



# LED Lighting: Contents

Welcome to Essential	2
Scenic LED	3
MiTRIX	4
MiSTRIP	6
LED Set Enhancements	8
Schnick Schnack	9
LED Strips, Nodes & Tiles	10
LED Lighting	12
Battens	13
Pars & Floods	14



# Welcome to Essential

Service / Equipment / Quality / Reliability

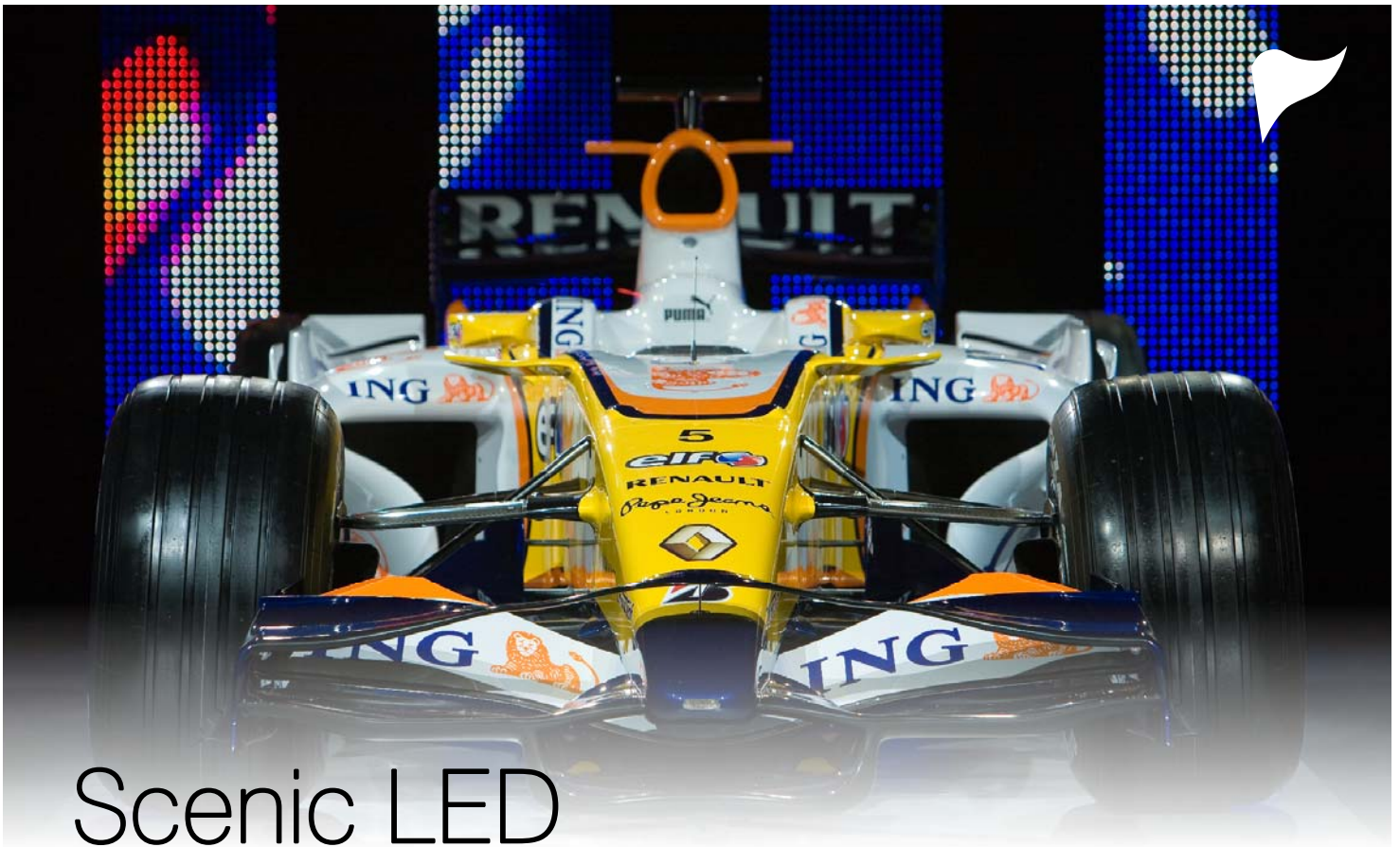
Essential Lighting is an established company focused on the supply of the highest quality equipment and services to the Live Event industry.

