

MODEL 27015

KEY FEATURES

- Dual-slot design compatible with (optional):
 - A27016x Series
 - A04020x Series
- 4+4 independent programmable DC power supplies
 - VDD 1~15V / 3A max, 45W max
 - VBL 5~55V / 10A max, 150W max
 - ELVDD 1.5~12V / 1A max, 12W max
 - ELVSS -12~-1.5V / 1A max, 12W max
 - Real-time display of voltage and current measurements
- Power Protection Features (OCP/OVP/UCP/UVP)
- Independent control of power timing
- Remote voltage compensation function (Remote Sense)
- Supports Bitmap image playback
- Supports pattern scrolling
- Smart fan system
- Built-in eMMC storage of 341~1365 BMP image files
- Indicator LEDs display DUT and test status
- Intuitive FPD Master software interface
 - Timing/Pattern/Power/Program parameterized editing
 - BMP image pattern support
 - EDID reading/writing/comparison
 - Each module can store up to 100 configurations
 - Crosshair and coordinates function for defect location
 - Test data integration and storage
 - User permission control
 - CIM/MES integration (optional)
- Remote Controller (optional)
- Input/output control suitable for factory automation

FPD TESTER MODEL 27015

Chroma 27015 FPD (Flat Panel Display) Tester is a versatile test solution designed to evaluate the driving information and audiovisual entertainment provided by automotive display modules with distinct sizes and resolutions. The tester boasts a dual-slot design that allows concurrent and sequential testing of devices under test with varying signal interfaces. Users can select from a range of signal modules to meet their specific test requirements, including integration with factory automation for enhanced production efficiency.

A27016x and A04020x Signal Modules (Optional)

To meet the diverse signal requirements of today and the future, the 27015 can be equipped with a wide range of signal modules, covering MIPI, eDP, and LVDS (A27016x series). Alternatively, the economical A04020x series offers MIPI, eDP, and V-by-One signal modules. Users can select the modules that best suit their testing needs, ensuring broad applicability and long service life of the tester.

Protection Features (OCP/OVP/UCP/UVP)

Chroma 27015 is equipped with over-voltage protection (OVP), over-current protection (OCP), under-voltage protection (UVP), and under-current protection (UCP). Users can set their own protection limits. If the detected current or voltage during the output process exceeds the set values, the protective devices are activated immediately to prevent product damage.

To prevent these protections from falsely triggering due to inrush current during power startup, the 27015 features a delay function (Protection Delay Time) to safeguard test accuracy.

Programmable Power Supply

The device features a 4+4 set of programmable DC power supplies to meet the testing needs of various automotive panels. VBL and VDD offer a maximum output power of 150W (5~55V/10A max) and 45W (1~15V/3A max) respectively. Users can edit voltage settings via the FPD Master software with a minimum adjustment of 0.001V/step. The precise and stable DC voltage output enables simulation of various test scenarios. Additionally, the extra positive and negative power sources ELVDD (1.5~12V/1A max) and ELVSS (-12~-1.5V/1A max) facilitate interface, bias, and driving purposes.

Built-in Embedded Multimedia Card (eMMC)

The 27015 can store approximately 341 to 1365 BMP image files depending on image resolution, each with a maximum resolution of 8K. In addition to the built-in image library, users can add their own test graphics to suit diverse testing requirements.

Remote Voltage Compensation function (Remote Sense)

When conducting a series of tests, test accuracy is often affected by voltage drops in the power transmission caused by cables, connectors, and distance. To mitigate this, the 27015 is equipped with a remote voltage compensation function that can automatically adjust the output to harmonize the difference between the actual test voltage and the set voltage.

Controllable Power Supply Timing

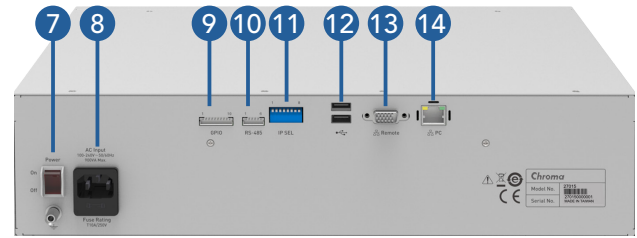
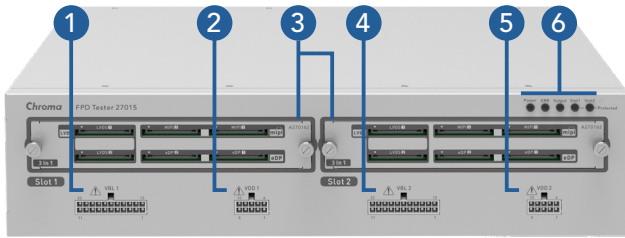
Chroma 27015 allows individual activation of power, signals, and control pins, with programmable timing in increments as small as 1ms. The lead/lag timing of the power, signal, and control pin output, as well as shutdown can all be fine-tuned to user requirements.

