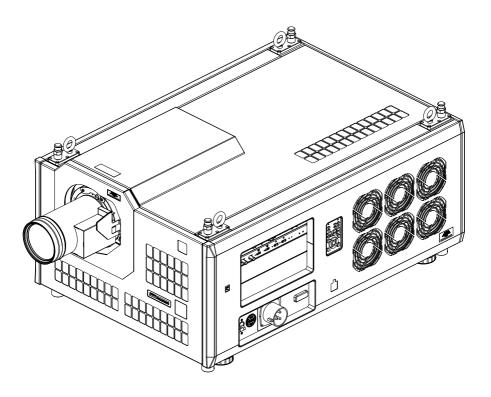


# INSIGHT Dual Laser 4K Series

# **Important Information**



Rev A June 2017 118-533A

### Important Information

# **Digital Projection**

### **Digital Projection Limited**

Greenside Way, Middleton Manchester M24 1XX, UK

Registered in England No. 2207264 Registered Office: as above

Tel (+44) 161 947 3300 Fax (+44) 161 684 7674

enquiries@digitalprojection.co.uk service@digitalprojection.co.uk

www.digitalprojection.co.uk

# Digital Projection China

中国 北京市 朝阳区 芍药居北里101号 世奥国际中心A座2006室(100029)

Rm A2006 ShaoYaoJu 101 North Lane Shi Ao International Center Chaoyang District Beijing 100029, PR CHINA

Tel (+86) 10 84888566 Fax (+86) 10 84888566-805

techsupport@dp-china.com.cn www.dp-china.com.cn

### Digital Projection Inc.

55 Chastain Road, Suite 115 Kennesaw, GA 30144, USA

Tel (+1) 770 420 1350 Fax (+1) 770 420 1360

powerinfo@digitalprojection.com www.digitalprojection.com

### **Digital Projection Asia**

16 New Industrial Road #02-10 Hudson Technocentre Singapore 536204

Tel (+65) 6284-1138 Fax (+65) 6284-1238

www.digitalprojectionasia.com

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Symbols used in the User Manual

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Full information about operating, connecting and setting up the projector can be found in the User Manual, located on the CD.

Updates may be available online - visit the Digital Projection website for all latest documents.

# Symbols used in the User Manual



LASER WARNING: this symbol indicates that there is a potential hazard of eye exposure to laser radiation unless the instructions are closely followed.



LIGHT HAZARD WARNING: this symbol indicates that there is a danger of exposure to intensive light that may result in personal injury unless the instructions are closely followed.



ELECTRICAL WARNING: this symbol indicates that there is a danger of electrical shock unless the instructions are closely followed.



WARNING: this symbol indicates that there is a danger of physical injury to yourself and/or damage to the equipment unless the instructions are closely followed.



NOTE: this symbol indicates that there is some important information that you should read.



Specifications are subject to change without notice.

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# **Electrical and physical specifications**

Main Voltage 200-240 VAC 50/60Hz
Operating Temperature 0°C to 35°C (32 F to 95 F)
Storage Temperature -10°C to 50°C (14 F to 122 F)
Operating Humidity 20% to 80% non-condensing

Dimensions: W 72.2 cm (28.4 in), H 47.9 cm (18.9 in), D 100.3 cm (39.5 in)

Weight 100 kg (220 lb) without lens

Power Consumption 4000 W

Thermal Dissipation 13,650 BTU/hr

## Laser precautions



### **CLASS 3R LASER PRODUCT**

This Laser Product is designated as Class 3R during all procedures of operation.

LASER LIGHT - AVOID DIRECT EYE EXPOSURE.

Do not point laser or allow laser light to be directed or reflected toward other people or reflective objects.

Direct or scattered light can be hazardous to eyes and skin.

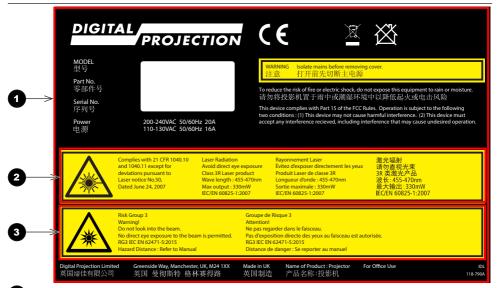
There is a potential hazard of eye exposure to laser radiation if the included instructions are not followed.

