

# PRODUCT SPECIFICATION - MODEL 549-109

ELECTROSTATIC IMAGE DISSECTOR

#### PHYSICAL CHARACTERISTICS

I.

Focusing: Deflection: Dynodes: Overall length (unpotted): Major diameter (unpotted): Photocathode (area): Window material:

Cathode type: Aperture size: Typical weight (unpotted): Electrostatic Electrostatic 14; focussed, CuBe (See Figure 4) 5 5/8 inches (See Figure 4) 1 5/8 inches 7/8 inch diameter Fiber optic, 15 µ diameter N.A. 1.0 typical Semitransparent, bi-alkali To be determined (note 1) 250 grams

			Note	Minimum	Typical	Maximum	Units
II.	PHOTOCA CHARACT	THODE	2				
	Quantum Typical Cathode	a efficiency (Q) at 4100 Å spectral response uniformity	11	10	14 25		% SeeFigl %
111.	CHARACI	PERISTICS					
	Acceler Deflect Lineari Cathode	ating voltage ion sensitivity ty distortion separation for a	3 4 6		750 .001 1.05	•	V in/V %
	rejection ratio of: 200				.035		Inches
	Multipl gain c	ier yoltage for a of 10	9		1900	2200	v
•	Anode d (DC) a	lark current at 10 gain	5,7		5.0x10 <sup>-1</sup>	2 1x10 <sup>-11</sup>	A
	Anode Uniformity		8		30		%
							0 0
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EMR DIVISION OF WESTON INSTRUMENTS, INC • A SCHLUMBERGER COMPANY	
PRODUCT SPECIFICATION - MODEL 549-109	
ELECTROSTATIC IMAGE DISSECTOR	•
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Note Minimum Typical Maxim	um Units
IV. MAXIMUM RAIINGS	
Supply voltage 400	v
Temperature 10 85	oC
Anode current [9,10] [ 10	<u> </u>
V. ENVIROMENTAL	
$-40^{\circ}$ C to $+85^{\circ}$ C	
NOTES:	
1. The determined aperture size referred to photocathode.	
2. Specified characteristics are determined by the combination photocathode spectral response and the spectral transmiss characteristics of the faceplate.	on of .on
그는 것 같은 것 같	
3. The deflection voltage required for a given deflection is directly proportional to the accelerating voltage. The s	ated
.001 deflection sensitivity implies a .001" displacement (of an electron image at the aperture) per deflection vol- when "the accleerating potential is 750 volts.	
4. The linearity/distortion figure is determined by the foll relationship: $\frac{V_a/A}{A_b/B}$	wing
where $A_a$ and $V_b$ are the deflection voltages corresponding points on the faceplate at separation of A and B respecti from the electrical center. The measurement is made alon an axis for the worst case condition over the center 0.6 inch diameter.	to rely J
5. This characteristic is dependent upon the aperture size. stated values are for a .040 inch square aperture.	The
6. A black mask in optical contact with the faceplate is ori with one edge along an electrical scan axis in such a man as to mask one half the photocathode area. The photocath is illuminated with collimated blue light, and the anode	ented her ode
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### PRODUCT SPECIFICATION - MODEL 549-109

ELECTROSTATIC IMAGE DISSECTOR

NOTES: (Cont'd)

signal is monitored as the axis perpendicualr to the mask edge is scanned from the illuminated to the non-illuminated half of the photocathode. If  $I_s$  is the anode signal from the illumination portion, then the position on the photocathode corresponding to a signal level of 0.5I is defined as the reference position corresponding to the mask edge. The equivalent cathode separation distance (deflection voltage times deflection sensitivity) for a rejection ratio of 200 can be determined from the deflection voltage required to attenuate the anode signal to .5  $I_s$ 

200

- Dark current and background count rate are measured at 20<sup>o</sup>C after suitable aging in dark.
- 8. The anode uniformity shall not vary more than 30% from maximum when a .010 diameter spot originating at any area of the .6 effective cathode is swept over the electron aperture.

9. Recommended maximum average anode current is 1/4A.

 Absolute maximum rating, prolonged exposure at maximum ratings will result in permanent changes.

