

# SHV 8K



## FPD TESTER MODEL 2918

The Chroma 2918 is a high performance stabilized FPD tester ideal for LCM ATS. It features a modular design that is capable of combining different signals and power modules for various test requirement. The FPD tester is highly adaptable and expandable to a variety of test functions.

### 8K Super Hi-Vision

The 2918 provides ultra high 8K resolution (7680x4320/8192x4320) for testing @60/120 Hz (32/64 lane V-By-One).

### High Speed Signal Module Design

The modular design interface supports LVDS/V-by-One and eDP mainstream LCM interfaces for inspection. The tester uses a dual-core graphics processing architecture to significantly increase drawing and data transmission speed. The V-by-One interface data rate is up to 3.75GHz per lane, and requires less than 200 msec. for 8K SHV image switch. This high-speed, flexible signal generator tester is ideal for high performance specification testing for the next generation FPD.

### Programmable Power Module

The built-in VDD and VBL programmable power modules source TCON (Timing Controller) and backlight modules according to the UUT specification. Parameters include current measurement, power on/off, scan timing, power auto compensation, slew rate, voltage and current upper/lower limits

for OCP/OVP/UCP/UDP protection during accurate and thorough test.

### Timing Parameter, Pattern and Test Program Editing

The FPD tester supports standard JEIDA/VESA timing formats that can be used directly or geometric patterns may be created for various tests by either combining any of the provided icons or importing the natural pictures with BMP file extension. Up to 300 8Kx4K (BMP) patterns can be stored.

### Network Management Control (Option)

When paired with PC control and customizable Go/No Go Software, the Chroma 2918 FPD tester can be extremely effective in production line when integrated with a PC and an optional customized GO/NOGO software that testing. preset the operator Authority levels and a unified the system management mode to reduce human error. The user-friendly graphical user interface uses cross coordinates to check and record the defect position during test. Data of LCM defect types and classifications are created to generate test reports for analysis. It can also be configured with client's system to maintain and manage test programs, upload/download data, compile statistics, and write in EDID network online function. This allows system managers to remotely monitor production for throughput, efficiency and yield status.

## MODEL 2918

### KEY FEATURES

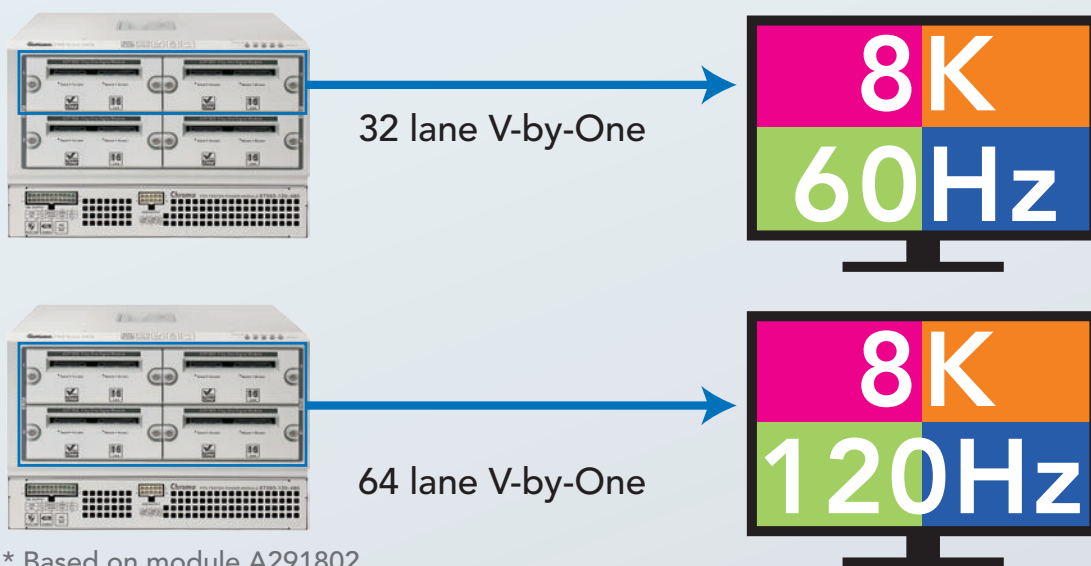
- Support 8K Super Hi-Vision (7680x4320 / 8192x4320)
- Full 8K scrolling
- Independent signal and power modules
- Dual-core graphics processing architecture
  - Increase graphics and data transmission performance
  - 8K Super Hi-Vision pattern with less than 200 ms switch time
- Support 6/8/10/12 bits color depth (12 bit in LUT mode)
- User edited test patterns
  - BMP pattern format
  - Up to 300 8Kx4K bmp patterns
- VDIM and PWM dimming
- Cross coordinates defect positioning
- Auto flicker adjustment (with A712306)
- Gigabit Ethernet control
- USB port for data update





# Support 8K Super Hi-Vision

- The 2918 FPD tester provides 8K Super Hi-Vision (7680x4320/ 8192x4320) for testing. Full 8K@60/120 Hz resolution (32/64 lane V-By-One) is supported by one tester.



