

3 . SPECIFICATIONS

3 - 1 Electrical Charasteristics

Streak sweep time	: 1ns ~ 10ms (1, 2, 5, 10 step)
Maximum repetition rate	: 2MHz
Maximum trigger frequency	: 150MHz
Time resolution (fastest range)	: Better than 15ps (single shot)
Trigger jitter	: Better than ± 10 ps
Extinction ratio	: 5×10^3 or better
Streak trigger signal input	: ± 3 Vp-p / 50Ω
Reset signal input	: Reset at 0V
Monitor signal output (TRIG OUT)	: 1.5Vp-p / 50Ω
Video signal out	: 1.0Vp-p / 75Ω
Sync signal input	: 0.3Vp-p / 75Ω
Power supply	: 100 / 117 / 220 / 240 VAC, 50 / 60Hz
Power consumption	: Approx. 180VA

Streak trigger delay time and maximum repetition rate :

Sweep Range	Delay Time(typ)	Max. repetition rate (typ)
1 ns	44 ns	2 MHz
2 ns	51 ns	2 MHz
5 ns	62 ns	2 MHz
10 ns	76 ns	600 KHz
20 ns	110 ns	600 KHz
50 ns	212 ns	550 KHz
100 ns	390 ns	500 KHz
200 ns	749 ns	400 KHz
500 ns	1.8 μ s	200 KHz
1 μ s	3.5 μ s	100 KHz
2 μ s	6.7 μ s	70 KHz
5 μ s	18 μ s	12 KHz
10 μ s	36 μ s	10 KHz
20 μ s	72 μ s	6 KHz
50 μ s	180 μ s	3 KHz
100 μ s	337 μ s	1.5 KHz
200 μ s	720 μ s	800 Hz
500 μ s	1.8 ms	300 Hz
1 ms	3.6 ms	150 Hz
2 ms	7.2 ms	80 Hz
5 ms	18 ms	30 Hz
10 ms	36 ms	12 Hz

MCP Gain :

range	MCP applied voltage (V)
1	400
2	433
3	466
4	500
5	533
6	566
7	600
8	633
9	666
10	700
11	733
12	766
13	800
14	833
15	866
16	900

3 - 2 Optical Characteristics

3 - 2 - 1 Streak Tube (N4320)

Photocathode	: S - 20, S - 25, S - 1
Useful photocathode size	: $70\mu\text{m} \times 5.5\text{mm}$
Phosphor screen	: P - 20 / fiber out
Image magnification Mo	: 2.3
Light gain	: 3×10^3

3 - 2 - 2 Output Optics (taper fiber)

Image magnification Mo	: 1 : 0.8
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3 - 3 Read-Out

Pickup device	: Interline transfer CCD (with fiber coupling)
H / V resolution	: 756 (H) \times 485 (V)
S / N (typ)	: 52dB ($\gamma = 1$, AGC = OFF)

3 - 4 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 - 5 Dimensions and Weight

Streak controller	: 260 (W) \times 120 (H) \times 450 (D) mm approx. 10Kg
Streak Head	: 130 (W) \times 192 (H) \times 460 (D) mm approx. 8Kg

3 - 6 Standard Options

Input optics	:	A1976 - 02
Manual controller	:	C4499
Host computer	:	MAC