11. Cathode uniformity, when a .01 inch diameter light spot is scanned across the .6 effective photocathode shall not vary more than 25% from maximum. The tube is connected in a diode configuration for this measurement.

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PRODUCT SPECIFICATION - MODEL 549-117 Rev. ELECTROSTATIC IMAGE DISSECTOR

#### I. PHYSICAL CHARACTERISTICS

Focusing: Deflection: Dynodes: Overall length (potted): Major diameter (potted): Photocathode diameter (Effective): Window material:

Cathode type: Aperture size: Typical weight (potted): Electrostatic Electrostatic 14; focussed, CuBe 7-1/2 inches 2-7/8 inches

1/2 inch
Fiber optic, 15µ diameter
N.A. 1.0 (typical)
Semitransparent, tri-alkali
.010 in. (Note 1)
800 grams

		Note	Minimum	Typical	Maximum	Units
II.	PHOTOCATHODE CHARACTERISTICS	2				
	Quantum efficiency (Q) at 4100 Å		10	15		%
	tivity Typical spectral response			.050		A/W See Fig.1
III.	OPERATING CHARACTERISTICS					
	Accelerating voltage Deflection voltage	3		750 600		V V/kv - in
	Linearity/distortion Cathode separation for a	4		1.03	1.05	
	$\begin{array}{c} \text{rejection ratio of: } 10\\ 10^2 \end{array}$			.010 .020		in. in.
	Multiplier voltage for a gain of 10 <sup>6</sup>			2600	3000	V See Fig.2
	Anode dark current (DC) at 10 <sup>6</sup> gain	5,7		5.0×10-12	10-11	A
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PRODUCT SPECIFICATION - MODEL 549-117 Rev. ELECTROSTATIC IMAGE DISSECTOR

Background count rate

Anode uniformity

IV. MAXIMUM RATINGS

Supply voltage Temperature Anode current

Note	Minimum	Typical	Maximum	Units
5,7,		2	10	counts
9		15	25	%
11 10			4500 60 100	ν °c μΑ

V. ENVIRONMENTAL

Vibration: Random Sinusoidal Temperature: See Note 12 5,g, 20 to 2000 Hz -7°C to 60°C

#### NOTES:

- The aperture size referred to photocathode and shape will be determined by the particular application for which the device is intended. Aperture diameters down to 0.001 inch can be provided.
- 2. Specified characteristics are determined by the combination of photocathode spectral response and the spectral transmission characteristics of the faceplate.
- 3. The deflection voltage required for a given deflection is directly proportional to the accelerating voltage.
- 4. The linearity/distortion figure is determined by the following × relationship:

$$v_a/A$$
  
 $v_b/B$ 

where  $V_a$  and  $V_b$  are the deflection voltages corresponding to points on the faceplate at separation of A and B respectively from the electrical center. The measurement is made along an axis for the worst case condition over the center 0.5 inch diameter.

5. This characteristic is dependent upon the aperture size. The stated values are for a 0.010 inch circular aperture.

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PRODUCT SPECIFICATION - MODEL 549-117 Rev. ELECTROSTATIC IMAGE DISSECTOR

#### NOTES: (Cont'd)

- 6. A black mask in optical contact with the faceplate is oriented with one edge along an electrical scan axis in such a manner as to mask one half the photocathode area. The photocathode is illuminated with collimated blue light, and the anode signal is monitored as the axis perpendicular to the mask edge is scanned from the illuminated to the non-illuminated half of the photocathode. If  $I_s$  is the anode signal from the illumination portion, then the position on the photocathode corresponding to a signal level of 0.5  $I_s$  is defined as the reference position corresponding to the mask edge. The equivalent cathode separation distances (deflection voltage times deflection sensitivity)ccorresponding to the  $10^{-1}$   $I_s$  and  $10^{-2}$   $I_s$  points are defined as the 10 and  $10^2$  rejection ratio separation distances respectively.
- Dark current and background count rate are measured at 20°C after suitable aging in dark.
- 8. A pulse height discriminator level of e/4 is used where e is the average single electron pulse height.
- 9. The anode non-uniformity is measured in the pulse counting mode with the entire photocathode uniformly illuminated with 4200 Å radiation. The non-uniformity is defined as

Maximum count rate - Minimum count rate x 100% Maximum count rate

for the worst case condition over the center 0.5 inch diameter of the photocathode.