So why choose Essential?

It might be our proven track record - we have been supplying lighting equipment and services successfully since 1993.

It might be our reliability, meticulous attention to detail and focus on customer service, or our impressive and diverse inventory of lighting equipment. Or it could be the friendly and knowledgeable staff with years of experience in the lighting industry.

Whatever the reason you choose Essential, we believe that what really sets us apart from the competition is our personnel. Each member of staff is an expert in their own field and plays a vital role, and collectively they make a committed, approachable and talented team.



# Scenic LED

## Creative LED Modules

Scenic LED products involve sending an animated video image to a number of creative LED modules, forming the pixels of the image. There are a number of products currently on the market which sit on this increasingly hazy line between video and lighting.

Essential have selected the Barco's Mi-Trix and Mi-Strip Scenic LED products, to add to their hire stock, as these are the most exciting to the Live Event set or lighting designer. We are proud to be the first lighting company in the world to offer these contrasting and complementary products for hire, as part of a lighting system.

The modular systems offer a highly creative building block, allowing the scenic video image to be presented across an imaginatively constructed canvas, not simply a rectangular screen. These are an exciting new tools available to produce an entirely new and varied scenic look. These products are deliberately designed and selected to push creative boundaries and offer unlimited configurability options, both to the eye and to the camera.

Both the Mi-Strip & Mi-Trix products present a high degree of transparency, allowing creative scenic use by combining the products with traditional lighting and scenic techniques. The products can be integrated with many scenic materials and can be used as a transformation surface in a reveal sequence, in place of, for example, traditional gauze.

The content that is presented across this scenic vista can be either custom designed and produced or derived from the stock images on a Media Server. Full integration with the show and lighting system is achieved through the content being controlled and modified by connection of the media server to the show's lighting desk.



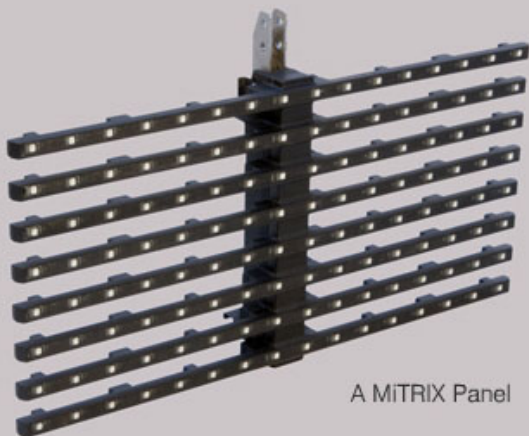
# MiTRIX

## Semi-transparent Scenic LED Modules

MiTRIX are highly transparent (55%), bright and lightweight LED modules for indoor and outdoor use. At 24mm pixel pitch and 3000 Nit brightness, they set a new standard of performance in creative scenic LED.

Based on the proven Barco OLite LED platform, the MiTRIX delivers outstanding image quality and excellent colour uniformity. The small size and low weight of the MiTRIX modules, in combination with the Directors Toolset software, enables an unprecedented degree of creative freedom.

With its all-metal construction and integrated smart power & data cabling system, MiTRIX is built to withstand the rigours of any event.



