



# Professional laser projectors

Spring / Summer 2017



PRO|SCENE



## Why laser?

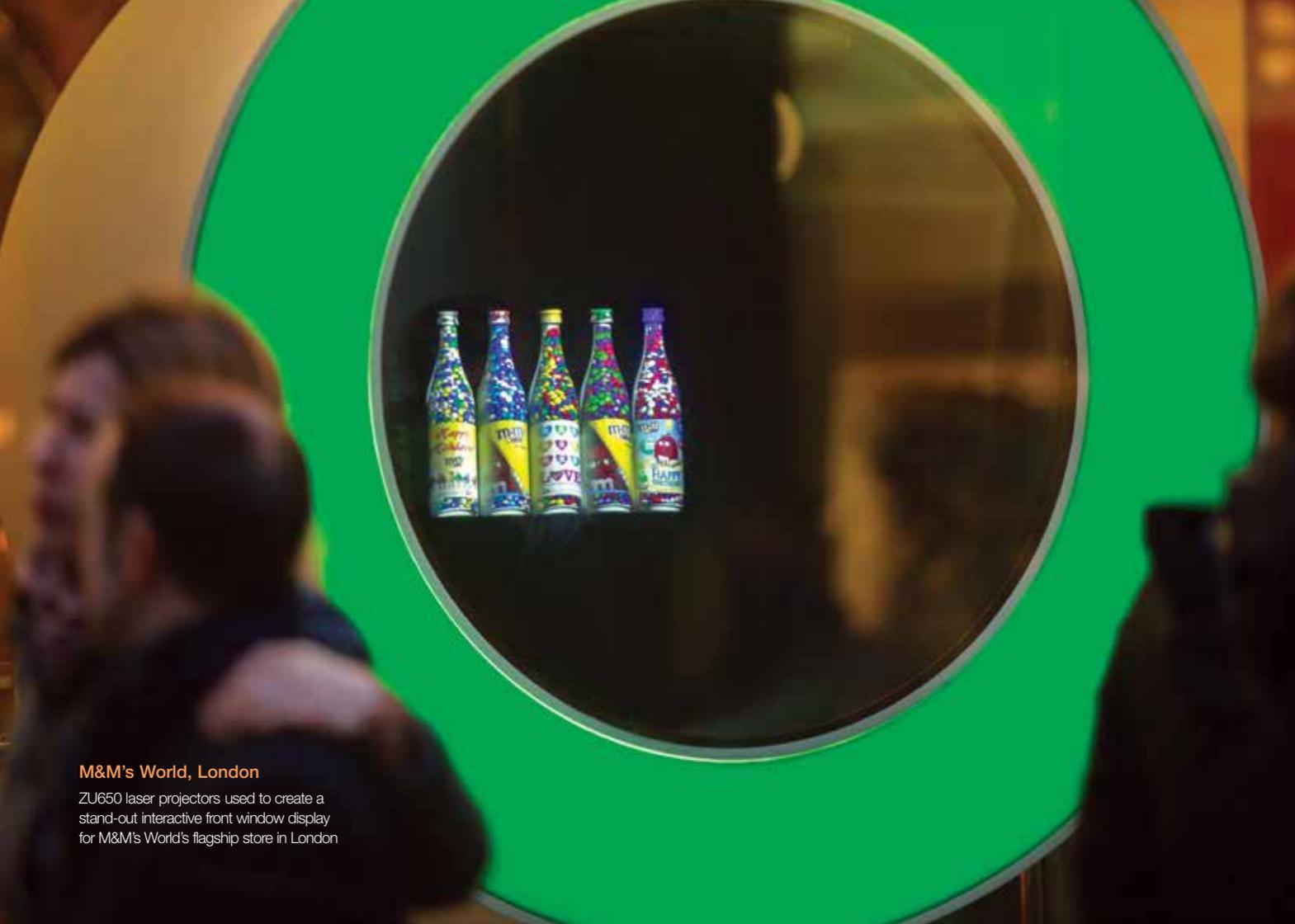
Optoma champions a wide range of professional laser projectors which offer key advantages over conventional lamp based models.

As a result, laser projectors are increasingly becoming the light source of choice for professional applications. The long-life and low maintenance of laser phosphor projectors make them ideal in high-use settings like boardrooms, classrooms, retail environments, museums and entertainment venues as well as restrictive installation locations.