- 10. Recommended maximum average anode current is 1 µA.
- 11. Absolute maximum rating, prolonged exposure at maximum ratings will result in permanent changes.
- 12. Random Vibration

10 - 35 cps @ +6 db/oct 35 - 700 cps @ 0.0705 g<sup>2</sup>/cps 700 - 900 cps @ -18 db/oct 900 - 2000 cps @ 0.015 g<sup>2</sup>/cps

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EMR DIVISION OF WESTON INSTRUMENTS, INC • A SCHLUMBERGER COMPANY PRODUCT SPECIFICATION - MODEL 549-126 Rev. ELECTROSTATIC IMAGE DISSECTOR Ι. PHYSICAL CHARACTERISTICS Focusing: Electrostatic Deflection: Electrostatic Dynodes: • 14; focussed, CuBe Overall length (potted): 7-1/2 inches Major diameter (potted): 2-7/8 inches Photocathode (Effective): 6 mm square Window material: Fiber optic, 15µ diameter N.A. 1.0 (typical) Cathode type: Semitransparent: tri-alkali Aperture size: .75 mm square (note 1) Typical weight (potted): 800 grams Note Minimum Typical Maximum Units II. PHOTOCATHODE CHARACTERISTICS 2 Quantum efficiency (Q) at 4100 Å 10 18 % Typical spectral response See Fig.1 III. **OPERATING CHARACTERISTICS** Accelerating voltage 750 V V/kv Deflection voltage 3 600 4 Linearity distortion 2.0 4.0 % Cathode separation for a 6. rejection ratio of: 102 .75 .6 mm  $10^{3}$ 1.50 1.50 mm Multiplier voltage for a 8, gain of 10<sup>6</sup> 12 2600 3000 V Anode dark current (DC) at 10<sup>6</sup> gain 5.0x10-12 1x10-11 5,7 A Background count rate 5,7, 20 90 counts 8 /sec 9 % Anode uniformity +15+25

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PRODUCT SPECIFICATION - MODEL 549-126 Rev.

ELECTROSTATIC IMAGE DISSECTOR

IV. MAXIMUM RATINGS

Supply voltage Temperature Anode current

Note	Minimum	Typical	Maximum	Units
11 10			4500 60 100	ν °c μΑ

V. ENVIRONMENTAL

Temperature:

 $-40^{\circ}C$  to  $+60^{\circ}C$ 

#### NOTES:

- 1. The aperture size referred to photocathode.
- Specified characteristics are determined by the combination of photocathode spectral response and the spectral transmission characteristics of the faceplate.
- 3. The deflection voltage required for a given deflection is directly proportional to the accelerating voltage.

4. Measured as follows: a checked (alternate black & white) 8x8 pattern

.1% accuracy is projected on the photocathode and the potential necessary to deflect to each square is recorded. The linearity is then defined as follows:

Linearity = Largest Voltage Interval-Smallest Voltage Interval x 100% 2 x Average Voltage Interval

- 5. This characteristic is dependent upon the aperture size. The stated values are for a 0.75 mm square aperture.
- 6. A black mask in optical contact with the faceplate is oriented with one edge along an electrical scan axis in such a manner as to mask one half the photocathode area. The photocathode is illuminated with collimated blue light, and the anode signal is monitored as the axis perpendicular to the mask edge is scanned from the illuminated to the non-illuminated half of the photocathode. If  $I_s$  is the anode signal from the illumination portion, then the position on the photocathode corresponding to a signal level of 0.5  $I_s$  is defined as the reference position corresponding to the mask edge. The equivalent cathode separation distances

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PRODUCT SPECIFICATION - MODEL 549-126 Rev.

ELECTROSTATIC IMAGE DISSECTOR

NOTES: (Cont'd)

(deflection voltage times deflection sensitivity) corresponding to the  $10^{-1}$  I<sub>s</sub> and  $10^{-2}$  I<sub>s</sub> points are defined as the 10 and  $10^2$  rejection ratio separation distances respectively.

