



Portable LED film viewer combine with Densitometer

FV-2010T Plus

- Densitometer High Accuracy : $\pm 0.02D$
- Electronic Light mask - World First
- Larger size: 400×100mm (15.8×4 inch)
- Low noise: Fan with temperature depended
- CE Approved

MAX.L=130,000Cd/m²

g=0.95

σ' =0.95

Characteristic:

- Luminance : 130,000Cd/M² (408,200Lux)
- High Accuracy: $\pm 0.02D$
- Uniformity: 0.95 , Diffusion factor: 0.95
- Window Size: 400×100mm (15.8×4")
- Weight less than 4.0 Kg (8.8lbs)
- 12 hours continues maximum luminance,
Surface temperature rise $\leq 18^{\circ}\text{C}$
- Unlimited dimmer from 5%-100%
- Free 2 years service guarantee
- CE Approved

What is electronic light mask?

Traditionally we use a series of metallic light masks which are mount on the surface of film viewers. It is inconvenient when you replace the light masks when you want to change the size of light, and energy waste because it just mask the light where you do not need, but the entire light screen is still turn on.

Electronic light mask is electronics controlled, the light screen is divided into 6 parts, you can turn on or turn off each parts of light screen by press one key. With the help of it, you just turn on the area you need, it will be convenient when you change the size of light, low heat and low energy cost.

The size of light will be switched as below:



Spare parts list:

Description	Quantity
Power adaptor & Line	1
Foot pedal	1
Light mask (400×70mm)	1
Instruction (English)	1
Guarantee and report (English)	1

Specification:

Max Luminance: $\geq 130,000\text{Cd/M}^2$ (408,200Lux)	Uniformity: g=0.95 High Accuracy: $\pm 0.02D$
Diffusion Factor: $\sigma'=0.95$	Viewer window: 400×100mm (15.8×4 inch)
Surface temp. rise $\leq 18^{\circ}\text{C}$ After 12 hours continues maximum luminance	Power: 85-264VAC 47~63Hz. (Full range)
Dimension: 600×80×160mm 23.6×3.1×6.3 inch (L×W×H)	Weight: 4Kg (8.8 lbs)

We can do better



www.lcndt.net

ISO9001 Registered

PRODUCT CERTIFICATE

PRODUCT Industrial LED Film Viewer
MODEL FV-2010T PLUS
SERIAL NO. _____
MEASUREMENT BASED ON EN25580 / ISO5580 / ASTM 1390-90
MEASUREMENT RESULT QC Passed

Testing Report:

Maximum Luminance: 130,000Cd/m² Uniformity g: 0.95
Diffusion factor σ' : 0.95 Maximum Reading Density: 4.2H/D

Film Density	ASTM/EN/ISO MIN. Cd/m ²	TEST MAX. Cd/m ²
2.21	30	815.7
3.17	10	267.2
3.66	10	41.6
4.29	10	9.2

NOTE: The luminance mentioned in above table is measured light through the film.

Calibration Report:

AGFA Density Strip (SN.: <u>1001311</u>)								
Num.	0	1	2	3	4	5	6	7
Density:	0.15	0.30	0.60	0.90	1.21	1.50	1.80	2.10
Cal.:	0.16	0.31	0.60	0.90	1.22	1.51	1.81	2.12
AGFA Density Strip								
Num.	8	9	10	11	12	13	14	
Density:	2.41	2.69	2.98	3.26	3.59	3.91	4.21	
Cal.:	2.42	2.69	2.98	3.28	3.60	3.93	4.22	

INSPECTOR INSPECTOR 3 MANAGER INSPECTOR 1 Date : 2014.12.29



Portable Industrial LED Film Viewer

FV-2010 Plus

- ▶ **Electronic Light mask - World First**
- ▶ **Larger size: 400×100mm (15.8×4 inch)**
- ▶ **FV-2010W Plus 440×80mm**
(fit to 480mm×100mm film) are available.
- ▶ **CE Approved**

MAX.L=130,000Cd/m²

g=0.95

σ'=0.95

Characteristic:

- Luminance : 130,000Cd/M² (408,200Lux)
- Uniformity: 0.95 , Diffusion factor:0.95
- Window Size: 400×100mm (15.8×4")
- Weight less than 4.0 Kg (8.8lbs)
- 12 hours continues maximum luminance,
Surface temperature rise ≤ 18 °C
- Unlimited dimmer from 5%-100%
- Free 2 years service guarantee
- CE Approved

What is electronic light mask?

