

PHOTOMULTIPLIER TUBE

TYPE: H10966A

COLLEGE OF WILLIAM & MARY

QUANTITY: 1 pce.

Serial Number	(1) Cathode Luminous Sens. μ A/lm	(2) Anode Luminous Sens. A/lm	(3) Anode Dark Current nA	(4) Cathode Blue Sens. Index	(5) Gain $\times 10^5$		
ZK0249	78.7	24.5	0.10	11.40	0.31		

NOTES

(1) (2) (4) Light source: Tungsten filament lamp operated at 2856 K.
(2) (3) (5) Overall supply voltage: 1000 V

Voltage distribution:

K Dy1 Dy2 Dy3 ... Dy7 Dy8 GR P
1 1 1 1 1 1 1 0.5

Measured as one anode output by bundling all 64 anodes.

(4) Measured with a Corning CS 5-58 blue filter (half stock thickness).

(1) (2) (4) (5) Aperture size: 49 mm

Date: May 8, 2014

Approved by: *K. Nagura*

Anode Uniformity of H10966A

Supply Voltage : -1000 v
 Light Source : W-Lamp with blue filter (DC Light)
 Spot Illumination : 6 mm square on each channel

Serial No. : ZK0249

Ratio of Anode Output = 1 : 1.4

P1 73	P2 77	P3 80	P4 88	P5 91	P6 91	P7 82	P8 74
P9 78	P1 78	P1 81	P1 83	P1 83	P1 89	P1 88	P1 84
P1 76	P1 76	P1 80	P2 78	P2 79	P2 83	P2 87	P2 86
P2 76	P2 75	P2 79	P2 80	P2 82	P3 84	P3 86	P3 89
P3 76	P3 74	P3 77	P3 83	P3 85	P3 86	P3 90	P4 88
P4 80	P4 76	P4 80	P4 81	P4 86	P4 88	P4 93	P4 88
P4 86	P5 83	P5 89	P5 95	P5 98	P5 100	P5 93	P5 87
P5 71	P5 73	P5 79	P6 89	P6 89	P6 88	P6 83	P6 71

Top View

FLAT PANEL TYPE MULTIANODE PHOTOMULTIPLIER TUBE ASSEMBLY

H10966 SERIES

《HANDLING PRECAUTION》

【Take sufficient care to avoid electrical shock】 **Warning**

Negative high voltage is applied to the photomultiplier tube assembly and the metal side wall. Although the side wall is protected by the insulating tape, always provide adequate safety measures to prevent the operator or service personnel from receiving an electrical shock or equipment from being damaged.

【Handle the tube assemblies with extreme care】 **Warning**

Photomultiplier tubes are vacuum devices. Allowing the glass or the side wall to be scratched or subjected to shock can cause cracks. Use the screw hole located on the back side of the device for fixing the products position. If the side wall must be used to fix the position, pressure should be applied to the entire surface of the wall. Avoid any pressure applied locally (such as set screws). The connector pins can be damaged if they are bent. Connectors should be aligned as carefully as possible. Remove connectors gradually to avoid any force perpendicular to the pins. Do not modify any part of the product.

【Keep faceplate and connectors clean】

Do not touch the faceplate or the connectors with bare hands. Dirt and fingerprints on the faceplate can cause loss of optical transmittance and dirt or grime on the connectors may cause ohmic leakage. Should they become soiled, clean using alcohol.

【Do not expose to strong light】

Do not expose the photocathode of the photomultiplier tubes to excessive light such as sunlight. If exposed, noise will increase and photocathode sensitivity will deteriorate. No light shield is installed to the back side of the product, therefore, it is possible for light to penetrate from the back which may reach to the photocathode causing an increase in noise as background. Apply a light shield if needed.

