projectiondesign ®

HIGH PERFORMANCE PROJECTORS

professional projector series
F80

WUXGA or 1080p resolution
3-chip DLP® technology
up to 8500 ANSI lumens
Advanced Color Optical Processing

DLP
TEXAS INSTRUMENTS

Pro**Net**
COMPATIBLE

projectiondesign®
HIGH PERFORMANCE PROJECTORS

Professional projector series

The projectiondesign professional series of projectors include high resolution, high performance products made and conceived especially for graphically challenging appllications such as scientific visualisation, motion 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.

F80 series

The projectiondesign F80 series of three-chip DLP® projectors is our top professional model, and is made for large screen imaging and the ultimate image quality for in demanding users.

Markets and applications

With its brightness, numerous configuration, performance, and warranty options, the F80 series is made for strict requirements. It is made for large screen imaging in auditoriums, staging, or other applications that require the ultimate in detail and reliability, such as multi channel imaging, or visualisation centres.

Key features

RealColor colour management provides completely unique colour management accuracy
Full 24 / 7 warranty covers any operating environment and installation requirement
DYnamicBlack™ gives totally unique dynamic range for a three-chip projector
ACOP optical colour processing enables user selectable color gamuts
3-chip DLP® technology for outstanding colours and dynamics
Choice of WUXGA and 1080p resolution options.

WUXGA or 1080p resolution

The projectiondesign F80 can be configured with either WUXGA or 1080p resolution for computer or video centric applications. In large auditoriums and with large screens, where computer imaging with maximum detail accuracy is the primary concern, 1920x1200 pixels (WUXGA) is the obvious choice, and fully compatible with the legacy 1600x1200 format. Furthermore, for video centric applications, the 1920x1080 (1080p) pixel resolution perfectly fits high defintion video and data. Additionally, for editing and video centric applications where a menu line, or additional inforamtion is needed on screen simultaneously with the unaltered 1080p video image, WUXGA resolution gives just that.

Three chip DLP

Three chip DLP technology is renowned for producing formidable on-screen images, and combines the DLP reliability and accuracy for even better colours . With a wealth of brightness from the 3-chip engine's high efficiency, and many options for accurately adjusting colour and brightness performance, the F80 series can be tailored to suit a a vast number of of applications, focusing on large screen video centric displays and events.

DLP technology
– chosen for reliability

The DLP technology from Texas Instruments® is chosen for its unmatched reliability performance, and its unique coupling with long lasting image quality. With a widely recognized and proven reliability record, and high brightness and contrast, all whilst displaying utterly natural colours, it is the obvious choice for heavy duty applications, or applications that are that run continuously, or are mission critical. Independent testing has proven DLP technology to be the most reliable of all microdisplays; not degrading when subjected to UV light, inherent in all projectors. Unlike competing technologies, showing severe image quality degradation after only a few thousand hours, DLP technology remains constant over hundreds of thousands of hours.

projectiondesign®
HIGH PERFORMANCE PROJECTORS

California Academy of Sciences, California, USA.

The California Academy of Sciences in San Fransisco, USA, uses more than 30 projectiondesign projectors in various configurations.

A wide range of lenses, from ultra wide 0.74 : 1 to 6.24 : 1 gives unique flexibility in installations and placement of product.

Precision projection lenses

The F80 series features a wide range of custom designed, precision ground projection lenses for the best quality imaging, and the most secure and reliable setup. Key features include infintely adjustable IRIS and aperture settings, and motorized zoom, focus and lens shift with memory for use in multiple settings and installations with programmed calibration and screen setups. Most importantly, every single lens uses Low Dispersion (LD) aspherical glass and aspherical lens elements for high quality focusing and sharpness, as welll as high optical interfield contrast, resulting in very high image quality. Unlike many competing projector ranges, the lenses are designed and made with high resolution in mind, not taking standard, off the shelf lenses for use in higher performance applications. The range of lenses span from an an ultra wide angle 0.74 : 1, to a long tele zoom at 6.24 : 1, and comprises five lenses.