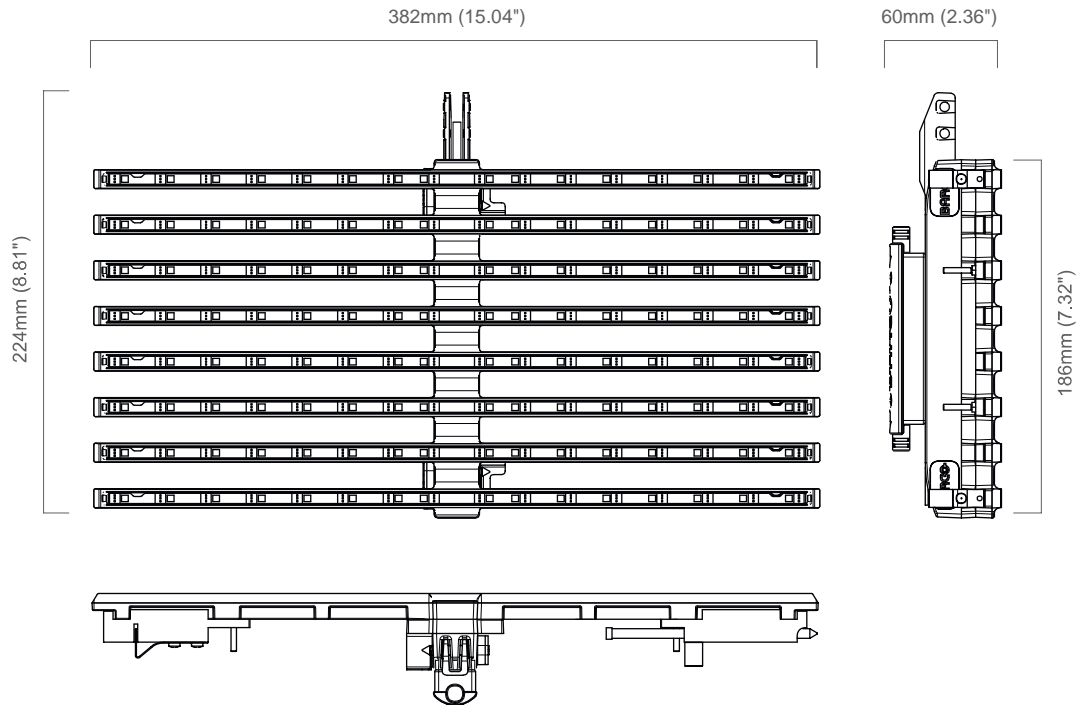
A MiTRIX Panel



The MiTRIX smart cabling system

# MiTRIX (cont)

## Technical Specifications



Pixel pitch	24 mm
Brightness	3,000 Nit
LED configuration	3-in-1 SMD
Pixel density	1,736 LEDs/m <sup>2</sup>
Viewing angle horizontal	> 145°
Viewing angle vertical	> 145°
Transparency (see through factor)	55%
Lifetime (full white, half brightness)	50,000 hours
Power consumption	50W/tile
Weight/tile	1.0kg
Processing	16-bit per color @ 50Hz
Colors	185 trillion
Refresh rate	800Hz minimum (PAL/NTSC)
Max. truss build-up	48 tiles high (9,2m)
Protection rating	IP65
Temperature range (operating)	-30 to +50°C
Humidity range (operating)	10 to 99%
D320 input compatibility	Data DVI up to UXGA, SDI, HD-SDI, S-video, composite, YUV
Certification	UL, CE, TUV, FCC Class A
Tile dimensions	382 x 186 x 60mm (incl. attached link cable)



# MiSTRIP

## Semi-transparent Scenic LED Modules

MiSTRIP is a creative pixel strip, setting a new standard for LED display technology in a wide variety of applications. From large free-form video displays to architectural visual design.

High brightness and tight pixel pitch in a slim, lightweight yet rugged package make MiSTRIP a true all-round performer. The possibilities with this innovative product include not only stunningly bright video displays of any size, shape or form but also lighting-type effects, all in one product.