Caution – use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Parameters:

Wavelength 455nm - 470nm

### **Product labels**



1 Manufacturer's ID label

Includes model name, serial number, manufacturer's name and address.

Also contains the Certification Statement label and Explanatory label, as well as the Risk Group 3 label.

- Certification Statement label and Explanatory label States that the product is Class 3R and shows laser parameters. Also shows a Laser Hazard Warning symbol.
- Risk Group 3 label
  States that the product is Risk Group 3 according to IEC 62471-5:2015.
  Also shows a Light Hazard Warning symbol.

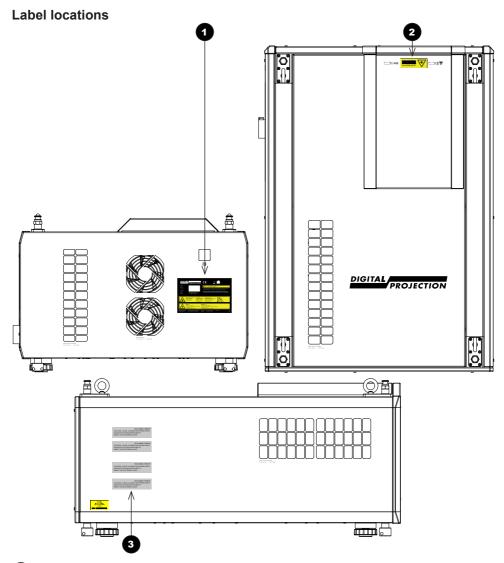


4 Hazard Warning Symbol and Aperture label

M2-S1-00003-170309-39 CAUTION- CLASS 4 LASER LIGHT WHEN OPEN AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED LIGHT

5 Protective Housing label

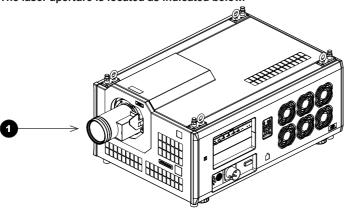
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- Location of Manufacturer's ID label, including the Certification Statement label and Explanatory label and the Risk Group 3 label on the projector
- 2 Location of Hazard Warning Symbol and Aperture Label on the body of the projector
- 3 Location of Protective Housing label (under the side cover, only visible once the cover is removed)

# Location of laser aperture

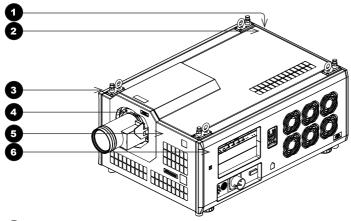
The laser aperture is located as indicated below.



1 Laser aperture

### Interlock switches

Six interlock switches installed at the main frame, inside the cover, will power-off the system individually when activated.



1 Will be activated when the back cover is removed.

Will be activated when the top cover is removed.

Will be activated when the right side cover is removed.

Will be activated when the projection lens is removed.

Will be activated when the front cover is removed.

Will be activated when the left side cover is removed.

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# **General precautions**



The unit is never to be operated if the unit is defective or the cover or seal is damaged.

No maintenance allowed by end user.

Do not open the cabinet. There are no user serviceable parts inside.

No service is allowed except by authorized personnel.

Use only the power cable provided.

Ensure that the power outlet includes a Ground connection, as this equipment MUST be earthed.

Take care to prevent small objects such as paper or wire from falling into the projector. If this does happen, switch off immediately, and have the objects removed by authorised service personnel.

Do not expose the projector to rain or moisture, and do not place any liquids on top of the projector.

Unplug before cleaning, and use a damp, not wet, cloth.

Do not touch the power plug with wet hands.

Do not touch the power plug during a thunder storm.

Handle the power cable carefully and avoid sharp bends. Do not use a damaged power cable.



Do not touch the ventilation outlets, as they will become hot in use.

Do not cover or obstruct the ventilation outlets or inlets.