【Cautions for Storage and Disposal】

Storage temperature range: -15 °C to +50 °C

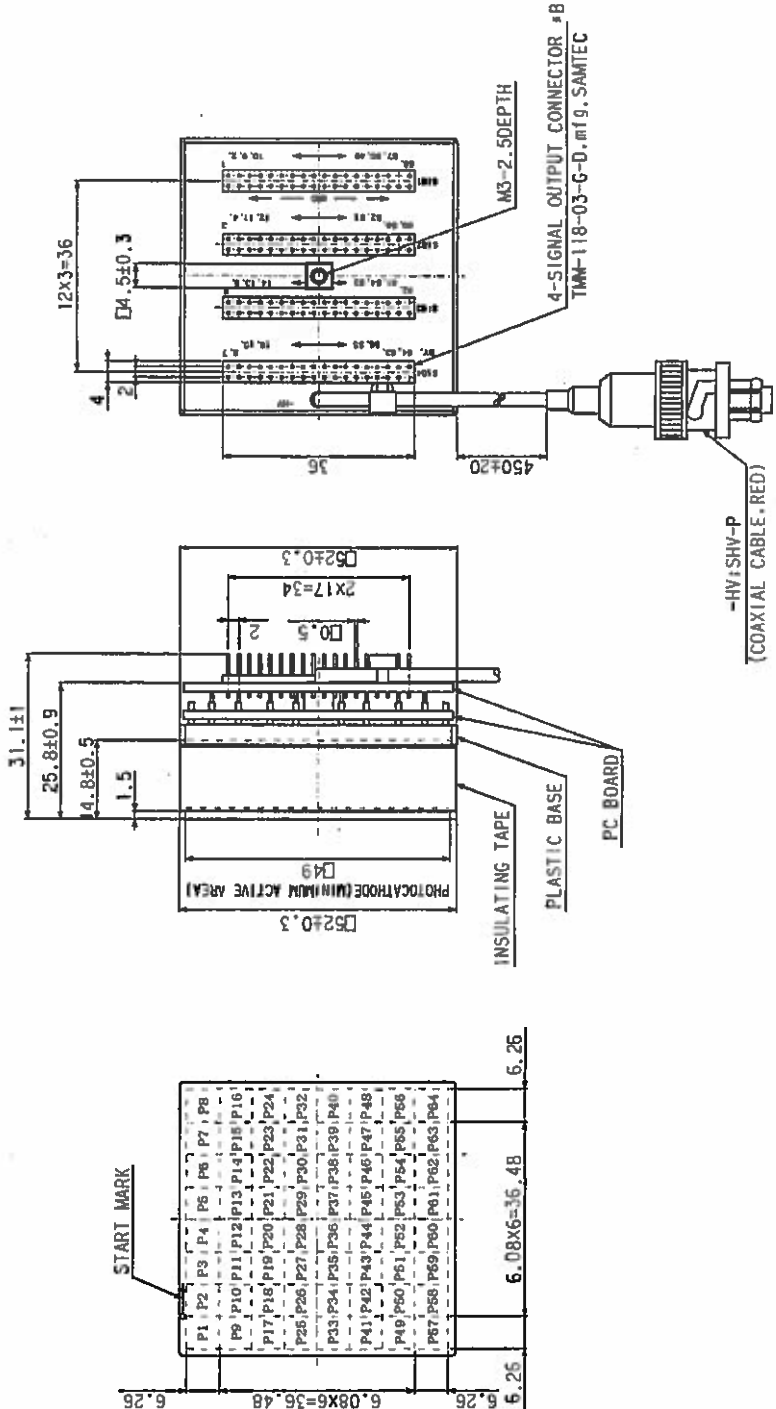
Recommended storage humidity range: less than 60 % (No condensation)

The material in H10966 contains lead. Please follow the applicable regulations regarding disposal of hazardous materials and industrial wastes in your country, state, region, or province.

CONNECTION FOR SIGNAL CONNECTORS
(BOTTOM VIEW)