revolutionary
colour
performance

Advanced Color Optical Processing

The F80 series projectors feature new and revolutionary projectiondesign optical color processing technology. By combining fixed and motorised optical filters for each colour channel, the projector can be optically calibrated with near infinite accuracy. It also means that by the flick of a switch, you can change the projected colour gamut from standard computer graphics optimized, to comply with for instance REC709 (High Definition programming) All this without any loss of bit depth, as the compensation is purely optical, and not electronic. Unlike competing projectors, where colour calibration is based upon a simple yellow notch filter to change the green point of the picture, or simply by changing electronic values, ACOP is vastly superior in all aspects.
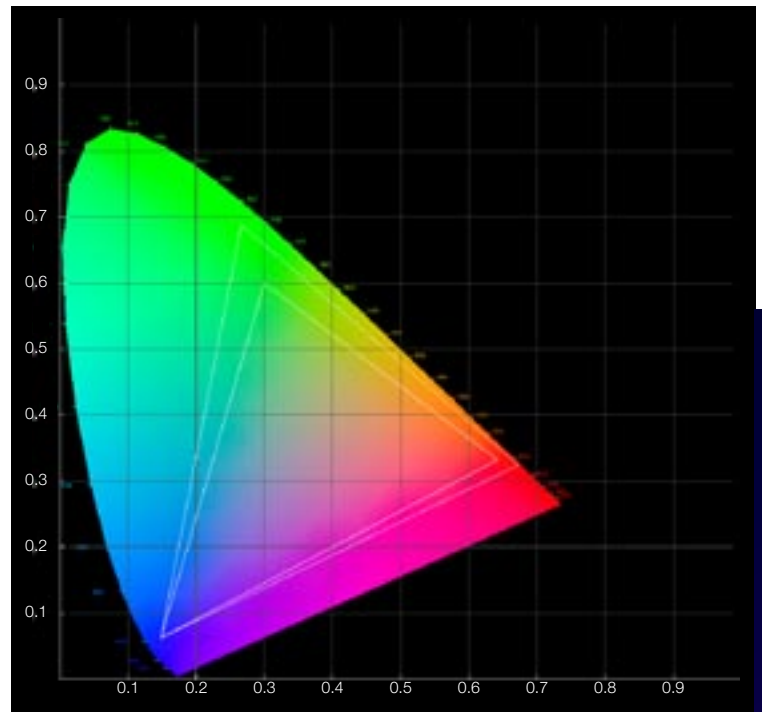
RealColor colour calibration

Each F80 projector is uniquely characterised and calibrated during its manufacture. Unique optical performance values are 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.

What RealColor gives

RealColor provides a unique and quick way to calibrate and set up perfect images for any number of projectors. RealColor can alter imagery by changing simple characteristics such as the colour temperature of the image – perfectly along the black body curve, or very complex things such as each colour's relative saturation and x/y coordiantes. In fact, it is perfect to within 0.002 along all axes of measurement. RealColor works by mathematically calculating each colour independently.

DynamicBlack™ for outstanding dynamics

The F80 series features unmatched dynamics amongst large venue projectors. The unique DynamicBlack™ functionality can automatically adapt to the input histogram of the signal, and ajdust so that image output contrast is maximised at any one point in time. This creates much more dynamic imaging, and a more involving experience. If the DynamicBlack™ functionality is not desired, the user can manually adjust IRIS and settings to match a constant, desired output level, with constrast up to 15 000 : 1, and brightness levels to match that of the desired screen size requirement.

DynamicBlack™ automatically adjusts output to the input signal, and maximises available contrast in the image. The result is unmatched dynamic performance.

Colour matching

Like all other projectiondesign professional projectors, the F80 series features numerous possibilities and alternatives for matching of several projectors, so that they all appear and perform similarly. Actual colour matching is realized through several process steps, including that of hand selecting units that are very closely performing optically. Additionally, colour matching is realized using extensive features of the RealColor colour management suite, so that every single projector performs absolutely similarly.

applications and features

Low Total Cost of Ownership

Thanks to its complex and robust build and construction, the F80 series requires very little maintenance and in-life servicing. There are no user serviceable parts inside, and it does not have any filters or other parts that need periodical replacement. That means it does not require a costly and high frequency maintenance contract. Similarly, and compared to similarly performing Xenon high power lamps, lamp replacement cost is low*, and typical lamp life is long. In total, a very cost effective projector over time, resulting in a very low cost of ownership.