Do not cover the lens whilst the projector is switched on. This could cause a fire

Always allow the projector to cool for 5 minutes before disconnecting the power or moving the projector.

Never use strong detergents or solvents such as alcohol or thinners to clean the projector and lens.

# Installation precautions



Connect the LAN cable only to a computer LAN connection. Other similar connectors may have a dangerously high voltage source.

The projector must be installed only by suitably qualified personnel, in accordance with local building codes.

The projector should be installed as close to the power outlet as possible.

The power connection should be easily accessible, so that it can be disconnected in an emergency.

Ensure that there is at least 50cm (19.7in) of space between the ventilation outlets and any wall, and 30cm (11.8in) on all other sides.

Do not install the projector close to anything that might be affected by its operational heat, for instance, polystyrene ceiling tiles, curtains etc.

Place the projector in a dry area away from sources of dust, moisture, steam, smoke, sunlight or heat.

The projector is heavy. Use safe handling techniques when lifting the projector.

Do not drop or knock the projector.

Before installation, make sure that the surface, ceiling or rigging that is to support the projector is capable of supporting the combined weight of the projector and lens.

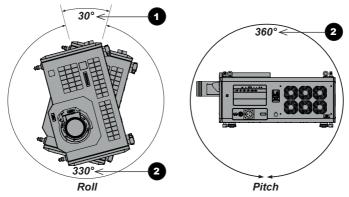
When stacking projectors, the stack MUST be vertical, to ensure that the stresses are distributed to all four chassis corners.

Do not stack more than 3 projectors.

Do not place heavy objects on top of the projector chassis. Only the chassis stacking points and the optional grab rail are capable of withstanding the weight of another projector.

Backup safety chains or wires should always be used with ceiling mount installations.

The projector can be operated in any position. It is recommended to position the projector in portrait mode with inputs facing upward, as shown in the diagram:



**0 2** 

Recommended positions: inputs side up

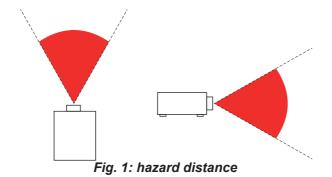
Also possible

# Light hazard warning



Failure to comply with the following may result in serious injury:

- No direct exposure to the beam is permitted, RG3 IEC 62471-5:2015.
- Operators control access to the beam within the hazard distance or install the projector at sufficient height to prevent exposures of spectators' eyes within the hazard distance.

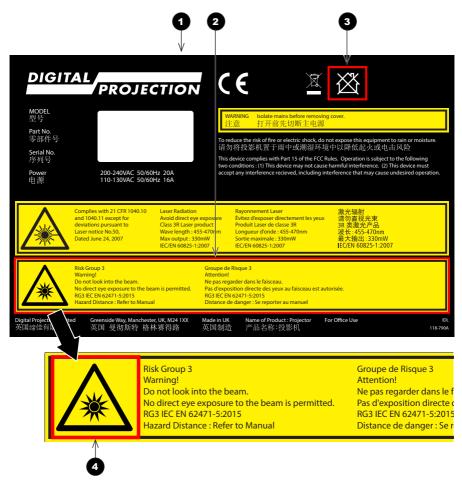


The **hazard distance (Fig. 1)** is the distance measured from the projection lens at which the intensity or energy per unit of surface is lower than the applicable exposure limit on the cornea or skin. If the person is within the hazard distance, the beam is considered unsafe for exposure.

The hazard distance for this projector is 12 m.

## Light hazard labels used on the body of the projector

Light hazard labelling is part of the product label.



- Product label
- 2 Risk Group 3 label
- 3 Not For Home Use logo
- 4 Hazard Warning symbol

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# Operation and configuration precautions



Do not make changes to the networking configuration unless you understand what you are doing, or have taken advice from your Network Manager. If you make a mistake, it is possible that you will lose contact with the projector. Always double-check your settings before pressing the APPLY button. Always keep a written note of the original settings, and any changes you have made.

Software update should NOT be carried out except by, or with the supervision of, Digital Projection Service personnel.