- Dark current and background count rate are measured at 20°C after suitable aging in dark.
- 8. A pulse height discriminator level of e/4 is used where e is the average single electron pulse height.
- 9. The anode non-uniformity is measured in the pulse counting mode with the entire photocathode uniformly illuminated with 4200 Å radiation. The non-uniformity is defined as

+ <u>Maximum - Minimum</u> x 100% 2 x Average Count Rate

for the worst case condition over the useful area of the photocathode.

- 10. Recommended maximum average anode current is 1 µA.
- 11. Absolute maximum rating, prolonged exposure at maximum ratings will result in permanent changes.
- 12. MCA calibrated to specify electrons/channel. AC gain defined as (elec/chan) x average channel.

MCA = Multichannel Analyzer.

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	PRODUCT SPECIFICATION	I - M(	DEL 549	9-4276A Rev	7.B		
	IMAGE I	DISSEC	CTOR				
I.	PHYSICAL CHARACTERISTICS						
Focusing method:Magnetic (note 8)Deflection method:Magnetic (note 8)Aperture size:.00075 in. diameterNumber and type of dynodes:14; Cu-BeWindow material:7056 glass, flatCathode sensitive area:2.0 in. <sup>2</sup> , 1.6 in. diameterCathode type:Semitransparent, multialkaliMaximum overall diameter:2.3 in.Maximum overall length:12-1/8 inchTypical weight (unpotted):250 grams							
тт	Ουοτος Ατυούε ουλυλοττριςτις	Note	Minimum	Typical	Maximum	Units	
o	Quantum efficiency (Q) at 4100 Å 6300 Å 8000 Å Cathode luminous sensitivity Cathode peak radiant sensi- tivity	1	16 100	20 5 .7 150 .065		% % μa/lm A/W	
III.	Cathode uniformity at 4100 Å Typical spectral response MULTIPLIER CHARACTERISTICS			<u>+</u> 5	<u>+</u> 10	% See Fig.1	
	Voltage required for current amplification (G) of: 104 105 106	1,2		1420 2130 3160		V V V	
	rent amplification of: 10 <sup>4</sup> 10 <sup>5</sup> 10 <sup>6</sup>	1		1.0x10 <sup>-12</sup> 2.0x10 <sup>-12</sup> 4.0x10 <sup>-12</sup>	1.0x10 <sup>-11</sup>	A A A	
IV.	DYNAMIC CHARACTERISTICS	1					
	Horizontal linearity	3		+1.5	+2.0	%	
	Vertical linearity	3		<u>+</u> 1.5	<u>+</u> 2.0	%	
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PRODUCT SPECIFICATION - MODEL 549-4276A Rev. B

IMAGE DISSECTOR

		Note	Minimum	Typical	Maximum	Units
	Resolution at 50% amplitude re- sponse over 1.5 in. diameter circle				а. <sup>с</sup> .	
	Paraxial		1300	1400		TV lines
	Off-axis (dynamic focus)		1100	1200		per in. TV line: per in.
	Shading or anode uniformity over 1.5 in. diameter circle at 4100 Å	-		<u>+</u> 12	<u>+</u> 20	See . Fig. 3 %
	Dynamic range (shades of grey)	4	13	15		Steps
	Signal to noise ratio	5	30	33.6		db
	Cathode current density			10		(See Fig. 4) µa/cm <sup>2</sup>
V.	MAXIMUM RATINGS	6.			. <sup>19</sup> 9	
	Cathode current density	7			30	$\mu a/cm^2$
	Anode current				1	mA
	Ambient temperature				60	°C
	Supply voltage			3	4000	V
VI.	ENVIRONMENTAL	L	n an		2. 4200 - Tool Conservation of Same Space Spac	Sandara and an
	Shock:	20 g	, 11 mill	isecond du	uration	

Vibration:

Temperature:

20 g, 11 millisecond duration

20 g, 20 to 2000 Hz

 $-30^{\circ}$  to  $+60^{\circ}$ C

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PRODUCT SPECIFICATION - MODEL 549-4276A Rev. B IMAGE DISSECTOR

NOTES:

- 1. All data at room temperature =  $20^{\circ}$ C.
- 2. Voltage across multiplier only.
- 3. Measured as follows: an 11 line pattern of .1% linearity is projected onto a 1.5 inch diameter cathode and the current intervals in the deflection coils necessary to go from one line to the next are measured.