---

* When replacing lamps, it is adviced to use only original parts and accessories, as non original aftermarket lamps may reduce performance, damage the projector, and void warranties.

Low Frequency Maintenace programme

Our Low Frequency Maintenance programme can be set to automatically notify of required service and maintenace. When run continuously, moving parts such as fans and colour wheels require periodic replacement in order to secure and enable heavy duty, and continuous operation. With the F80, the shortest duty cycle of any one component – run in full power mode, is as long as 8000 hours, meaning a full year's operation in 24/7 without any maintenance. Add hot svwappable lamps to that, and you have a projector simply does not need to be turned off.
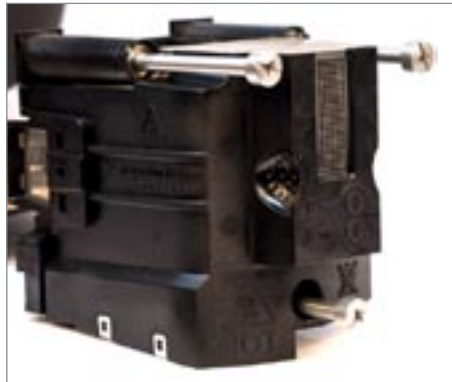
*Original lamp with projectiondesign optimised fixture mechanics.*

Designed for full 24/7 operation

All projectiondesign professional projectors feature full 24/7 operation warranties. That means they are designed to operate continuously. There is no fine print. Designing for 24/7 operation requires a lot of attention to detail. Some technologies are better than others when it comes to withstand the abuse of time. We use only components that have predictable behaviours, for instance fans, colour wheel motors, and electronic components that are designed by their respective manufacturers to do the same - withstand time. There are no off-the-shelf components. That is why we also closely monitor the creation of every detail, apply dedicated thermal management, and use specific materials in all parts of the process.

Changing lamps is easily done from the side of the projector.
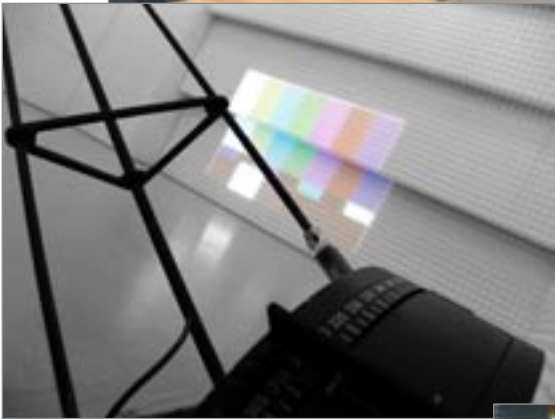
projectiondesign in-house EMC lab.

In-house acoustics lab.

RoHS compliant PCB assembly line.

Immaculate process management

Every single F32 projector is rigorously tested, and characterised in-house. We keep test records and performance statistics for every single unit. Also, as we put our pride into making great projectors, they are not passed down an automated production line, but enjoy the careful management of people at all stages of their manufacture. That also means we are personally responsible for all of them. In addition, every single projector is made to specific order. That means that the configuration ordered is the configuration built, and only existing in that particular installation.
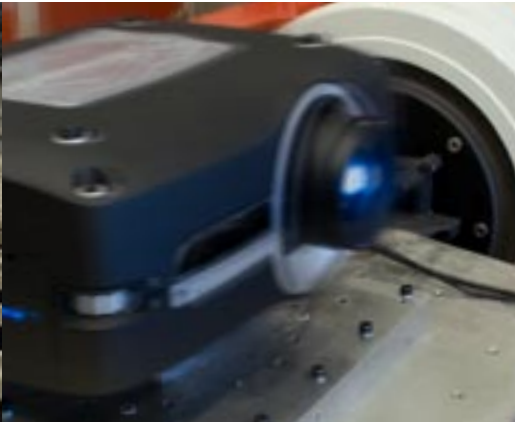
In house development and process management

Every single part of the F80 series projectors is developed, rigorously tested, and verified in-house at projectiondesign. With more than 800 models and variations of projectors in regular manufacture, test, research and verification facilities include everything from acoustical analysis labs, to a full featured FCC certified EMC lab, environmental labs for lifetime and operational testing, such as temperature variations and testing of vibration resistance, as well as our own optics lab and various test and demo .

projectiondesign warehouse is completely automatic.