# Compliance with international standards



### RF Interference

FCC

The Federal Communications Commission does not allow any modifications or changes to the unit EXCEPT those specified by Digital Projection in this manual. Failure to comply with this government regulation could void your right to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant with Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference, in which case the user will be responsible for correcting any interference.

### Noise

GSGV Acoustic Noise Information Ordinance

The sound pressure level is less than 45 dB (A) according to ISO 3744 or ISO 7779.

# European Waste Electrical and Electronic Equipment (WEEE) Directive



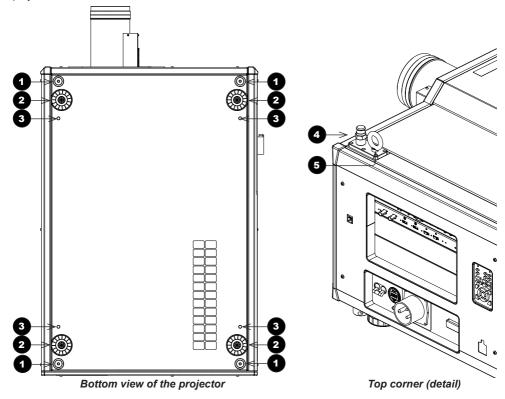
Digital Projection Ltd is fully committed to minimising Waste Electrical and Electronic Equipment. Our products are designed with reuse, recycling and recovery of all components in mind. To this end, at end of life, your projector may be returned to Digital Projection Ltd or its agent so that the environmental impact can be minimised.

# **Basic operation instructions**

### Positioning the screen and projector

- 1. Install the screen, ensuring that it is in the best position for viewing by your audience.
- 2. Mount the projector, ensuring that it is at a suitable distance from the screen for the image to fill the screen. Set the adjustable feet so that the projector is level, and perpendicular to the screen.

The drawings below shows the feet for table mounting, and the fixing holes for ceiling mounting. Also shown is one of four rings each located in the top corners. These can be used for lifting a single projector.





Never use the rings for lifting more than one projector.

Four stacking points

2 Four adjustable feet

Four M10 holes for ceiling mount
The screws should not penetrate more than 18 mm into the body of the projector.

Stacking point at the top of the projector

Lifting ring (for handling a single projector)

The rings can be removed to reveal M10 x 18 deep holes for ceiling mounting.

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# Connecting the power supply

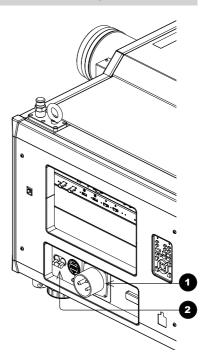
Firmly push the mains connector into the **socket** 1, then press the **ON/OFF switch** 2.



Use only the power cable provided.

Ensure that the power outlet includes a ground connection as this equipment MUST be earthed.

Handle the power cable carefully and avoid sharp bends. Do not use a damaged power cable.



# Switching the projector on

- 1. Connect the power cable between the mains supply and the projector. Switch on at the switch next to the power connector. (See **Connecting the power supply** above.)
- 2. Wait until the self-test has completed and the standby indicator on the projector keypad shows amber. The light source will be off and the projector will be in STANDBY mode.
- 3. Press **ON** on the remote control or the control panel and hold for three seconds, to switch the projector ON. The power indicator on the control panel will show green, the light source will light and the shutter will open.

# Switching the projector off

- Press **OFF** on the remote control or the keypad, and hold for three seconds. The power indicator
  on the keypad will show amber, the light source will go out and the cooling fans will run for a short
  time until the projector enters STANDBY mode.
- 2. If you need to switch the projector off completely, switch off at the mains power switch next to the power connector and then disconnect the power cable from the projector.

### Selecting an input signal

The last selected input remains active until a new input is selected. To select a new input:

- 1. Connect one or more image sources to the projector.
- 2. Select the input you want to display in one of the following ways:
  - Press one of the input buttons on the remote control (1, 2, 3 or 4).
  - Alternatively, open the On-screen display (OSD) by pressing MENU. Highlight Input from the main menu, press ENTER/OK and then select an input signal using the UP and DOWN arrow buttons. Press ENTER/OK to confirm your choice.
  - On the keypad, press INPUT + or INPUT to switch to the next or previous input in the list.

