

professional projector series

## FL32 series

Failsafe ReaLED™ technology

Predictable TCO

Unmatched colour display

24/7 operation warranty



## professional projector series

The projectiondesign professional series of projectors includes high resolution, high performance products conceived and built especially for graphically challenging applications such as scientific visualisation, motion platform simulation, medical imaging, and public displays.

As our utmost concern is image quality and operational reliability, all professional series projectors are available with 24/7 operation warranties, and a wide range of configuration options to ensure the best possible application fit and customer satisfaction.

# FL32 series

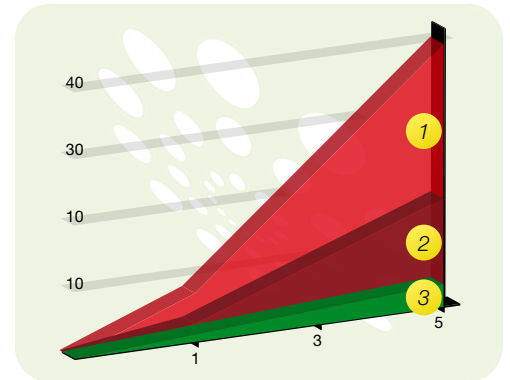
The FL32 is the first completely customisable professional front projector based on LED lighting and high resolution DLP® imaging technologies. projectiondesign's ReaLED™ technology provides unmatched predictability. With an incredible 100,000 hours uninterrupted light output, extremely low power consumption, no required recalibration or adjustments, and no lamp changes – it is the ultimate in reliability and low Total Cost of Ownership

### What is ReaLED™?

LED (Light Emitting Diode) lighting technology has been around for many years in all sorts of electronics and appliances. The main reason for this is its unique combination of reliability, low power consumption, and application adaptability. ReaLED is projectiondesign's implementation of high power LED lights; one per Red, Green, and Blue colour, and paired with our unique, patented optical design. This combination results in a large range of features that benefits the user in every possible way.

### Predictable Total Cost of Ownership

Mission critical installations and applications are everywhere. From process control and infrastructure and utilities monitoring, through safety and defence applications, projectors are expected to run 24/7 year after year. The FL32 series is designed to do this effortlessly, and unlike traditional discharge lamp based projectors, the FL32 does not require periodic lamp replacements, and can be run for years with only the most basic maintenance. Additionally, with its low power consumption, operating and owning costs become extremely low, and totally predictable.



The cost difference of a running a traditional two-lamp projector for 5 years in 24/7 (1) and 12/6 (2) compared to an FL32 with ReaLED technology at 24/7 (3) is substantial.

### Real benefits from ReaLED technology

ReaLED technology addresses numerous performance aspects with traditional lamp based systems. Lamps change performance characteristics as they go through their usable lamp life by changing colour temperature, reducing their light output, and becoming more likely to experience premature shut off. ReaLED stays completely stable over its entire life time, maintaining consistent light output and accurate colours. And,





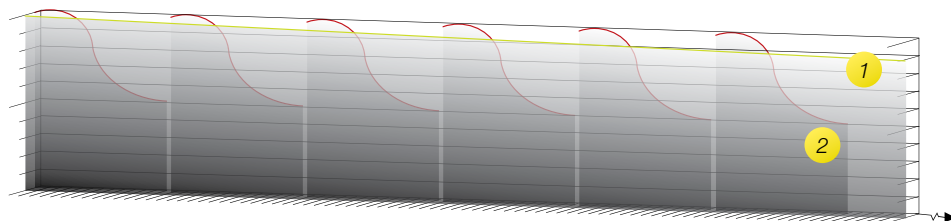
Projectors used in multichannel simulators and visualisation systems are susceptible to periodic maintenance and calibration to be performing well. Images courtesy of Anticyp Simulation.



#### FL32 with RealColor

As with all projectiondesign professional projectors, each FL32 projector is uniquely characterised and calibrated during the last stages of its manufacture. Unique optical performance values are

importantly, it is very unlikely to experience any premature shut down, and if it does, it will not damage itself, or any other part of the projector.



ReaLED technology keeps the projector light output near constant over its entire lifetime (1), spanning as much as 50 sets of traditional discharge lamps, and negating the requirements of re-calibration and adjustments during operation. Traditional lamps can drop as much as 50% of their light output during their operating life (2), making it time consuming and costly to maintain in a multi-channel system.

#### Greatly enhanced image quality

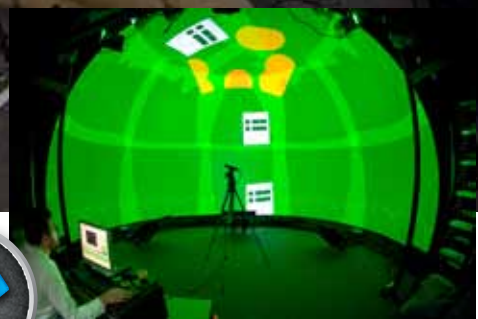
Using ReaLED technology improves on image quality in many ways. When paired with single chip DLP technology, ReaLED replaces the rotating colour wheel, and increases the active colour cycle to 24x per frame of content. The result is a near elimination of any sequential colour and disturbing processing artefacts, and reducing colour smear and blur with fast moving images. But one of the greatest features of LED lighting is its ability to reproduce any visible colour. Using three independent LED sources, colours are pin sharp, with the accuracy of lasers. Primary colours are extremely precise, and LED provides a much larger, and more accurate colour gamut than any other lighting technology – perfect for anyone looking to reproduce accurate, natural colours.



recorded and matched to the electronics processing in order to secure perfect on-site calibration. With RealColor, it is possible to match any number of projectors, and ensure they all project the same primaries and grey scale, without going through a very complicated process.