### Key advantages of laser projectors:

- ✓ Minimal maintenance
- ✓ No lamp replacements
- ✓ Instant power on/off
- ✓ Versatile installation
- ✓ High brightness and contrast
- ✓ Superior colour reproduction
- ✓ Consistent brightness





### M&M's World, London

ZU650 laser projectors used to create a stand-out interactive front window display for M&M's World's flagship store in London

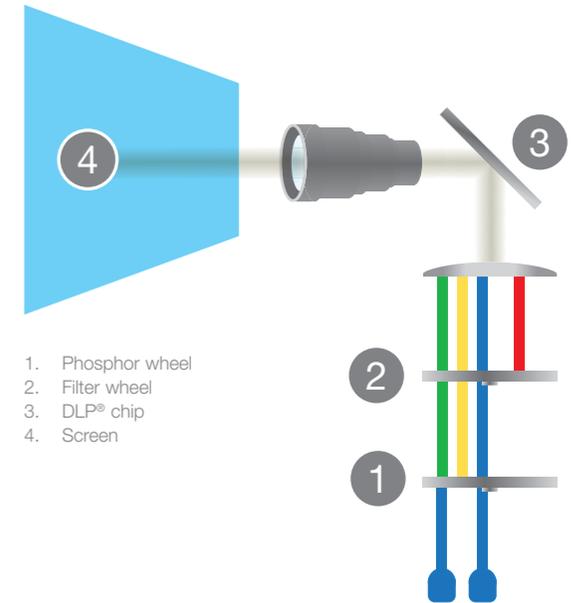
## What is laser phosphor?

Laser phosphor is a lamp-less illumination technology that uses blue laser diodes as the light source instead of a lamp to illuminate the DLP® chip.

The laser diodes shine blue laser light onto a phosphor wheel to create yellow light, while the blue laser light passes directly through an opening in the phosphor wheel and then through a diffusion window on the filter wheel. Red and green colours are created when the yellow light passes through the corresponding section of the filter wheel. These colours are then directed onto the DLP® chip.

Optoma uses DLP® technology for its highly acclaimed image quality and unmatched reliability. The DLP® chip can vary in resolution and size and can contain a rectangular array of over eight million micromirrors. Each of these micromirrors reflect light through the projector lens and onto the projection surface, creating an image.

The images displayed are high contrast, judder-free and consistently bright. The main benefits of laser phosphor projectors are longer life, 24/7 operation capability, consistent dependable brightness, minimal maintenance and low total cost of ownership which make this technology the number one choice of the professional.





## Ultimate colour performance with MCL technology

Select models feature unique MCL (MultiColor Laser) technology. MCL adds a second red laser to the more usual blue. The result is greatly improved colour performance and a colour gamut that covers 99% of Rec. 709 standard.

## Optoma MCL technology

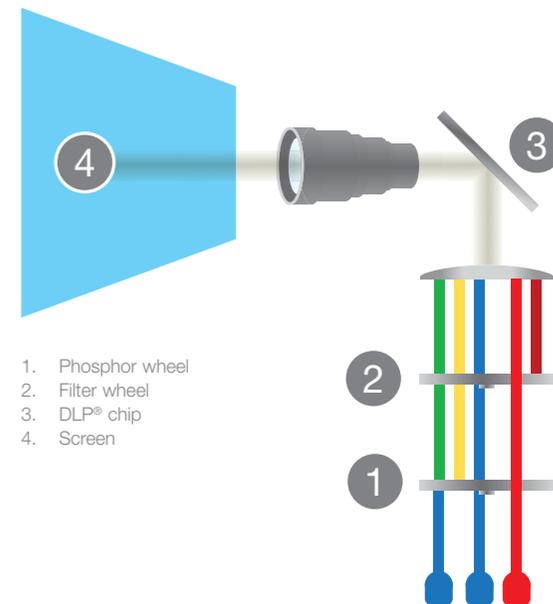
More vivid and vibrant colours.



MCL



Non MCL





## DuraCore laser technology

Optoma's DuraCore laser installation projectors are precision engineered to deliver exceptionally lifelike, rich images over years of 24/7 continuous operation whilst maintaining consistent high brightness, installed in any orientation.

DuraCore delivers a minimum of 20,000 hours of operation in full brightness mode with an independent dust certification of IP5X or IP6X. With inbuilt innovative laser diode cooling techniques, the projector runs more efficiently, uses less power and is compact and quiet.

This combination ensures longer lifetime, exemplary consistent high brightness with virtually no maintenance.



## Benefits of DuraCore laser technology

Unique to Optoma, DuraCore offers an industry-leading lifetime of the light source, delivering a minimum of 20,000 hours consistent brightness in full brightness mode, 24/7 continuous operation and an independent IP dust resistant certification.



### Compact and lightweight

Higher thermal cooling efficiency enables a compact light weight design.



### Quiet operation

Advanced cooling and energy efficient design enables exceptionally quiet operation.



### Maintenance-free

With virtually no maintenance required, the total cost of ownership is significantly reduced; free from lamp replacements, labour and downtime.