## Dual-Core Graphics Processing

- Significantly increases graphics and data transmission performance
- 8K SHV pattern switching time < 200ms



## True 8K Motion Pattern

- True 8K scrolling function for 8K motion picture inspection
- Adjustable scrolling direction (up/down/left/right), motion speed to test dynamic response of panel





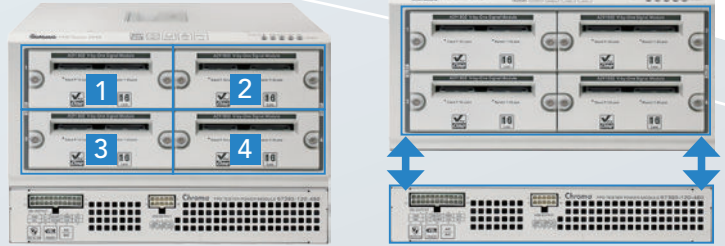
# Next Generation for 8K Super Hi-Vision

The Reference of Today and Tomorrow



## Independent Signal / Power Module

- 4 slots in a signal module
- Support LVDS / V-By-One / eDP signals
- Independent power module provides current measurement, power on/off, and scan timing tests
- Voltage/current upper and lower limits for OCP/OVP/UCP



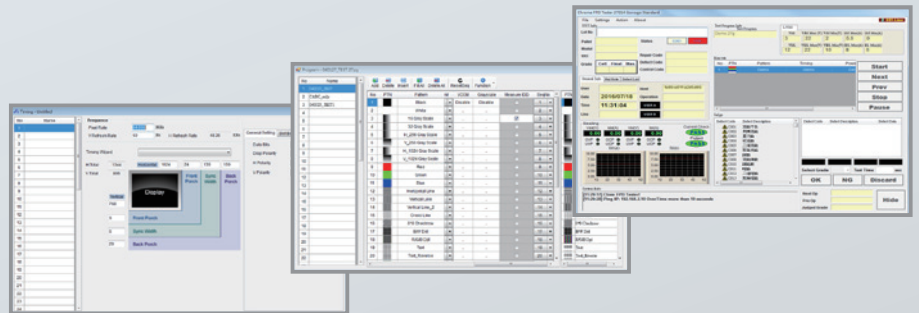
## Remote Control Box

- 20 words x 4 lines matrix LCD display
- Signal and power quick on/off button
- Quick menu switching and selection rotary knob
- Real-time voltage/current display
- VCOM adjustment/write-in function



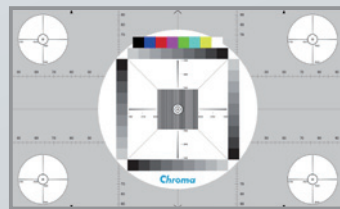
## Graphic User Interface : FPD Master

- Graphical user interface for test program editing
- Unique GO/NO GO software (option) for quick inspection
- Support VCOM/Grayscale/EDID inspection



## Full Range of Test Patterns and Functions Support

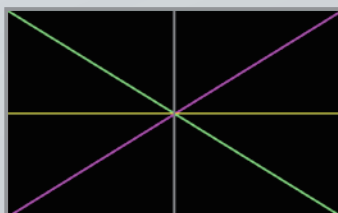
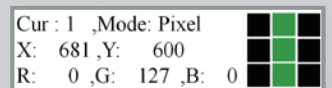
- Support patterns (color bar, grayscale, dot), 8K bitmap (BMP) figures, and various inspection functions as required for industrial panel testing.
- Cross coordinate cursor positioning to display coordinate and RGB values of any dot in real-time
- Foreground/background grayscale adjustment for CABC test