#### Colour matching and consistency of image

Anybody familiar with multi-channel displays and setups will recognize the fact that display tiles based on standard discharge lamps change over time. The stability of ReaLED means that it stays completely consistent over time, and does not alter in output, neither in brightness nor in colours. In reality, what that means, is that all tiles of a specific display will look the same after years of use.



#### Security and network manageable

Fully networkable, vital projector settings and features can be set through the built-in web page, thus allowing remote asset management. Optional projectiondesign software, ProNet.Manager, can be used to asset manage, monitor, and control an unlimited number of projectors in single, or multiple sites. The ProNet.Installer version also handles colour management, matching and performance over time.

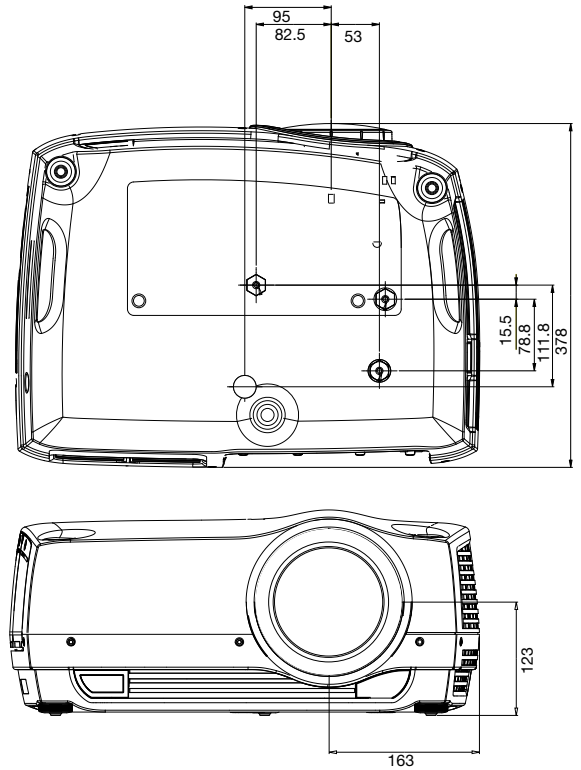
#### Precision projection lens optics

A great advantage with the FL32 series is the range of six different HD resolution projection lenses, inherited from the F32 series projectors. Proven in resolution, performance, and range, all lenses are very high quality to provide the image clarity and performance one demands from a high performance projector.

## Technical specifications

<b>projector</b>	LED based DLP® digital projector
<b>display</b>	technology concept available resolutions brightness contrast ratio
	0.95" / 0.98" DMD™ with RealLED™ technology all-glass optical design with lens shift 1920 x 1200, 1920 x 1080 about 600 ansi lumens infinite (not measurable) sequential up to 7500 : 1 adjusted
	colour depth colour management accuracy image processing latency
	30-bit ± 0.002 on x, y, z axis ~ 22 ms on graphics port up to 1920 x 1200 pixels
<b>input signal compatibility</b>	computer
	RGBHV, RGBS, RGsB
	horizontal scan frequency vertical scan frequency video
	15 - 150 kHz 48 - 190 Hz HDTV (1080i, 720p, 576i/p, 480i/p)
	bandwidth
	NTSC 3.56/4.43, PAL BGHI, M, N, SECAM 205 MHz analog RGB 165 MHz digital RGB (DM or HDMI)
<b>optics</b>	available lenses
	0.79 : 1 ultra wide angle 1.16 : 1 wide angle 1.24 - 1.60 : 1 wide angle zoom 1.60 - 2.32 : 1 standard zoom 2.37 - 3.79 : 1 short tele zoom 3.80 - 6.50 : 1 long tele zoom
	focusing distance optical lens shift
	0.5 - 40m (see separate lens specifications) vertical/horizontal (motorized) 1080 vertical: ± 125% horizontal: ± 84% WUXGA vertical: ± 117% horizontal: ± 84%
	mechanical shutter illumination lamp life (typical expected) colour cycles / frame
	yes, optical RealLED™ technology >100,000 hours up to 24x

<b>connectivity</b>	computer	1x HDMI (1.3) 1x DVI-D 1x 15-pin DSUB 1x BNC x5
	video	1x HDMI (v1.3) (HDCP) 1x DVI-D (HDCP) 1x RCA x3 YUV 1x 4-pin mini DIN Y/C 1x RCA composite video
	control and communication	1x RJ45 TCP/IP network port 2x RS232 9-pin DSUB (in / out) 1x USB – mouse control & firmware upgrade 2x 12V (60mA) triggers (screen drop / aspect) 1x RC repeater, 3.5mm mini jack
	other	2x configurable XPort™ (front- / back end) cables 4m power cord (country dependant)
<b>supplied accessories</b>	other	backlit IR remote control, ceiling mount cable cover
<b>general</b>	dimensions (dwh)	product documentation 376 x 510 x 223 mm (ex. lens)
	weight	about 14 kg (ex. lens)
	environmental	RoHS, WEEE
	security	4-digit PIN code, Kensington lock
	power requirements	100 – 240 VAC, 50/60 Hz, +/- 10% <350W power consumption <1100 BTU/hr
	conformances	CE, CSA "C/US", FCC Class A, CCC
	operating temperature	0 – 40°C / 32 – 104°F, 0 – 1500 m 0 – 35°C / 32 – 95°F, 1500 – 3000 m
	operating and storage	20 – 90% RH
	available colours	black metallic, silver metallic
	warranties	limited 2 years parts and labour up to 5 years total extended warranty available. Conditions apply.



## Available versions

resolution	1920 x 1200	1920 x 1080
part number	101-1452-08	101-1451-08
Available colour: black metallic.		

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