Linearity =  $\pm \frac{\text{Largest Interval} - \text{Smallest Interval}}{2 \times \text{Average Interval}} \times 100\%$ 

- 4. Transmission of successive steps on the test slide changes by increments of  $\sqrt{2}$ .
- 5.  $(S/N)_{rms}$  at a cathode current density of 10  $\mu a/cm^2$  and a frequency bandwidth equal to 12.5 k Hz.
- 6. Absolute maximum ratings; prolonged exposure at maximum ratings may result in permanent deterioration of tube performance.
- 7. Averaged over any interval not greater than 10 sec.
- The 549-4276A is designed to utilize the standard 3-inch image orthicon deflection and focus coil assemblies. Custom built coils may be required for specific scan requirements.

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	IMAGE	INTENSIFIER - SEPTE	EXPERI MBER 1	MENTAL SP 968	ECIFICATI	ON			
Ι.	PHYSICAL CHARA	ACTERISTICS							
	FocusingMagneticMaximum overall length (unpotted)2.730 inches max.Typical weight (including permanent magnet)3.0 kilogramsWindow material7056 glassCathode sensitive area40 mm diameterCathode typeSemitransparent trialkaliOutput phosphorP-11 or P-20Output phosphor area40 mm diameter-fiberoptic plate								
7.7	DUOROQUEUODE		Note	Minimum	Typical	Maximum	Units		
	Quantum effici 4100 A	lency (Q) at		15	20		%		
	6300 Å	Lency (Q) at			5		%		
	( $G_k$ ) at 4100	A Rensitivity		.050	.068		A/W		
	Cathode radiar (© <sub>k</sub> ) at 6300	nt sensitivity Å			.025		A/W		
III.	IMAGE TUBE CHA	ARACTERISTICS							
	Magnification	(Paraxial)	1	0.9	1.0	1.2			
	(out to 17 mm Operation volt For P-11 Phose Wavelength o output	n radius) age bhor of maximum	1		8 15 4600	20	% KV		
	Resolution ( Photon Gain Radiant Gair	(Paraxial) at 4100 Å n at 4100 Å	1 2 2	64	81 72 57		1p/mm		
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PRODUCT SPECIFICATION - MODEL 576E-01-00 Rev. A

IMAGE INTENSIFIER - EXPERIMENTAL SPECIFICATION SEPTEMBER 1968

For P-20 Phosphor Wavelength of maximum output Resolution (Paraxial) Photon Gain at 4100 Å Radiant Gain at 4100 Å

IV. MAXIMUM RATINGS

Supply voltage Ambient temperature

V. ENVIRONMENTAL

Shock Vibration Temperature

VI. PACKAGING

Note	Minimum	Typical	Maximum	Units
1 2 2	64	5600 81 96 81		A 1p/mm
		*	20 85	кv °С

40 g, 11 millisecond duration 20 g, 20 to 3,000 cps -55°C to 85°C

Normally packaged in an epoxy fiberglass housing.

NOTES: 1. Measurements made using 4100 Å input radiation.

2. Calculated for input radiation of stated wavelength and typical operating voltage.

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- 12		A second s	A CANADA AND A CANADA AND AND AND AND AND AND AND AND AN	CONTRACTOR STANDART AND CONTRACTORY	A CONTRACTOR OF THE OWNER	AT A DESCRIPTION OF A D	STRANG CONTRACT

![](_page_33_Figure_0.jpeg)

![](_page_34_Picture_0.jpeg)

PRODUCT SPECIFICATION - MODEL 577E-00-00 Rev. D

#### IMAGE INTENSIFIER

#### I. PHYSICAL CHARACTERISTICS

Maximum overall length (unpotted) Typical weight (including permanent

magnet) Window material Cathode sensitive area Cathode type Output phosphor Output phosphor area Focusing