8K Resolution Test Pattern



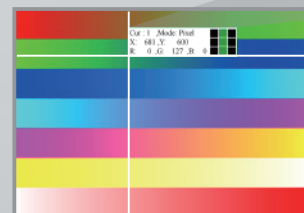
8K BMP Files



Outer Frame Function



CABC Test Function



Cursor Position

## SPECIFICATIONS

<b>Main Frame</b>	
<b>Signal</b>	
Signal interface	4 slot module
Resolution	Support up to 8K @ 120 resolution (1 Slot for 4K @ 120)
Pattern switch time	8K Logic pattern: < 200ms 8K BMP pattern: <2s (non-preload), < 100ms (Pre-load)
<b>Functions</b>	
Special Functions	EDID /Cursor / Scroll / BMP support
<b>Communication</b>	
LAN	RJ-45
Remote	D-Sub 15
<b>Others</b>	
System ready time (Output video)	< 10s
Fan noise	< 65dB
Operation Temperature	5°C ~ 40°C
Store Temperature	0°C ~ 80°C
Humidity	20% ~ 90% RH
Dimensions (HxWxD)	190mm(H) x 375mm(W) x 290mm(D) (include 67393-120-480)
Weight	13KG (include 67393-120-480)

<b>67393-120-480 : FPD Tester Power Module</b>	
<b>AC Input</b>	
Voltage	1Ø 100~240V ± 10% V <sub>LNr</sub> 47~63Hz
<b>VDD Output</b>	
VDD	VDD=2~25V / IDD=22A Max., P=264W Max. IDD-1=11A Max., P <sub>IDD-1</sub> =132W Max IDD-2=11A Max., P <sub>IDD-2</sub> =132W Max
Resolution	0.1 V/step
Accuracy	1% F.S.
<b>VBL Output</b>	
VBL	VBL 3~30V / 20A, 480W Max.
Resolution	0.1 V/step
Accuracy	1% F.S.

\* All specifications are subject to change without notice. Please visit our website for the most up to date specifications.

## ORDERING INFORMATION

2918 : FPD Tester  
 67393-120-480 : FPD Tester Power Module  
 7123 : Display color analyzer main unit  
 A040206 : Remote Control Box  
 A291800 : 4CH LVDS Signal Module  
 A291802 : 16 Lane V-by-One Signal Module  
 A291803 : 8.1G eDP Signal Module  
 A712306 : Flicker measuring probe (for LCM ATS)  
 Network Management Function of Software

<b>A291800 : 4CH LVDS Signal Module</b>	
Resolution	4096 x 2160 @ 60Hz max
LVDS Signal Channel	4 Channel Output ; 1 Link : 10-150 MHz ; 2 Link : 20- 300 MHz ; 4 Link : 40- 600 MHz
Color depth	6 / 8 / 10 bits Programmable
I <sup>2</sup> C	Level : Floating / 0V / 3.3V / 5 V Max frequency : 400KHz
Aging Mode Control x 1	Floating / 0 V / 3.3 V programmable
Inversion Control x 1	Floating / 0 V / 3.3 V programmable
GPIO x 8	0V / 3.3V @4mA max , programmable
Spare Power (VIF)	1.0V~ 5.0 V / 0.5A max
ESD Protection	Contact 8KV / Air15KV (Refer to IEC 61000-4-2 Level 4)

<b>A291802 : 16 lane V-by-One Signal Module</b>	
Compliant	V-by-One HS v1.4 standard
Resolution	4096x2160 @ 120Hz max. (with 1 module)
Color depth	6 / 8 / 10 / 12 bits Programmable
Lane count	4 / 8 / 16 Lane (with 1 module)
Data rate	3.75 GHz / Lane
Packer type	3 / 4 / 5 Bytes
I <sup>2</sup> C	Level : Floating / 0V / 2.5V / 3.3 V (I <sup>2</sup> C and GPIO level must be the same) Max frequency: 400KHz
GPIO x 8	Floating/0V/2.5V/3.3 V@4mA max, programmable (I <sup>2</sup> C and GPIO level must be the same)
ESD Protection	Contact 8KV / Air15KV (Refer to IEC 61000-4-2 Level 4)

<b>A291803 : 8.1G eDP Signal Module</b>	
Compliant	eDP v1.4a standard
Resolution	7680 x 4320@30Hz max (1 port output) 7680 x 4320@60Hz max (2 port output)
Color depth	6 / 8 / 10 bits Programmable
Lane count	1 / 2 / 4 / 8 Lane *8 Lane uses 2 port output simultaneously (4+4 lane)
Lane rate	1.62Gbps / 2.16Gbps / 2.43Gbps / 2.7Gbps / 3.24Gbps / 4.32Gbps / 5.4Gbps / 8.1Gbps Lane
I <sup>2</sup> C	Level : Floating / 0V / 2.5 V / 3.3V Max frequency : 400KHz
Functions	HPD / EDID / PSR / PSR2 (Option) / MSO (option)
ESD Protection	Contact 8KV / Air15KV (Refer to IEC 61000-4-2 Level 4)



A291800



A291802



A291803

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