*F80 series undergoing vibration testing.*

www.projectiondesign.com

Extensive input compatibility

Two discrete digital inputs, HDMI and DVI-D enables simple and source switching setups in smaller installations. Both inputs feature HDCP - High bandwidth Digital Content Protection. The F80 also features legacy formats such as RGBHV over VGA, and a 5-BNC input, in addtion to standard video formats. Importantly, the F80 features a projectiondesign unique interface, XPort™, for connection to third party modules, as well as standard modules provided by projectiondesign. Currently, an HD-SDI module is available for direct connection to such sources and formats.

ProNet Asset Management

Adding to the serviceability and in-life monitoring features, the projectiondesign ProNet.Manager asset management suite can be set up to monitor and report on an unlimted number of projectors in a dedicated or corporate network, in a single site, or in multiple sites. ProNet monitors every single aspect of the projector, from individual lamp and fan statuses, to operating hours, usage statistics, and any other related information.
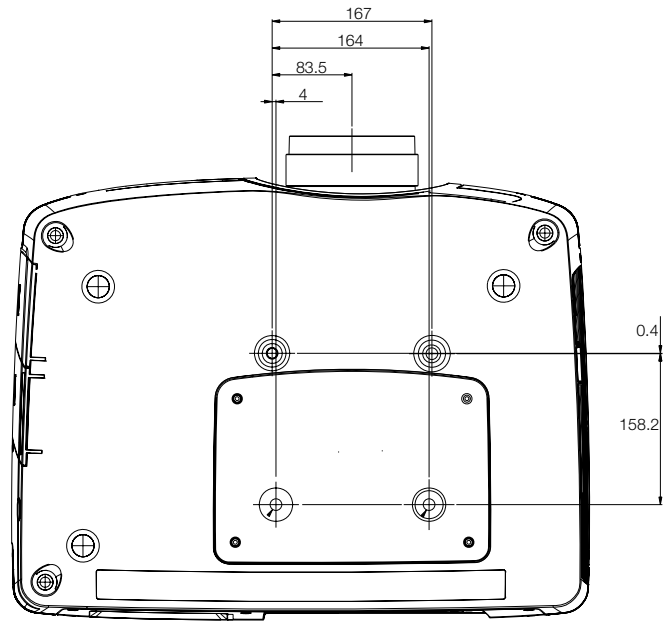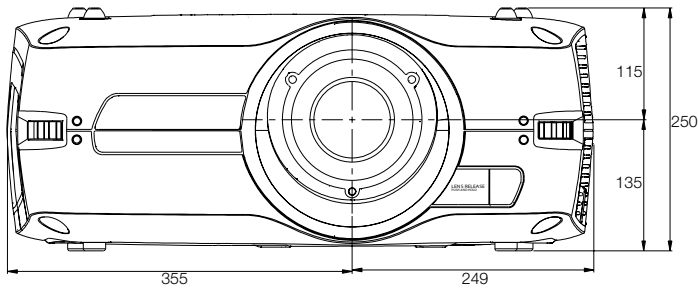
projectiondesign®
HIGH PERFORMANCE PROJECTORS