Traditionally we use a series of metallic light masks which are mount on the surface of film viewers. It is inconvenient when you replace the light masks when you want to change the size of light, and energy waste because it just mask the light where you do not need, but the entire light screen is still turn on.

Electronic light mask is electronics controlled, the light screen is divided into 6 parts, you can turn on or turn off each parts of light screen by press one key. With the help of it, you just turn on the area you need, it will be convenient when you change the size of light, low heat and low energy cost.

The size of light will be switched as below:



Spare parts list:

Description	Quantity
Power adaptor & Line	1
Foot pedal	1
Light mask (400×70mm, 240×80mm, 100×80mm)	1
Instruction (English)	1
Guarantee and report (English)	1

Specification:

Max Luminance: ≥ 130,000Cd/M ² (408,200Lux)	Uniformity: g=0.95
Diffusion Factor: σ'=0.95	Viewer window: 400×100mm (15.8×4 inch)
Surface temp. rise ≤ 18 °C After 12 hours continues maximum luminance	Power: 85-264VAC 47~63Hz. (Full range)
Dimension: 600×80×160mm 23.6×3.1×6.3 inch (L×W×H)	Weight: 4Kg (8.8 lbs)

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PRODUCT CERTIFICATE

PRODUCT	Industrial LED film viewer
MODEL	FV-2010
SERIAL NO.	100760
MEASUREMENT BASED ON	EN 25580 / ISO 5580
MEASUREMENT RESULT	QC Passed

Testing Report:Maximum Luminance: 130,000Cd/M² Uniformity g: 0.96Diffusion factor σ': 0.95 Maximum Reading Density: 4.1 H/D

Film Density	ASTM/EN/ISO MIN. Cd/m ²	TEST MAX. Cd/m ²
2.21	30	812.54
2.72	10	265.50
3.66	10	40.20
4.29	10	9.10

NOTE: The luminance mentioned in above table is measured light through the film.

INSPECTOR

INSPECTOR 3

MANAGER

INSPECTOR 1

Date of Measurement: 2014.2.28**Lu Cheng NDT Equipment Corp.**E-mail: Sales@Lcndt.net (For sales) gm@Lcndt.net (For service)Http://www.Lcndt.net

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Portable LED film viewer combine with Densitometer

FV-2009T



- ▶ Portable, easy to carry
- ▶ High Luminance
- ▶ Smart design
- ▶ 2 years free service guarantee

MAX.L=120,000Cd/m²

g=0.95

σ'=0.95

Characteristic:

- Luminance : 120,000Cd/M² (376,800Lux)
- High Accuracy:±0.03D
- Viewer's Density:4.1D
- Densitometer's Density:5.0D
- Uniformity: 0.95 , Diffusion factor:0.95
- Window Size: 200×60mm
- Weight less than 2.5 Kg
- Unlimited dimmer from 5%-100%
- Free 2 years service guarantee
- CE Approved

FV-2009T intelligent LED Industry X-ray Film Viewer is a kind of innovative viewer that developed by our company joint with the American company. It not only can inspect films, but also can measure the film density accurately.

FV-2009T origin from the U.S. ASME standards, which is equipped with original U.S. probe, and has excellent optical properties and stability. The powerful auto-calibration function of this unit (patent technology), can make it adapt to the films from various of brands and film bases.

Is FV-2009T only simply combine the viewer and densitometer together?

No, it isn't. FV-2009T is not simply merge view and densimeter together, but integrate two revolutionary units together, and complement each other. Not only saves you valuable desktop space, but also get rid of the disadvantage of traditional B&W densitometer, which aiming point is not convenient, then can't measure the density of large size film. Use of luminous surface of viewer as the initial intensity light source for the densitometer, measure where as you touch with pen type probe, convenient and intuitive.

