

Superior Sensitivity Imaging Device for Visible Region GaAsP Photocathode: QE...45 % (Typ.) at 530 nm and Low Noise

FEATURES

- Superior Sensitivity in Visible Region
Quantum Efficiency(Typ.)..... 45 % at 530 nm
- High Resolution(Typ.)..... 50 Lp/mm
- Gating Operation..... 5 ns (Minimum gate width)
- Low Noise/ EBI (Typ.)..... 3×10^{-12} Im/cm²
- High SN Ratio (by filmless MCP)

APPLICATIONS

- Bio-imaging for Fluorescence or Luminescence
- Shutter Cameras
- Time Resolved Low-light-level Imaging
(with image sensors such as CCD, etc.)
Microscopes, Low-light-level TV, etc.



GENERAL

Parameter	Description/Value	Unit
Spectral Response	280 to 720	nm
Peak Wavelength	530	nm
Photo-cathode	Material	GaAsP
	Minimum Effective Area	16 × 16
Input Window Material	Borosilicate glass	—
Index of Refraction (at 588 nm)	1.49	—
MCP ^(A)	1 stage	—
Output Window Material ^(A)	Fiber optic plate	—
Phosphor Screen	Material ^(A)	P43
	Minimum Effective Area	16 × 16
Case Material	Poly Oxy Methylene (POM)	—
Lead Wire Cover	Teflon	—
Operating Ambient Temperature	-20 to +40	°C
Storage Temperature	-55 to +65	°C
Weight	Approx. 120	g

NOTE: ^(A) Please refer to "SELECTION GUIDE BY SUFFIX NUMBER".
Variety of options are available for any applications.

RATINGS

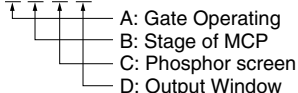
Parameter	Min.	Typ.	Max. ^(C)	Unit	
Supply Voltage	Photocathode to MCPin ^(B)	150	200	230	V
	MCPin to MCPout ^(B)	600	1000	1010	V
	MCPout to Phosphor Screen ^(B)	5000	6000	6100	V

NOTE: ^(B) The maximum and recommended supply voltage are noted on the test data sheet when the product is delivered.
Please refer to the test data sheet for these values.

^(C) Absolute maximum values.

SELECTION GUIDE BY SUFFIX NUMBER

V9501 U - 74 - A B C D



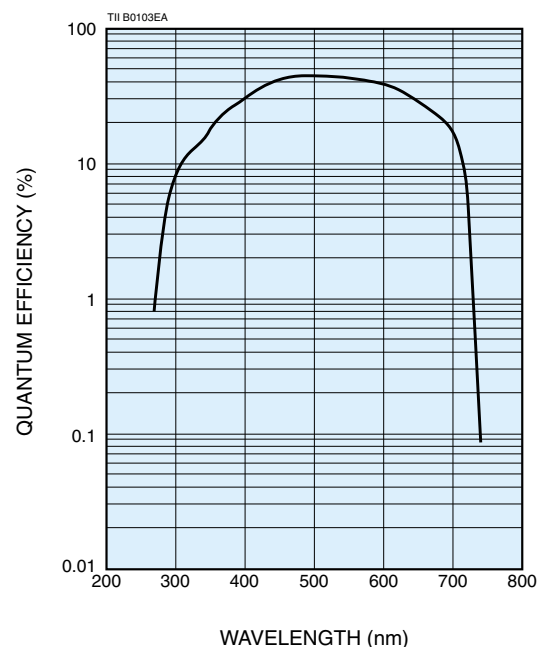
Suffix No.	Gate Type
N	Non-Gate
G	Gateable (5 ns)

Suffix No.	Stage of MCP
1	1
2	2
3	3

Suffix No.	Phosphor Screen
1	P11
3	P43
4	P24
6	P46
7	P47

Suffix No.	Output Window
0	Fiber Optic Plate
1	Fiber Optic Plate with Transparent Conductive Coating
2	Borosilicate Glass

Figure 1: Typical Spectral Response



PROXIMITY FOCUSED IMAGE INTENSIFIER V9501U-74-G130

CHARACTERISTICS

Parameter		Min.	Typ.	Max.	Unit
Photocathode	Luminous Sensitivity	400	700	—	$\mu\text{A/lm}$
	Radiant ^(A)	—	192	—	mA/W
	Quantum Efficiency ^(A)	—	45	—	%
Light Gain	Luminous Gain	1.0×10^4	2.2×10^4	—	$(\text{lm/m}^2)/\text{lx}$
	Radiant Emittance Gain ^(A)	—	1.4×10^4	—	$(\text{W/m}^2)/(\text{W/m}^2)$
EBI	Luminous	—	3.0×10^{-12}	3.0×10^{-11}	lm/cm^2
	Radiant ^(A)	—	8.0×10^{-15}	—	W/cm^2
Limiting Resolution		40	50	—	Lp/mm
Response Time (Gate Width)		5	—	—	ns

NOTE: (A) At peak wavelength.