### Adjusting the lens

The lens can be adjusted using the lens buttons on the keypad or remote control.

On either device, press **FOCUS**, **ZOOM** or **SHIFT**, then use the arrow keys to adjust the lens.

### Adjusting the image

### Orientation

This can be set from the OSD menu.

Choose from Upper Left, Upper Middle, Upper Right, Mid Left, Mid Middle, Mid Right, Lower Left, Lower Middle and Lower Right.

### **Picture**

Settings such as Gamma, Brightness and Contrast can be set from the Image menu.

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# Inserting a new lens



Before changing the lens, always make sure the projector is switched off and fully disconnected from its power supply.



When changing the lens, avoid using excessive force as this may damage the equipment.



The lens is shipped separately.



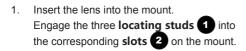
Take care to preserve the original lens packaging and protective caps for future use.

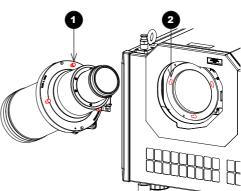


The projector will not power on without the lens fitted.

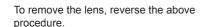


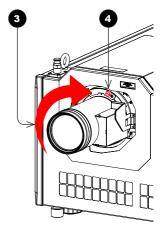
Before turning on the projector, please ensure the protective caps are removed from the front and rear of the lens.





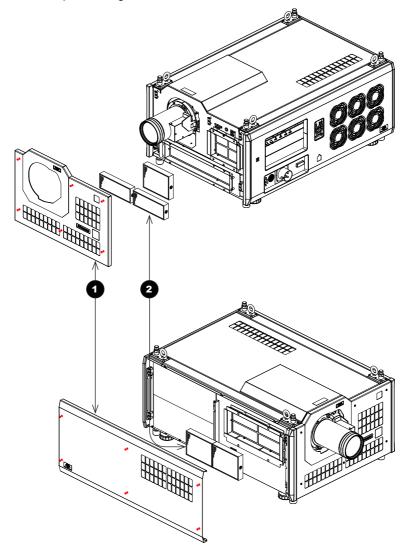
- Rotate the lens clockwise 3 until the studs slide all the way into the slots.
- Tighten the two **fixing screws** 4 on the lens collar.





# Replacing the filters

- 1. Loosen the six captive screws, then remove the front/side **panel** 1.
- 2. Replace the **filters 2**.
- 3. Reattach the panel and tighten the screws.



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### Remote control reference

The remote control is shipped with no battery fitted. Remove the back cover and insert the supplied cells while observing the correct cell polarity.

Transmit indicator

Flashes when the remote sends a signal to the projector. Lights solidly when the projector is in FOCUS. ZOOM or SHIFT ADJUSTMENT mode.

- 2 Power ON / OFF
- FOCUS

Press for FOCUS ADJUSTMENT mode, use the arrows to make the adjustment.

- 4 Shutter OPEN / CLOSE
- 5 Input selection

Select input source. Press:

1 for HDMI A, 2 for HDMI B, 3 for DisplayPort A and 4 for DisplayPort B

- Remote control backlight ON / OFF
  Make the remote control keys glow in the dark,
  or switch this feature off.
- CAL

Press and hold this key, then press **FOCUS** or **ZOOM** to calibrate focus or zoom respectively.

ZOOM

Press to enter ZOOM ADJUSTMENT mode, then use the arrow keys to make the adjustment.

9 SHIFT

Press to enter SHIFT ADJUSTMENT mode, then use the arrow keys to make the adjustment.

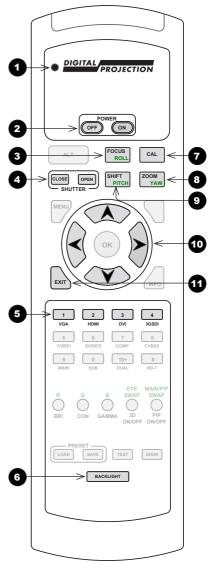
Arrow keys

Use these keys for focus, zoom and shift.