#### 2.51 inches

3.0 kilograms High resolution fiber optics 1 in. diameter (area = 0.785 sq. in.) Semitransparent multialkali P-11 or P-20 1 in. diameter (area = 0.785 sq. in.) Magnetic

			I	Note	Minimum	Typical	Maximum	Units
II.	CHARAC	ATHODE						
	CHARAC	IERISTICS						
	Quantum	efficiency (Q) @ 4100 Å			8	13		%
	Quantum	efficiency (Q) @ 6300 Å				2		%
- 100	Cathode 1	adiant sensitivity $(\sigma_k)$						
	@ 4100	A A diant consitivity (r.)			.026	.043		A/W
	@ 6300	R				010		A/W
	6 0500					.010		11/ 11
III.	IMAGE T	UBE CHARACTERISTICS	5					
	Magnifica	tion (Paraxial)		1	0.9	1.0	1.1	
·	Non-linea	arity distortion (out to						
	11 mm	radius)		1		5		%
	Operation	voltage				15	20	KV
	For P-II	Phosphor			-x	1600		8
	Wavele	hgth of maximum output		, .	50	4000		A In/mm
	Resolu	Coin @ 4100 P		2	30	45		ip/iiii
	Radian	Gam @ 4100 A		2	26	39		
	Madian	c cam e 1100 m			20			
;	For P-20	Phosphor						
9	Wavele	ngth of maximum output				5600		R
	Resolu	tion (Paraxial)		1	50	55		1p/mm
	Photon	Gain @ 4100 A		2	48	72		
	Radian	t Gain @ 4100 A			36	54		
ş							9557997 5768057597587759775977898799803000000000	TOUS FOR SHE HEREITS AV JULT HAR THAT WAS AND AND
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EMR DIVISION OF WESTON INSTRUMENTS, INC • A SCHLUMBERGER COMPANY

PRODUCT SPECIFICATION - MODEL 577E-00-00 Rev. D

### IMAGE INTENSIFIER

#### IV. MAXIMUM RATINGS

Supply voltage Ambient temperature

Note	Minimum	Typical	Maximum	Units
		18	20 85	KV °C

V. ENVIRONMENTAL

Shock Vibration Temperature

VI. PACKAGING

-

40 g, 11 millisecond duration 20 g, 20 to 3,000 cps -55°C to 85°C

Normally packaged in an epoxy fiberglass housing. See Figure 1.

#### NOTES: 1

1. Measurements made using 4100 Å input radiation.

2. Calculated for input radiation of stated wavelength and typical operating voltage.

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![](_page_36_Figure_0.jpeg)

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EMR DIVISION OF WESTON INSTRUMENTS, INC • A SCHLUMBERGER COMPANY

PRODUCT SPECIFICATION - MODEL 577E-01-00 Rev. D

#### IMAGE INTENSIFIER

#### PHYSICAL CHARACTERISTICS

Maximum overall length (unpotted) Typical weight (Including permanent

magnet) Window material: Cathode sensitive area Cathode type Output phosphor Output phosphor area Focusing

I.

2.51 inches

3.0 kilograms 7056 glass 1 in. diameter (area = 0.785 sq. in.) Semitransparent trialkali P-11 or P-20 1 in. diameter (area = 0.785 sq. in.) Magnetic

