

3. SPECIFICATIONS

3-1 Electrical Characteristics

Streak sweep time : 0.3, 1, 2, 5, 10ns/15mm

Streak sweep speed : 50, 15, 7.5, 3, 1.5mm/ns

Maximum repetition
frequency : 1KHz

Trigger frequency range : NORMAL mode : 1KHz
SWEEP-BL mode : 1KHz
GATE A mode : 800KHz
GATE B mode : 1KHz

Streak trigger delay time	Range(ns/15mm)	Delay time(ns)
	0.3	20
	1	21
	2	21
	5	25
	10	28

Gate time : Minimum : 300ns
Maximum : 100 μ s

Gate extinction ratio : 1 : 10⁶ or better

Gate trigger delay time : Approx. 300ns

Gate method : Photocathode-accel-relating electrode, MCP
simultaneous gate

MCP Gain switching	Range	MCP applied voltage (V)
	1	400 ~ 500
	2	500 ~ 600
	3	600 ~ 700
	4	700 ~ 800
	5	800 ~ 900

Streak trigger signal input : +5V ~ +40Vp-p/50 Ω
Recommended trigger signal :
+10 ~ +40Vp-p/50 Ω
Pulsewidth : 2 ~ 100ns

Gate A trigger signal input : +2V ~ +10Vp-p/50Ω

Gate B trigger signal input : +2V ~ +5Vp-p/50Ω

Gate control signal input : "

Forced gate close signal input : "

Reset signal input : Reset at 0V

Monitor signal output : +3Vp-p/50Ω

Power supply : 100/117/220/240VAC
50/60Hz

Power consumption : Approx. 60VA

3-2 Time resolution (fastest range) : Better than 2ps

3-3 Dynamic range (fastest range, incident pulsewidth 4ps) :
1 : 50 or greater

3-4 Trigger jitter
(+10Vp-p, 10ns risetime or less, stationary input waveform) :
Within ±20ps

3-5 Optical Characteristics

3-5-1 Input optical system (for standard visible input optics)

Lens configuration : 105mm F2.5 - 35mm F1.4
Tandem connection

Image magnification : 1/3 times

Useful F no. (for M=1/3) : 1 : 4.2

Slit width : 0 ~ 5mm, continuously variable

Slit width graduation accuracy : 0.005mm

Slit length : 0 ~ 24mm, continuously variable

Spectral transmission range : 400 ~ 800nm

3-5-2 Streak Tube (N1357X)

Photocathode : Multi-alkali (S-20)

Faceplate material : UV Glass

Spectral sensitivity : 200 ~ 850nm

Useful photocathode size : 8mm diameter

Light gain : Approx. 3×10^3 times
Image magnification M_o : Approx. 1.3 times
Time resolution : 2ps or better
Fluorescent screen : P-11
Useful phosphor screen size : 15mm diameter x 10.4mm

3-5-3 Output Optical System

Front lens : 50mm F1.2
Rear lens : a. 50mm F1.2 (with F2.0 aperture stop)
b. 105mm F 1.8
Image magnification M_a : a. 1 times (using 50mm F1.2 lens)
b. 2.1 times (using 105mm F1.8 lens)
Output mount type : Nikon F mount or standard C mount with F/C converter.

3-5-4 Overall Characteristics

Spectral sensitivity : 400 ~ 850nm
Image magnification : a. 0.433 times
b. 0.91 times

3-6 Environmental Conditions

Temperature range for guaranteed performance : $+15^{\circ}\text{C} \sim +30^{\circ}\text{C}$
Operating temperature range : $0^{\circ}\text{C} \sim +40^{\circ}\text{C}$
Storage temperature range : $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$
Humidity : 70% or less

3-7 Dimensions and Weight

Mainframe : 300(W) x 240(H) x 557(D),
approx. 21Kg
Power supply : 215(W) x 126(H) x 370(D),
approx. 6kg.