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.

Specification:

- Thermally cured crystal glass viewing screen with 95% translucency
- Plug-in foot switch – viewer also operable without foot switch
- Two controls for brightness, 0.2 ... 100 %
- 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.:	200,000 Cd/m² *)
Film density, max.:	4.3 D **)
Rated power:	250 W
Weight:	10.7 kg

KOWOLUX X3
Article no. 13 40080

Luminance, max.:	320,000 Cd/m² *)
Film density, max.:	4.5 D **)
Rated power:	400 W
Weight:	11.8 kg

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.:	200,000 Cd/m² *)
Film density, max.:	4.3 D **)
Rated power:	125 W
Weight:	6.8 kg

KOWOLUX X4
Artikel Nr. 13 40100

Luminance, max.:	320,000 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.:	630,000 Cd/m² *)
Film density, max.:	4.8 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.:	130,000 Cd/m² *)
Film density, max.:	4.1 D **)
Rated power:	340 W
Weight:	22 kg

KOWOLUX X6
Article no. 13 40600

Luminance, max.:	200,000 Cd/m² *)
Film density, max.:	4.3 D **)
Rated power:	500 W
Weight:	25 kg

KOWOLUX 14X17 series

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

Viewing screen:	14x 17 inch (430x355 mm)
Dimensions:	530 x 320 x 440 mm (WxDxH)

KOWOLUX 14X17eco
Article no. 13 40651

Luminance, max.:	80,000 Cd/m² *)
Film density, max.:	3.9 D **)
Rated power:	450 W
Weight:	23 kg

KOWOLUX 14X17
Article no. 13 40650

Luminance, max.:	160,000 Cd/m² *)
Film density, max.:	4.2 D **)
Rated power:	600 W
Weight:	26 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

*) Luminance in delivery state is approximately 10 % higher than specified
**) maximum evaluable film density according to ASTM E 1390, ISO 5580, DIN EN 25580

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 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 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

More masks for special applications upon request.

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
X6 – for films 10x48 cm	13 40614
X6 – for films 10x24 cm	13 40615

Attachment masks for 14X17 / 14X17eco
14X17 – for films 14x17 inch	13 40661
14X17 – for films 7x17 inch	13 40662
14X17 – for films 8x10 inch	13 40663
14X17 – for films 5x7 inch	13 40664

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

KOWOTEST
Gesellschaft für Prüfausrüstung mbH