Figure 2: Typical Luminous Gain and EBI vs. MCP Voltage

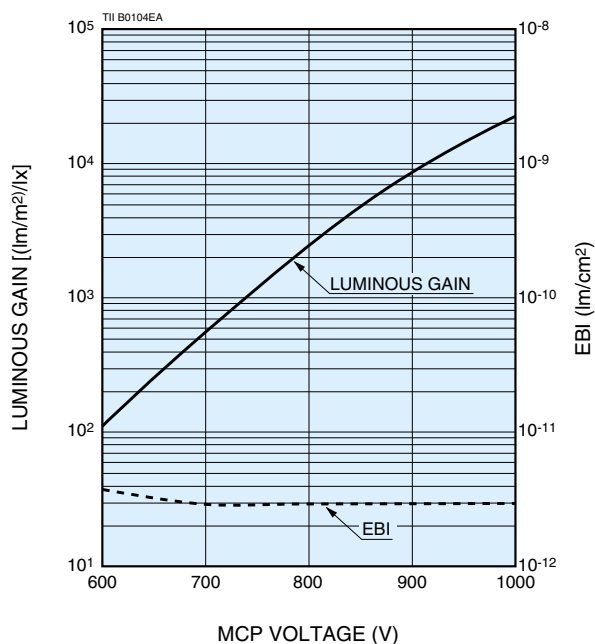


Figure 3: Photocathode Illuminance vs. Phosphor Screen Luminous Emission

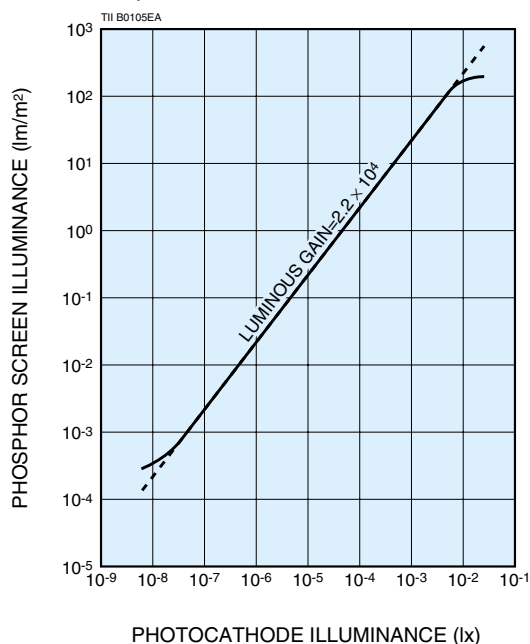
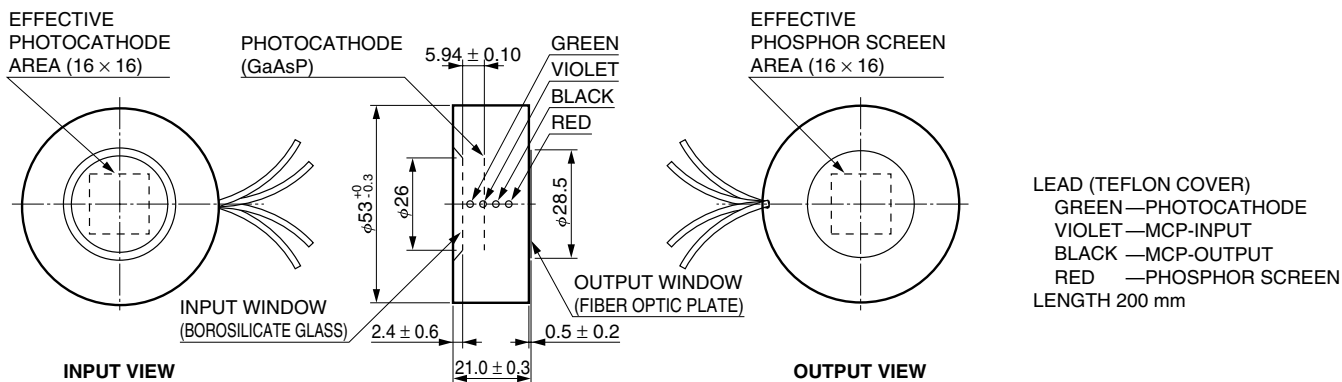


Figure 4: Dimensional Outline (Unit: mm)



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