER C6271

Figure 1: High Voltage Controlling Characteristic

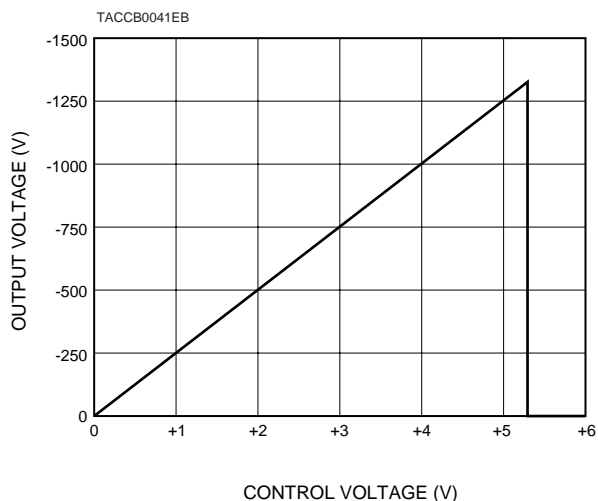


Figure 2: Schematic Diagram

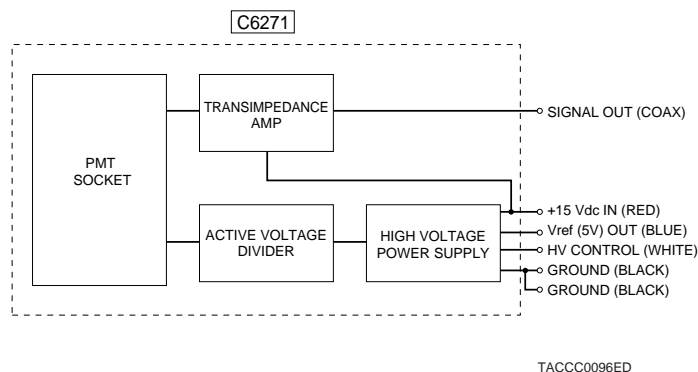
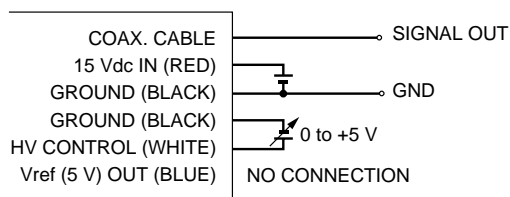
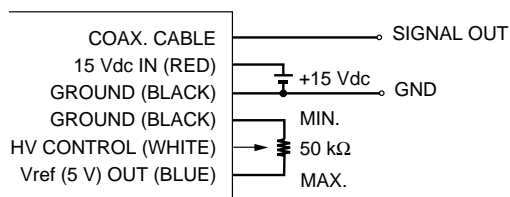


Figure 3: Wire Connection

● By external voltage

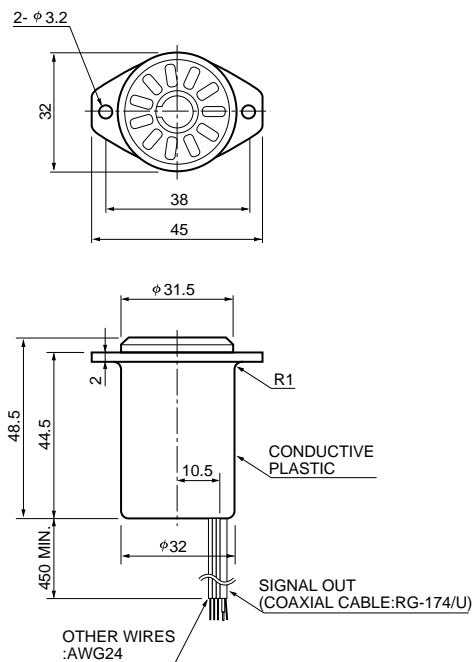


● By external potentiometer



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

Figure 4: Dimensional Outlines (Unit: mm)



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## HAMAMATSU

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TACC1011E03

MAY, 1998 SI

Printed in Japan (500)