Luminance distribution of the view window (Unit: Cd/m²)

118,300	118,000	118,400	117,400
119,000	120,000	119,080	119,080
118,500	119,300	119,600	118,000

Spare parts list:

Description	Quantity
Foot pedal	1
Carrying bag	1
Instruction (English)	1
Guarantee and report (English)	1
Light mask (150*45mm) (150*60mm)	1

Specification:

Max Luminance: ≥ 120,000Cd/M ² (376,800Lux)	Uniformity: g=0.95
Diffusion Factor: σ'=0.95	Viewer window: 200×60mm
Surface temp. rise ≤ 15°C After 12 hours continues maximum luminance	POWER: 85-264VAC 47~63Hz. (Full range)
Dimension: 17.9×5.5×2.6" 455×140×65mm (L*W*H)	Weight: 5.5pounds(2.5kg)

Portable Industrial LED Film Viewer

FV-2009



- ▶ **Portable, easy to carry**
- ▶ **High Luminance**
- ▶ **Smart design**
- ▶ **2 years free service guarantee**

MAX. $L \geq 103,000 \text{ Cd/m}^2$ $g=0.95$ $\sigma'=0.95$

Characteristic:

- Luminance : $103,000 \text{ Cd/M}^2$ (323,420Lux)
- Uniformity: 0.9, Diffusion factor: 0.95
- Weight less than 2.5 Kg
- 12 hours continues maximum luminance, Surface temperature rise $\leq 15^\circ\text{C}$
- Unlimited dimmer from 5%-100%
- Rugged aluminum frame engineering plastic
- Free 2 years service guarantee

FV-2009 LED Film Viewer is developed according to the Norm of ISO5580 Industrial radiographic illuminators - Minimum requirements. Inherited fine traditions of FV-2008, adopt powered LED area light source, enable the viewer to high luminance and excellent uniformity, theoretical lifetime span up to more than 50,000 hours.

Thanks to the portable, rugged and smart design, FV-2009 is extremely suitable for fieldwork. Can view films to 4.0H/D, meet the needs of daily use. It adopt constant current power which is specially designed to the viewer. With its help, the LED will be protected notably, so the lifetime can be extended. For the sake of Safety use, low voltage PWM unlimited dimmer is used. Foot mode and hand mode are equipped.

Luminance distribution of the view window (Unit: Cd/m^2)

102,300	102,000	101,400	100,400
102,000	103,000	102,080	102,080
101,500	102,300	101,600	101,000

Spare parts list:

Description	Quantity
Foot pedal	1
Carrying bag	1
Instruction (English)	1
Guarantee and report (English)	1
Light mask (150*45mm) (150*60mm)	1

Specification:

Max Luminance: $\geq 103,000 \text{ Cd/M}^2$ (323,420Lux)	Uniformity: $g=0.95$
Diffusion Factor: $\sigma'=0.95$	Viewer window: 200*60mm
Surface temp. rise $\leq 15^\circ\text{C}$ After 12 hours continues maximum luminance	POWER: 85-264VAC 47~63Hz. (Full range)
Dimension: 17.9*5.5*2.6" 455*140*65mm (L*W*H)	Weight: 5.5pounds(2.5kg)



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ISO 9001 Registered

PRODUCT CERTIFICATE

PRODUCT Industrial LED film viewer

MODEL FV-2009

SERIAL NO. 902001

MEASUREMENT BASED ON EN 25580 / ISO 5580

MEASUREMENT RESULT QC Passed

Testing Report:

Maximum Luminance: 103,000Cd/M² Uniformity g: 0.96

Diffusion factor σ': 0.95 Maximum Reading Density: 4.0 H/D

Film Density	ASTM/EN/ISO MIN. Cd/m ²	TEST MAX. Cd/m ²
2.21	30	466.12
2.72	10	137.18
3.66	10	15.63
4.29	10	6.33

NOTE: The luminance mentioned in above table is measured light through the film.



INSPECTOR

INSPECTOR 3

MANAGER

INSPECTOR 1

Date of Measurement: 2010.1.13

Lu Cheng NDT Equipment Corp.