Technical specifications
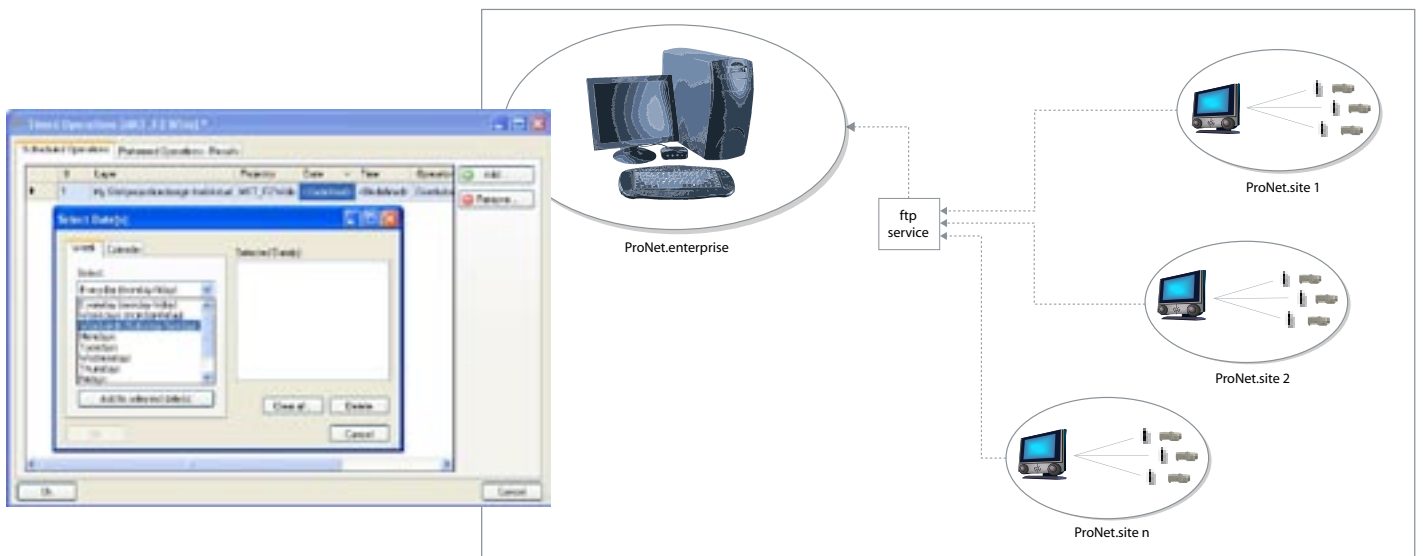
<div style="writing-mode: vertical">technical specifications</div>

projector		DLP® digital projector	
display	technology	three chip DMD™ (Digital Micromirror Device™)	
	concept	sealed, all-glass optical design with lens shift	
	available resolutions	1920 x 1200	1920 x 1080
	brightness	standard	8500	8000
		REC709	5500	5000
	contrast ratio	up to 15 000 : 1 (on/off) (automatically adaptive)	
	colours	30-bit	
	colour management accuracy	± 0.002 on x, y, z axis	
	image processing latency	~ 22 ms on graphics port	
input signal compatibility	computer	up to 1920 x 1200 pixels	
		RGBHV, RGBS, RGsB	
	horizontal scan frequency	15 - 150 kHz	
	vertical scan frequency	48 - 190 Hz	
	video	HDTV (1080i, 720p, 576i/p, 480i/p)	
		NTSC 3.56/4.43, PAL BGHI, M, N, SECAM	
	bandwidth	205 MHz analog RGB	
		165 MHz digital RGB (DVI or HDMI)	
optics	available lenses	fixed focal ultra wide angle	EN22 (503-0172-00)
		fixed focal wide angle	EN23 (503-0173-00)
		standard zoom	EN21 (503-0136-00)
		short tele zoom	EN24 (503-0174-00)
		short tele zoom	EN26 (503-0176-00)
	focusing distance	0.7 - 20m	
	optical lens shift	vertical and horizontal	
		EN22 on axis only	
	lens iris control	F/2.1 – 6.5 for all lenses, continuously adjustable	
	DynamicBlack™	user adjustable	
	shutter	mechanical	
	ACOP colour filters	standard RGB	
		REC 709	
	lamp	2 x 330W UHP™	
	lamp life	2000 hrs (max typical) (5000 hrs in eco relay mode)	
	replacement lamp part no.	400-0700-00	