		Note	Mi	nimum	Typical	Maximum	Units
II.	PHOTOCATHODE CHARACTERISTICS						
	Quantum efficiency (Q) @ 4100 Å Quantum efficiency (Q) @ 6300 Å			8	13 2		% %
	$(O_k)$ @ 4100 Å		•	026	.043		A/W
	Cathode radiant sensitivity ( $\mathcal{C}_k$ ) @ 6300 Å				.010		A/W
III.	IMAGE TUBE CHARACTERISTICS						
	Magnification (Paraxial) Non-linearity distortion (Out	1	0	.9	1.0	1.1	
	to 11 mm radius)	1			5		%
	Operation voltage				15	20	KV
	For P-11 Phosphor						
	Wavelength of maximum output				4600		· A
	Resolution (Paraxial)	1		70	80		lp/mm
	Photon Gain @ 4100 Å	2			30		
1	Radiant Gain at 4100 $\mathbbm{A}$	2			26		
	For P-20 Phosphor						
	Wavelength of maximum output				5600		R
	Resolution (Paraxial)	1		70	80		lp/mm
	Photon Gain at 4100 Å	2			48		
	Radiant Gain at 4100 Å	2			36		
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	PRODUCT S	SPECIFICATION -	MODEL 5	77E-01-00	Rev. D	
		IMAGE INTER	NSIFIER			
					1.2.5	
		Note	Minimum	Typical	Maximum	Uni
IV.	MAXIMUM RATINGS	5		-		
	Supply voltage Ambient temperature	e			20 55	KV °C
v.	ENVIRONMENTAL					
	Shock Vibration Temperature	40 g, 20 g, -55°	11 millised 20 to 3,000 C to 55°C	cond durat ) cps	ion	
VI.	PACKAGING	Norn hous	nally packag ing. See Fi	ged in an e gure l	poxy fibergl	ass
	NOTES: 1. Measu	urements made usin	x 4100 Å inr	ut radiatio	n	
	2. Calcul operat	lated for input radia ting voltage.	tion of state	d wavelen	gth and typic	cal
•						

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![](_page_39_Figure_0.jpeg)

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	EMR DIVISION OF WESTON INSTRUME	ENTS, INC	• A SCHLUM	IBERGER COM	IPANY	
	PRODUCT SPECIFICATIO	N - MC	DEL 577	'G-08-00 R	ev. A	
Ι.	PHYSICAL CHARACTERISTICS	JOINVLICE				
1.	Focusing: Maximum overall length (unpotter Typical weight (including per- manent magnet): Window material: Input Output Cathode sensitive area: Cathode type: Output phosphor: Output phosphor area:	Ma ad): 2. 3 Se L Fi 1 Se P- 1	gnetic 7 inches kilograms lected ul ithium F1 ber optic in. dia. mitranspa 11 or P-2 in. dia.	traviolet uoride nominal (area = 0 arent Cesi 20 (area = 0	quality 6μ Fiber .785 sq. um Iodide .785 sq.	in.)
		Note	Minimum	Typical	Maximum	Units
11.	PHOTOCATHODE CHARACTERISTICS Quantum efficiency (Q) at 1216 A 2537 A		5.0	7.0	.01	See Fig.1 %
	Cathode radiant sensitivity $(\sigma_k)$ at 1216 Å		.005	.007		A/W
	Magnification (Paraxial) Non-linearity Distortion (out to 11 mm radius) Operation voltage	1 1	0.9	1.0 5 20	1.1 25	% KV
	For P-11 Phosphor Wavelength of maximum output Resolution (Paraxial) Photon Gain at 1216 A Radiant Gain at 1216 A	2 3	70	4600 80 26 7		Å lp/mm
	For P-20 Phosphor Wavelength of maximum output Resolution (Paraxial) Photon Gain at 1216 Å Radiant Gain at 1216 Å	2 3	70	5600 80 42 10		Å 1p/mm
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**PRODUCT SPECIFICATION - MODEL** 577G-08-00 Rev. A UV IMAGE CONVERTER

IV. MAXIMUM RATINGS

Supply voltage Ambient temperature

Note	Minimum	Typical	Maximum	Units
		20	25 100	KV °C

V. ENVIRONMENTAL

Shock: Vibration: Temperature: 40 g, 11 millisecond duration 20 g, 20 to 3,000 cps -55°C to 100°C

VI. PACKAGING (See Fig. 2)

Normally packaged in an epoxy fiber glass housing.

## NOTES: 1. Measurements made using 2537 Å input radiation.

- 2. This parameter is normally not measured.
- 3. Calculated for input radiation of stated wavelength and typical operating voltage.

APP'VD. ENG.	DATE	APP'VD. PROD.	DATE	CLASSIFICATION PRELIMINARY	SPECIFICATION	
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![](_page_42_Picture_0.jpeg)

![](_page_43_Figure_0.jpeg)

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