### Independent IPX dust certified

Dust resistant; independently certified to IEC standards with either a rating of IP5X or IP6X, the projected images remain as detailed as the first day they were installed. Robust, reliable with no reduction of picture quality beyond 20,000 hours, DuraCore is the ultimate "fit and forget" technology.



### Versatile installation

Images can be projected over a full 360 range along the vertical axis, including reproduction a ceiling or floor. The projector can also be placed in portrait mode for applications such as digital signage or for areas with restricted space.



### Continuous 24/7 operation

Designed for continuous 24/7 operation; only the most dependable, industry proven components are used for ultimate reliability.



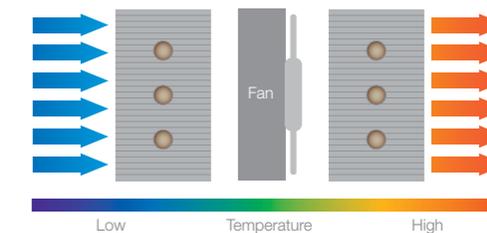
### Advanced cooling

DuraCore technology boasts innovative advanced laser diode cooling architecture which prolongs the lifetime of the optical engine. Refer to 'Advanced cooling' diagram.

## Advanced cooling

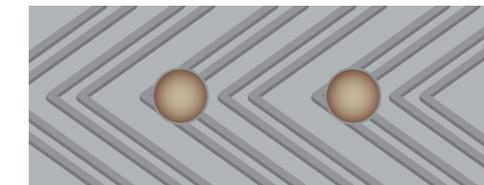
### Sandwich structure

An innovative configuration of the heat pipes, fans and thermal fins enables increased system heat dissipation.



### V-shape structure on thermal fins

Precision engineered thermal grooves on each individual cooling fin increase heat dissipation, resulting in higher efficiency of the laser diode and overall longer laser diode lifetime.



## DuraCore laser vs. conventional lamp projectors

DuraCore laser is precision engineered with a dust resistant optical engine independently IP certified. This ensures a long lasting, reliable and maintenance free light source beyond 20,000 hours in full brightness mode.

All light sources decay over time. After 20,000 hours in full brightness mode, DuraCore laser will still deliver 50% of the original brightness. Equivalent lamp based projectors do not maintain consistent brightness and would require 8x lamp changes within 20,000 hours.

DuraCore laser projectors are maintenance free with no serviceable parts or dust filters inside for a lower total cost of ownership.

DuraCore lamp-less laser light source



Lamp based light source



-  Lamp x 8
-  Labour x 8
-  Downtime x 8

## DuraCore laser projectors

	ZU850	ZU650+	ZU510T	ZH510T
				
<b>Display technology</b>	DLP	DLP	DLP	DLP
<b>Native resolution</b>	WUXGA	WUXGA	WUXGA	1080p
<b>Brightness<sup>1</sup></b>	8200 centre lumens (8000 ANSI lumens)	6000 centre lumens (5500 ANSI lumens)	5500 centre lumens (5300 ANSI lumens)	5400 centre lumens (5000 ANSI lumens)
<b>Light source type</b>	Laser phosphor (MultiColor Laser)	Laser phosphor	Laser phosphor	Laser phosphor
<b>Light source expected lifetime (max hrs.)<sup>2</sup></b>	20,000	20,000	30,000	30,000
<b>IP rating</b>	IP6X	IP5X	IP5X	IP5X
<b>Warranty</b>	5 years or 12,000 hours light source, 3 years projector	5 years or 12,000 hours light source, 3 years projector	5 years or 12,000 hours light source, 3 years projector	5 years or 12,000 hours light source, 3 years projector
	<b>ZH400UST</b>	<b>ZH400USTi</b>	<b>ZW400UST</b>	<b>ZW400USTi</b>
				
<b>Display technology</b>	DLP	DLP	DLP	DLP
<b>Native resolution</b>	1080p	1080p	WXGA	WXGA
<b>Brightness<sup>1</sup></b>	4000 ANSI lumens	4000 ANSI lumens	4000 ANSI lumens	4000 ANSI lumens
<b>Light source type</b>	Laser phosphor	Laser phosphor	Laser phosphor	Laser phosphor
<b>Light source expected lifetime (max hrs.)<sup>2</sup></b>	20,000	20,000	20,000	20,000
<b>IP rating</b>	IP5X	IP5X	IP5X	IP5X
<b>Interactive</b>	-	✓	-	✓
<b>Warranty</b>	5 years or 12,000 hours light source, 3 years projector	5 years or 12,000 hours light source, 3 years projector	5 years or 12,000 hours light source, 3 years projector	5 years or 12,000 hours light source, 3 years projector



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