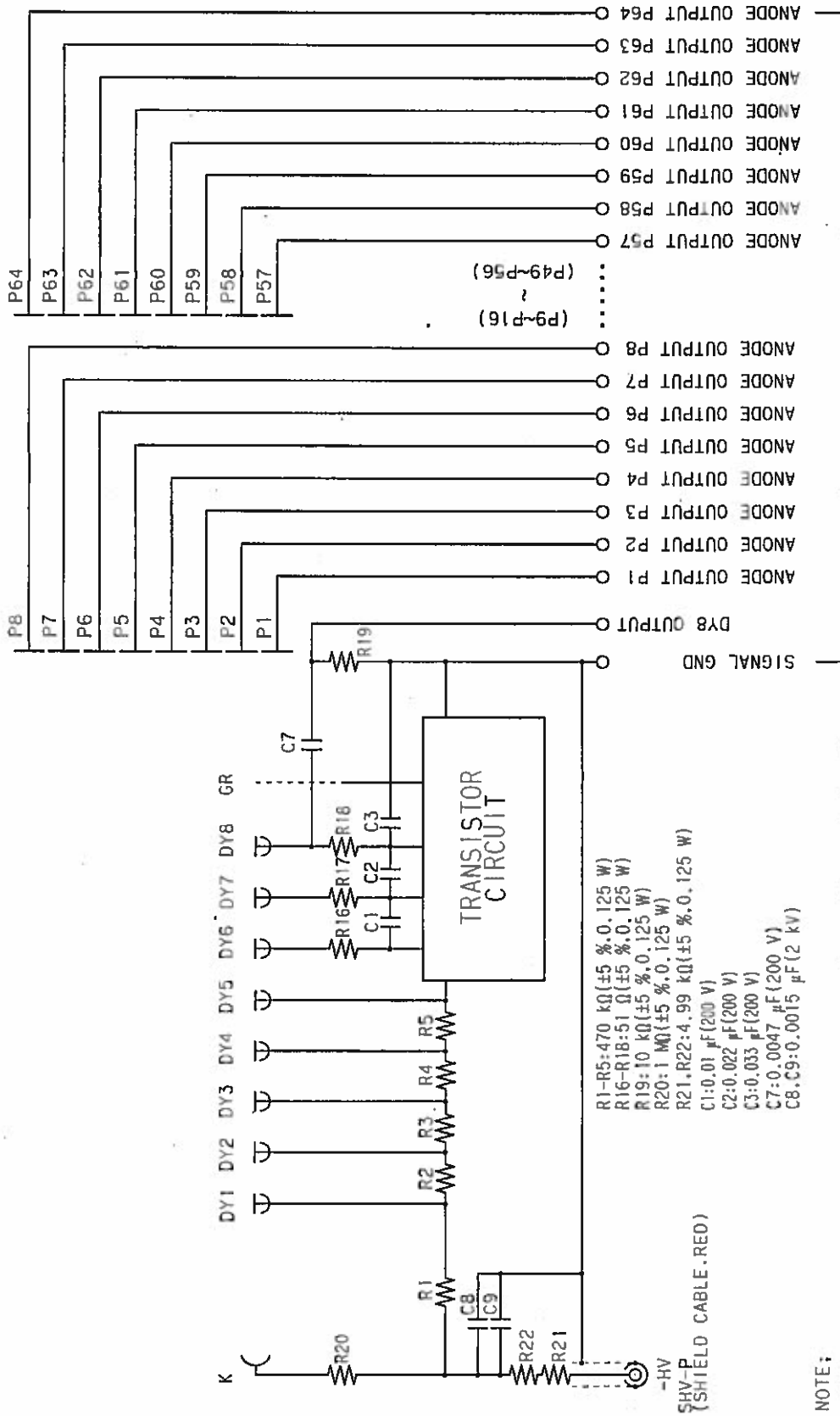
GND P7	GND P5	GND P3	GND P1
GND P8	GND P6	GND P4	GND P2
GND P15	GND P13	GND P11	GND P9
GND P16	GND P14	GND P12	GND P10
GND P23	GND P21	GND P19	GND P17
GND P24	GND P22	GND P20	GND P18
GND P31	GND P29	GND P27	GND P25
GND P32	GND P30	GND P28	GND P26
GND P39	GND P37	GND P35	GND P33
GND P40	GND P38	GND P36	GND P34
GND P47	GND P45	GND P43	GND P41
GND P48	GND P46	GND P44	GND P42
GND P55	GND P53	GND P51	GND P49
GND P56	GND P54	GND P52	GND P50
GND P63	GND P61	GND P59	GND P57
GND P64	GND P62	GND P60	GND P58
GND DVB	GND #A	GND #A	GND #A
#A GND	GND #A	GND #A	GND #A

NOTE #A: POLARIZED POSITION OF OMITTED PIN.
#B: SUITABLE SOCKETS FOR THE CONNECTORS WILL BE ATTACHED.



UNIT: mm

DIMENSIONAL OUTLINE
H10966A, H10966A-100



- R1-R5: 470 kΩ (±5 % 0.125 W)
- R16-R18: 51 Ω (±5 % 0.125 W)
- R19: 10 kΩ (±5 % 0.125 W)
- R20: 1 MΩ (±5 % 0.125 W)
- R21, R22: 4.99 kΩ (±5 % 0.125 W)
- C1: 0.01 μF (200 V)
- C2: 0.022 μF (200 V)
- C3: 0.033 μF (200 V)
- C7: 0.0047 μF (200 V)
- C8, C9: 0.0015 μF (2 kV)

NOTE:
 DIVIDER RATIO (K: DY1: DY2: ... : DY7: DY8: GR: P) = 1: 1: 1: ... : 1: 1: 1: 0.5
 DIVIDER CURRENT = 245 μA at -1100 V (MAX)

4-(DOUBLE-ROW 2 mm Pitch)CONNECTOR

VOLTAGE DIVIDER CIRCUIT

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