

KOWOLUX X

**LED Film Viewers
KOWOLUX X Series**



**Evaluation of X-ray films
with highest contrast**

KOWOLUX X Series NDT film viewers with PowerLED

KOWOLUX X viewers are designed for high-end NDT X-ray film evaluation. A durable, economically designed housing made of stainless steel contains latest series of PowerLED giving magnificent white light over the entire control range. Higher contrast helps inspection personnel to find defects and discontinuities easily without vision fatigue. A speed controlled cooling fan reduces irritating noise and a large variety of accessories simplifies handling of films. High luminance permits viewing of very dark films without damaging these.

PowerLED technology:

Due to the high efficiency of LEDs, heat generation and power consumption is reduced by 80 to 90% compared to conventional viewers with halogen lamps. With a lifetime of 40,000 hours (more than 20 years at full load operation) the LEDs never need to be changed. Due to these facts the price difference to halogen viewers pays for itself under two years. KOWOLUX X viewers perform about 10% higher luminance than specified to compensate loss in luminous flux of 8% over lifetime of the LEDs.

Specification:

- Stainless steel housing in ergonomic design
- Thermally cured crystal glass viewing screen with 95% translucency and antireflective coating
- Plug-in foot switch – viewer also operable without foot switch
- Two controls for brightness, 0.2 ... 100 %
- Cooling fan with temperature-dependent speed control for low noise level
- Changeable filter in cooling air inlet
- Interchangeable attachment masks for different film sizes
- Mounting threads in side panels for KOWOSPOOL roll film loading device or densitometer holder
- Mounting threads in bottom panel for fixing viewer on desk in mobile labs

Data valid for all KOWOLUX X series

Power supply: 88 ... 264 V / 47 ... 63 Hz
Color of temperature LEDs: 5,000 K
Lifetime of LEDs: 40,000 h

KOWOLUX X3 series

Viewer for long X-ray films of weld seams. Together with KOWOSPOOL it is perfect for handling of roll films used in pipeline inspection.

Viewing screen: 450 x 80 mm (for films 10x48 cm)
Dimensions: 530 x 220 x 205 mm (WxDxH)



KOWOLUX X3eco

Article no. 13 40081

Luminance, max.: 160,000 Cd/m² *)
Film density, max.: 4.2 D **)
Rated power: 250 W
Weight: 10.7 kg

KOWOLUX X3

Article no. 13 40080

Luminance, max.: 300,000 Cd/m² *)
Film density, max.: 4.5 D **)
Rated power: 400 W
Weight: 11.8 kg



*) Luminance in delivery state is approximately 10 % higher than specified

**) maximum evaluable film density according to ASTM E 1390, ISO 5580, DIN EN 25580

KOWOLUX X4 series

Viewer for X-ray films of weld seams. Together with available Iris lens it is a universal tool.

Viewing screen: 225 x 80 mm (for films 10x24 cm)
Dimensions: 305 x 220 x 205 mm (WxDxH)

KOWOLUX X4eco

Article no. 13 40101

Luminance, max.: 160,000 Cd/m² *)
Film density, max.: 4.2 D **)
Rated power: 125 W
Weight: 6.8 kg

KOWOLUX X4

Artikel Nr. 13 40100

Luminance, max.: 300,000 Cd/m² *)
Film density, max.: 4.5 D **)
Rated power: 200 W
Weight: 6.9 kg



KOWOLUX X5

Article no. 13 40120

The X5 was especially designed for evaluation of X-ray films of turbine blades. But it is also perfectly suitable for images of weld seams or castings with high optical density.

Viewing screen: 150 x 110 mm (for films 13x18 cm)
Dimensions: 305 x 220 x 205 mm (WxDxH)
Luminance, max.: 500,000 Cd/m² *)
Film density, max.: 4.7 D **)
Rated power: 300 W
Weight: 7.2 kg



KOWOLUX X6 series

Viewer for large format X-ray films with high optical density.

Viewing screen: 380 x 270 mm (for films 30x40 cm)
Dimensions: 530 x 320 x 440 mm (WxDxH)

KOWOLUX X6eco

Article no. 13 40601

Luminance, max.: 100,000 Cd/m² *)
Film density, max.: 4.0 D **)
Rated power: 340 W
Weight: 22 kg

KOWOLUX X6

Article no. 13 40600

Luminance, max.: 160,000 Cd/m² *)
Film density, max.: 4.2 D **)
Rated power: 500 W
Weight: 25 kg



KOWOLUX X7

Article no. 13 40140

The X7 is equipped with a built-in Iris lens and offers a flat surface suitable for films of every size. Even "black" spots on films can be evaluated according to standards. With a special holder it is extremely suitable for viewing "hole type films" used in heat exchanger testing.

Viewing screen: Ø 4 ... 75 mm (IRIS)
Dimensions: 305 x 220 x 205 mm (WxDxH)
Luminance, max.: 1,100,000 Cd/m² *)
Film density, max.: 5.0 D **)
Rated power: 230 W
Weight: 8.0 kg



Scope of supply:

KOWOLUX X film viewer complete with:

standard attachment mask
power cord
foot switch
test certificate according to ASTM E 1390,
ISO 5580, DIN EN 25580
Certificate of Conformity
according to ISO/IEC 17050-1



Accessories:

KOWOLUX X series

Densitometer holder, universal	13 40087
KOWOSPOOL spooling device for roll films	13 40088
Spare air filter for X3 / X3eco, X6 / X6eco, 2 pack	13 40089
Spare air filter for X4 / X4eco / X5 / X7, 2 pack	13 40109



Attachment masks for X3 / X3eco

X3 – for films 10x48 cm	13 40091
X3 – for films 10x40 cm	13 40092
X3 – for films 10x24 cm	13 40093
X3 – for films 7x48 cm	13 40094
X3 – for films 6x48 cm	13 40095
X3 – for films 6x40 cm	13 40096
X3 – for films 6x24 cm	13 40097
X3 – hole Ø 30 mm, magnetic stop	13 40098
X3 – IRIS Ø 4 ... 75 mm	13 40099
X3 – slit 3 cm, magnetic stop and cover strips	13 40116

Attachment masks for X5

X5 – for films 13x18 cm	13 40131
X5 – for films 10x24 cm	13 40132
X5 – for films 6x24 cm	13 40133
X5 – hole Ø 30 mm, magnetic stop	13 40138

Attachment masks for X4 / X4eco

X4 – for films 10x24 cm	13 40111
X4 – for films 6x24 cm	13 40112
X4 – for films 10x48 cm	13 40113
X4 – for films 6x48 cm	13 40114
X4 – slit 3 cm, magnetic stop and cover strips	13 40117
X4 – hole Ø 30 mm, magnetic stop	13 40118
X4 – IRIS Ø 4 ... 75 mm	13 40119

Attachment masks for X6 / X6eco

X6 – for films 30x40 cm	13 40611
X6 – for films 24x30 cm	13 40612
X6 – for films 18x24 cm	13 40613

Attachment masks for X7

X7 – Ø 82 mm, magnetic stop	13 40147
X7 – for hole type films, special	13 40148

More masks for special applications upon request.



KOWOTEST

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GL Systems Certification