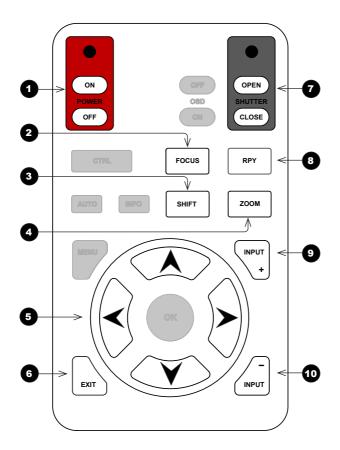
1 EXIT

Exit lens adjustment modes.

- Not all keys are used on this projector. The unused keys are grayed out.
- You can use the remote control wirelessly or with a standard TRS cable.
- When a new lens is fitted, a calibration procedure must be carried out.
- When adjusting focus or zoom, UP and LEFT will focus/zoom in, DOWN and RIGHT will zoom out. When adjusting shift, each arrow key moves the image in the corresponding direction.
- When you enter FOCUS, ZOOM or SHIFT ADJUSTMENT mode, all other remote control functions become unavailable. To cancel an adjustment mode, either press EXIT or wait ten seconds.



# **Keypad reference**



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- 1 POWER ON/OFF (with indicator)
- FOCUS

Use with the arrow keys to adjust focus.

Press to enter FOCUS ADJUSTMENT mode, then press an arrow key to focus the image. To exit FOCUS ADJUSTMENT mode, press **EXIT** or wait 10 seconds.

3 SHIFT

Use with the arrow keys to move the projected image.

Press to enter SHIFT ADJUSTMENT mode, then press an arrow key to move the image. To exit SHIFT ADJUSTMENT mode, press **EXIT** or wait 10 seconds.

4 ZOOM

Use with the arrow keys to zoom the image in or out.

Press to enter ZOOM ADJUSTMENT mode, then press an arrow key to zoom the image. To exit ZOOM ADJUSTMENT mode, press **EXIT** or wait 10 seconds.

5 Arrow keys

Use with **FOCUS**, **SHIFT** and **ZOOM** to make adjustments.

6 EXIT

Use to exit lens adjustment modes.

SHUTTER OPEN/CLOSE (with indicator)

8 RPY

Press, then press **RIGHT** to calibrate zoom.

Press, then press **LEFT** to calibrate focus.

9 INPUT +

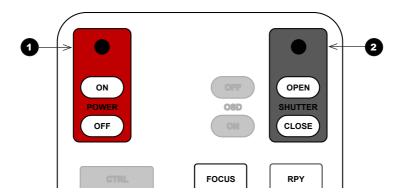
Switches to the next available input source. Cycle through the inputs in the following order: ...HDMI A, HDMI B, DisplayPort A, DisplayPort B...

10 INPUT –

Switches to the previous available input source. Cycle through the inputs in the following order:

...DisplayPort B, DisplayPort A, HDMI B, HDMI A...

# **Keypad indicators**



Power indicator

Behavior Meaning

Off The projector is switched off.

On (amber) The projector is in Standby mode.

On (green) The projector is switched on (Normal mode).

Shutter indicator

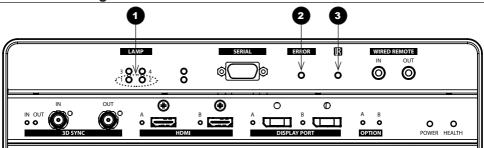
Behavior Meaning

On (amber) The shutter is closed.

On (green) The shutter is open.

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# Laser status lights



1 Lamp 1 and 2 indicators

These indicators correspond to the two laser light sources within the projector. (Lamp 3 and 4 remain switched off.)

Behavior		Meaning
Off		The laser light source is switched off.
On (green)	Ŏ	The laser light source is switched on (100%).
On (amber)		The laser light source is switched on (30-99%).
Flashing (red)	- <u></u>	Light Source Error

2 Error indicator

Behavior		Meaning
On (red)		Error
Flashing	-``—	Error

3 Infrared indicator

Behavior		Meaning
Flashing (blue)	-)	The projector is receiving input from the remote control.