MiSTRIP is also ideal for integration into stage sets, exhibition stands and interior, as well as exterior, architectural usage. IP65 protection rating and wide operating temperature range enable outdoor usage in any weather conditions. The built-in mounting track and smart cabling solutions make assembly of even very large systems fast and easy.

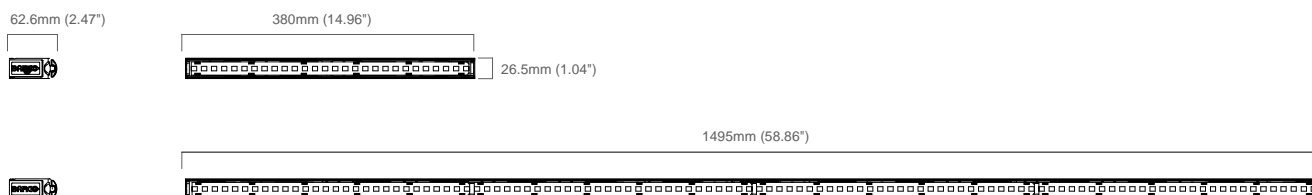
### Key benefits:

- High brightness enables usage in both outdoor as well as high bright indoor applications.
- High pixel density (13mm) makes creative high resolution displays possible.
- Flexibility in use; conventional screen or creative.
- Rugged, weather proof (IP65)
- Wide symmetrical viewing angle & short minimum viewing distances thanks to 3-in-1 RGB LEDs.
- Superior image quality. True 15-bit processing and LED level calibration ensure consistent colour and brightness uniformity.



# MiSTRIP (cont)

## Technical Specifications



Pixel pitch	13 mm
Luminous intensity	160 cd/m
Point brightness *	6100 Nit
Viewing angle (horizontal and vertical) **	145°
Operating temperature	-30°C - 45°C
Operating humidity range	10 - 90%, non condensing
Protection rating	IP65
LED configuration	3-in-1 SMD
Rated lifetime ***	50,000 hours
Color range	185 Trillion
Processing	15.8 bit / color
Refresh rate	800 Hz
Connection (power and signal)	d-Sub 25
Mounting	Multiple movable M6 threads on integrated track
Signal compatibility (via D320 processor)	Data DVI up to UXGA, SDI, HD-SDI, YUV, Composite, S-Video
Height	26 mm
Depth (excl. connector)	55 mm
Depth (incl. connector)	63 mm
Lengths	1500 mm / 750 mm / 380 mm
Certification	UL, CE, TUV, FCC Class A



# LED Set Enhancements

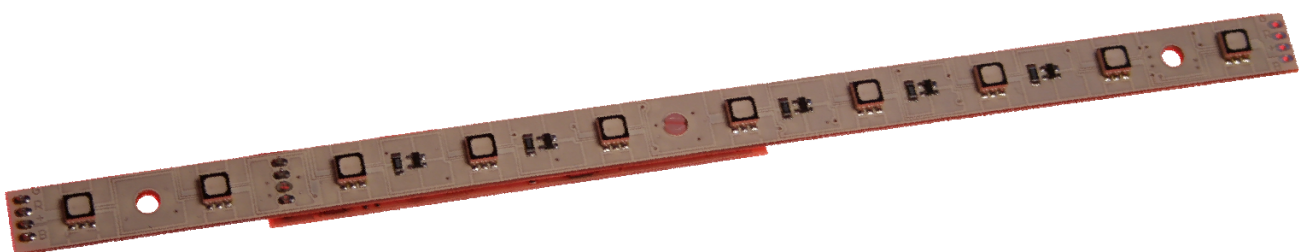
## LED Strips & Elements

LED Set Enhancements is made up from smaller, configurable LED modules or nodes, typically built into set, and used to enhance the architectural or decorative design. Their low heat and light weight make them ideal for backlighting in decorative elements such as stairs and surfaces or for emphasising edges and profiles.