Automotive Display



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PANEL DESCRIPTION



*Above image shows the 27015 mainframe outfitted with A270162 3 in 1 signal modules

1. VBL 1 : DC output and control signal
2. VDD 1 : DC output
3. Signal module expansion (optional)
4. VBL 2 : DC output and control signal
5. VDD 2 : DC output
6. Status display: POWER/ERROR/OUTPUT/SLOT1/SLOT2

7. Power ON/OFF switch: Main power control
8. AC INPUT : Power input
9. GPIO: Input/output control
10. RS-485: For external accessory use
11. IP SEL: Host address configuration
12. USB: For external device use
13. REMOTE: For external remote control
14. PC: Network input (control)

SPECIFICATIONS

FPD Tester Model 27015 System	
Configuration	Embedded MCU and FPGA graphics engine
Signal Interface	Dual-slot compatible with A27016x and A04020x module series
I ² Cx 1 (VBL output port)	SDA: Floating / 1.8V / 3.3V programmable SCL : 50KHz / 100KHz / 400 KHz
Inverter On/Off Control (VBL output port)	0V / 1.8V / 3.3V / 5V programmable
Analog Vdim Control (VBL output port)	0~5V (20mA), 0.1 V/step programmable
Digital Vdim Control (PWM) (VBL output port)	Floating / 1.8V / 3.3V / 5V Frequency 100~15K Hz / 1 Hz step Duty cycle 0~100% ± 1%

Data Storage Capacity	
Timing	100
Pattern	Logic : 300 BMP : 32G Memory
Power	100
Program	100

Communication Interface	
PC / Remote Controller	D-Sub 15 pin
Features	
Coordinates	Display x, y coordinates, RGB vectors
Dynamic Pattern	Programmable direction and speed

ELVDD Output	
Voltage Range	1.5 ~ 12V / 1A max, 12W Max
Resolution	0.1 V/ step
Accuracy	3% F.S.
Rise Time	1ms < Tr < 30ms
Fall Time	< 30ms@full load
Power Supply Protection Settings	UCP / UVP / OCP / OVP
Measurement Range	UVP/OVP:0~13V, UCP/OCP:0~1.1A Protection Delay Range: 0~1000 ms programmable
Measurement Accuracy Range	Voltage: ± 1% F.S. Current: ± 1% F.S.

ELVSS Output	
Voltage Range	-12~-1.5V / 1A max, 12W max
Resolution	0.1 V/ step
Accuracy	3% F.S.
Rise Time	1ms < Tr < 30ms
Fall Time	< 30ms@full load
Power Supply Protection Settings	UCP / UVP / OCP / OVP
Measurement Range	UVP/OVP:0~13V, UCP/OCP:0~1.1A Protection Delay Range: 0~1000 ms programmable
Measurement Accuracy Range	Voltage: ± 1% F.S. Current: ± 1% F.S.

VDD Output	
Voltage Range	1 ~ 15V / 3A max, 45W max
Resolution	1mV/ step
Accuracy	1% F.S.
Rise Time	1ms < Tr < 10ms
Fall Time	< 30ms@full load
Power Supply Protection Settings	UCP / UVP / OCP / OVP / OPP
Measurement Range	UVP/OVP:0~16V UCP/OCP:0~3.3A OPP: 50W Protection Delay Range: 0~1000 ms programmable
Measurement Accuracy Range	Voltage: ± 1% F.S. Current: ± 1% F.S.
Maximum Remote Sense Compensation	Maximum Remote Sense Voltage Drop Compensation is 1V (no compensation beyond specifications)


VBL Output	
Voltage Range	5 ~ 55V / 10A max, 150W Max
Resolution	1mV/ step
Accuracy	1% F.S.
Rise Time	1ms < Tr < 30ms
Fall Time	< 50ms@full load
Power Supply Protection Settings	UCP / UVP / OCP / OVP / OPP
Measurement Range	UVP/OVP:0~56V, UCP/OCP:0~11A OPP: 165W Protection Delay Range: 0~1000 ms programmable
Measurement Accuracy Range	Voltage: ± 1% F.S. Current: ± 1% F.S.
Maximum Remote Sense Compensation	Maximum Remote Sense Voltage Drop Compensation is 1V (no compensation beyond specifications)


Other	
AC Input	1Ø 100~240Vac ± 10% V _{LN} , 47~63 Hz
Operating Temperature Range	5 ~ 40 °C
Storage Temperature Range	0 ~ 80 °C
Operating Humidity Range	20 ~ 90%
Dimensions (WxDxH)	420 x 300 x 100 mm
Weight	9.5 kg / 20.9 lbs


ORDERING INFORMATION

27015: FPD Tester
 A270162: 3 in 1 Signal Module
 A040204: V-by-One Signal Module
 A040205: eDP 1.4 Signal Module
 A040206: Remote Controller
 A040209: MIPI Signal Module

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Search Keyword

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* All specifications are subject to change without notice.
 Please visit Chroma's website for the latest information.

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