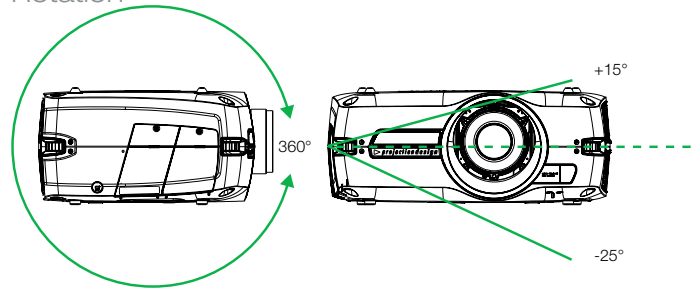| connectivity	computer	1x HDMI (1.3)
		1x DVI-D
		1x 15-pin DSUB
		1x BNC x5
	video	1x HDMI (v1.3) (HDCP)
		1x DVI-D (HDCP)
		1x RCA x3 YUV
		1x 4-pin mini DIN Y/C
		1x RCA composite video
	control and communication	1x RJ45 TCP/IP network port
		2x RS232 9-pin DSUB (in / out)
		1x USB – mouse control & firmware upgrade
		2x 12V (60mA) triggers (screen drop / aspect)
		1x RC repeater, 3.5mm mini jack
	other	2x configurable XPort™ (front- / back end)
supplied accessories	cables	4m power cord (country dependant)
	other	backlit IR remote control
		product documentation
general	dimensions (dwh)	505 x 604 x 250 mm (ex. lens)
	weight	about 24 kg (net, ex. lens)
		about 38 kg (shipping)
	environmental	RoHS, WEEE
	security	4-digit PIN code, Kensington lock
	power requirements	100 – 240 VAC, 50/60 Hz, +/- 10%
		<1050W power consumption
	BTU/hr	<2900
	conformances	CE, CSA "C/US", FCC Class A, CCC
	operating temperature	10 – 40ºC / 32 – 104ºF, 0 – 1500 m
		0 – 35ºC / 32 – 95ºF, 1500 – 3000 m
	operating and storage	20 – 90% RH
	available colours	soft touch rubber black matte
	warranties	standard 2 years, full 24/7 operation
		500 hours or 90 days on lamp
		up to 5 years total extended warranty available.
		conditions apply.