### Schnick Schnack LED Strips

250 mm long and 13 mm wide, this circuit board contains 10 high output RGB-LEDs, each with a light emission angle of 110°.

Controlled by DMX, each strip can be assigned an RGB channel allowing simple colour changing and chasing. Ideal for outlining a stage, set elements or building in to a desk or lectern. Up to 132 strips (33m) can be controlled by a single integrated power & data unit over 6 channels.





# LED Set Enhancements (cont)



Schnick Schnack was heavily used to outline the stage, set and steps in the X-Factor live shows



Schnick Schnack can be extremely effective when used to enhance corporate set items such as lecterns.  
(Design & Photo credit: Ben Fox)

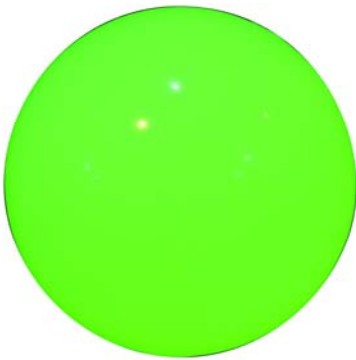
# LED Set Enhancements (cont)



## MR16 Module 6

The MR16 Module 6 uses simple RJ45 connectors are plugged in and out of each unit carrying data and power to each unit. The chain is simply completed by an RJ45 end terminator fitted to the last Module in the sequence.

The new Module 6 features improved colour mixing and now has a tapered shape to fit into even more interior, exterior and underwater housings. Furthermore for endless colour changing the RGB version offers 16 million colours when used in conjunction with Tryka IDS Drivers, which incorporate microstep control.



## ChromaSphere

The ChromaSphere is an exciting creative LED sphere that can be controlled to generate any colour!

It is available in seven diameters and three different power ratings of frosted polyethylene sphere and is internally illuminated with high-power LEDs. ChromaSpheres may be suspended or fixed using the stake supplied. They are designed for indoor and outdoor applications and an optional plinth is available to allow the ChromaSphere to be free standing.



## ChromaCube

ChromaCube is a frosted polyethylene cube internally illuminated with high-power LEDs allowing you to change it to any colour! The ChromaCube is easily suspended or fixed using the ground stake supplied. ChromaCube is ideal for indoor or outdoor use. It could also be used as decorative bricks and is often used to create eye-catching displays for TV and concerts.



## ChromaPanel

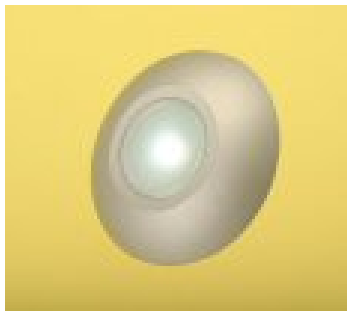
ChromaPanel utilises high power LEDs to create a vivid panel of colour making it ideal for suspended ceilings or wall displays. Available in two sizes, ChromaPanels are extremely flexible lighting fixtures that are used in architecture, television, studios, concert and interior design projects. Their lightweight constructions makes for easy suspension and installation.

# LED Set Enhancements (cont)



## ChromaStrip

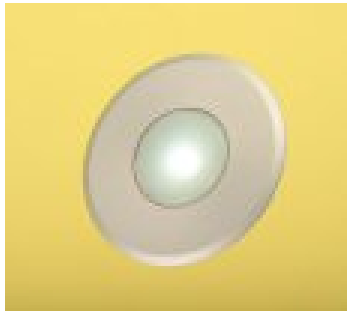
The ChromaStrip provides waterproof linear strips of colour mixing LEDs designed for concealed lighting and to highlight architectural features such as windows, doorways, coving or building structure outlines. Available in four lengths, each are capable of 20° or 90° beam angles by inverting the circuit board.