projectiondesign®
HIGH PERFORMANCE PROJECTORS

Standard bolt-on ceiling mount interface

115

250

135

355   249

167
164
83.5
4

0.4

158.2

Flexible vertical and horisontal lens shift

WUXGA: 117 %
1080: 124 %

WUXGA: 84 %
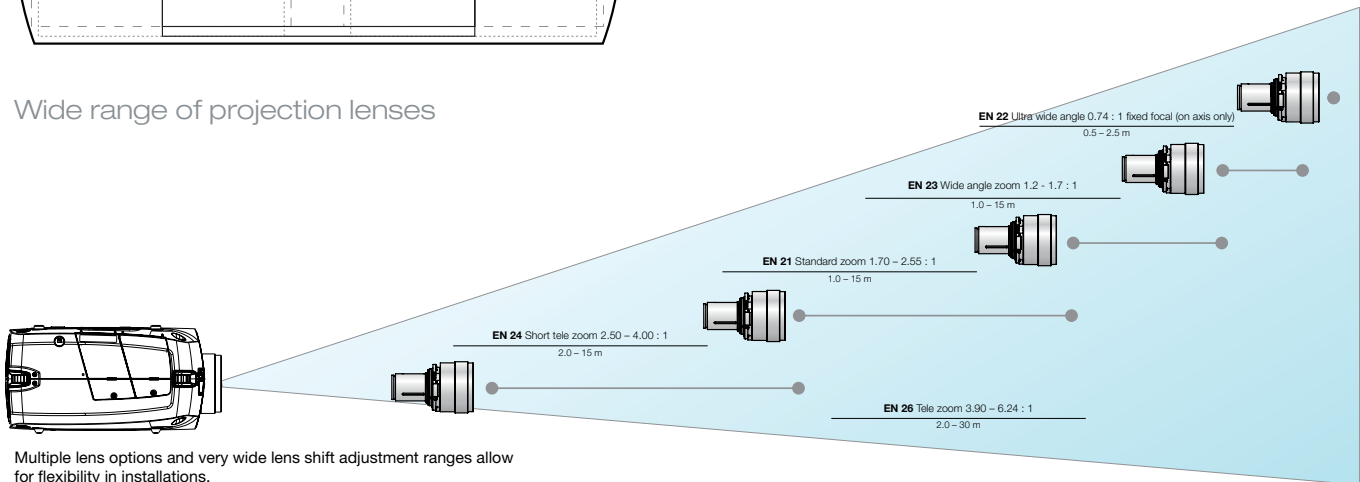1080: 89 %

WUXGA: 84 %
1080: 89 %

Rotation

+15°

360°

-25°

The F80 can be rotated 360 degrees around the side to side axis, and for instance project straight down or up, as well as +25/-15 degrees side to side.

Wide range of projection lenses

EN 22 Ultra wide angle 0.74 : 1 fixed focal (on axis only)
0.5 – 2.5 m

EN 23 Wide angle zoom 1.2 - 1.7 : 1
1.0 – 15 m

EN 21 Standard zoom 1.70 – 2.55 : 1
1.0 – 15 m

EN 24 Short tele zoom 2.50 – 4.00 : 1
2.0 – 15 m

EN 26 Tele zoom 3.90 – 6.24 : 1
2.0 – 30 m

Multiple lens options and very wide lens shift adjustment ranges allow for flexibility in installations.

Available versions

Model	Part Number
F80 1080	101-1600-08
F80 wuxga	101-1601-08

projectiondesign®

HIGH PERFORMANCE PROJECTORS

projectiondesign locations

head office

projectiondesign as
Habornveien 53
N-1630 Gamle Fredrikstad, Norway
ph +47 69 30 45 50
fx +47 69 30 45 80
sales@projectiondesign.com

regional offices

the Americas
projectiondesign LLC
295 North Street,
Teterboro, NJ 07608, USA
ph +1 888 588 1024
fx +1 201 288 1034
americas_sales@projectiondesign.com

Sweden
projectiondesign as
Göteborg, Sweden
ph +47 69 30 45 50
fx +47 69 30 45 80
sweden_sales@projectiondesign.com

Germany, Austria, Switzerland
projectiondesign as
Stuttgart
ph +49 7153 958263
mo +49 (176) 2316 0345
fx +47 69 30 45 80
germany_sales@projectiondesign.com

Southern Europe
projectiondesign as
Via Plinio 43, I-20129 Milano (MI), Italy
ph +39 02 45471864
fx +39 02 45471865
southe_sales@projectiondesign.com

BeNeLux
projectiondesign as
J. A. L. J. van Meertenstraat 4
4194WL Meteren, The Netherlands
ph +31 (0) 345753314
fx +31 (0) 345753314
benelux_sales@projectiondesign.com

United Kingdom
projectiondesign as
Regus House, Herons Way, Chester Business Park,
Chester, CH4 9QR, United Kingdom
ph +44 (0)1244 893 231
fx +47 69 30 45 80
uk_sales@projectiondesign.com

Asia
projectiondesign as
161 Kallang Way,
#04-05 Kolam Ayer Industrial Estate, Singapore 349247
ph +65 9621 7421
fx +47 69 30 45 80
asia_sales@projectiondesign.com

Spain and Portugal
projectiondesign as
Gorrondatxe15, bajo A
48640 Berango, Spain
ph 34 676 266 301
fx +47 69 30 45 80
iberica_sales@projectiondesign.com

India, including SAARC
projectiondesign as
Mumbai
ph +91 982 061 0670
fx +47 69 30 45 80
india_sales@projectiondesign.com

South Africa, Africa, Middle East and Oceania
projectiondesign as
1 Peterhof Close
Hout Bay 7806, South Africa
ph + 27 21 79 00 018
fx +47 69 30 45 80
africa_sales@projectiondesign.com
oceania_sales@projectiondesign.com

602-0190-00

www.projectiondesign.com