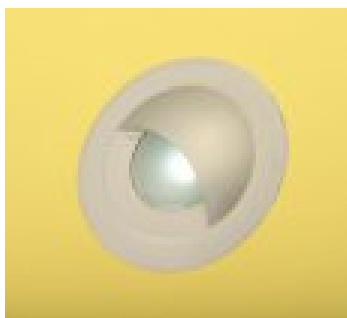
## Module 1 Dome, Flush & Eye-Flush

The Module 1 Dome, Module 1 Flush and Module 1 Eye-Flush are ultra compact light sources containing a single colour L.E.D. ideal for column lighting, drawing attention to a specific feature and more.

The IP65 rating makes them also suitable for certain outdoor applications.



Their compact size and high brightness mean the units can be easily used as an addition to existing lighting projects or as part of a new design, all to great effect.





# LED Lighting

## LED Pars, Floods & Battens

Major technological advances in Solid State or LED lighting has enabled it to become a credible alternative to conventional forms of lighting and has lead to the development of extremely bright LEDs.

The unique features of LEDs: low heat, long life, low energy consumption and RGB colour manipulation make a significant contribution to the lighting professionals toolkit

As the application of LEDs has become more widespread and diverse, for simplicity, we have sub divided the LED equipment into 3 categories. LED Lighting, encompasses all the product that have now become bright enough to be used as lighting tools, such as floods, battens and Pars.



# LED Lighting (cont)

## Battens



### Thomas Pixeline 1044

The PIXELline 1044 is an 18 cell, DMX controllable LED linear batten. When rigged end to end, It produces a 20 degree seamless wash of light and with its two sets of internal effects, it is a powerful lighting tool. The 1044 has also become popular as an alternative projection medium for video manipulation software.



### Colour Blaze 48

ColorBlaze™ is an intelligent high-performance LED batten, designed for washing large areas with rich saturated colours and colour changing effects. Its maximized light output offers a powerful solution for theatrical, entertainment, event, TV studio, and architectural applications. Each ColorBlaze 48 has 8 individual circuit board assemblies with 18 high-intensity 1W LED's per board making it controllable in 6" increments by a DMX512 controller.



### Colour Block DB4

The Color Block's modular design and comprehensive range of fixing options allows users to easily create a complete LED system using stock of just one generic fixture type - including battens, blinders and various mounting configurations using the built in fixing.



### Pulsar ChromaBank

ChromaBank contains 12 ChromaHearts packaged together in one linear lighting source featuring a total of 960 LEDs. It has a built in ChromaZone™ to power and control the unit, offering powerful internal effects and chases that can operate in stand-alone mode or with an external DMX/PMX controller. The fixtures use very little power and generate minimal heat.

# LED Lighting (cont)

## Pars



### Thomas Pixel Par 90

The PixelPar 90 is a high output solid state lighting projector containing 30 Red, Green and Blue 1w Luxeon emitters configured in a hexagonal array.

## Floods



### SGM Palco 3

SGM's new PALCO is a stylish architectural fixture for indoor and outdoor use (IP65). Three groups of Red, Green and Blue 3W LEDs make up the colour generation system. The PALCO does not require forced air cooling, resulting in silent operation. It can be controlled via standard DMX 512 using 6 control channels and with a number of on board effects, coupled with a stand alone Master / Slave feature makes the PALCO 3 an extremely versatile fixture.



### Color Blast 6 & 12

The ColorBlast® 6 and 12 are stylish, compact wall-washing lights that generate rich, uniform colours and colour changing effects.



- Mounting base allows for full pan and tilt rotation
- Base can be mounted to a junction box on a wall or ceiling
- A soft-tempered lens for a soft-edge (23°) beam of light, or a clear lens (10°) for extended light projection
- Housing equipped to affix attachments such as spread lenses and louvers
- Easily controlled via DMX512, a PC, or a range of Color Kinetics' controllers



### iPix Satellite

An extremely versatile unit boasting a wide range of colour palettes, super fast strobe rates and a variety of beam angles plus a powerful and innovative control interface.