

**Twister**<sup>TM</sup>  
for signs

*PFS1630 LED System for Signs*

## The Industry Standard In Small LED Systems

When the **Twister**<sup>TM</sup> was introduced in 2003, it gained immediate acceptance for its small form factor, range of color options, and bright output. When no other systems manufacturer could offer a white LED solution with a respectable level of brightness and high degree of color consistency, the Twister was quickly adopted by the sign industry as the LED solution for a variety of applications including high-visibility brand identity programs. The wide-spread adoption of the Twister has now resulted in one of the highest end-user installation base of any white LED system for signage to this day.

### Keeping The Twister

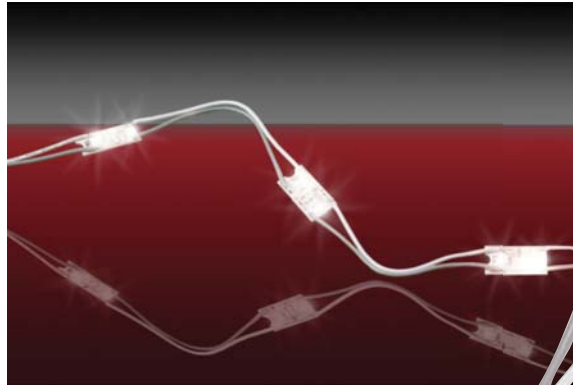
The Twister has been re-engineered and is now available in its original size, wide color options with equivalent light output. So what's been re-engineered?

Performance! The new Twister has been further optimized for peak operating efficiency. What used to consume nearly 0.8 Watts per module, in its first generation release, now consumes less than 0.4 Watts. That's a 100% increase in system efficiency!

### Twist It Longer

The new generation Twister operates at 12VDC, the operating voltage set by **Permlight for Signs**<sup>TM</sup> in all its LED systems for sign applications since 2000. This operating voltage consistency and no special tools required for installation

makes any Permlight for Signs product the simplest to install over any system currently available. With a much higher efficiency, installers can now benefit from longer installation runs per power supply. Permlight for Signs has opted to maintain the same light output of the original Twister enabling a higher degree of sustained compatibility with installations from nearly 4 years ago.



### More Twist; Less Buck

Compared to the original cost when it was first introduced, the new generation Twister is now more affordable offering significant savings in overall material cost.

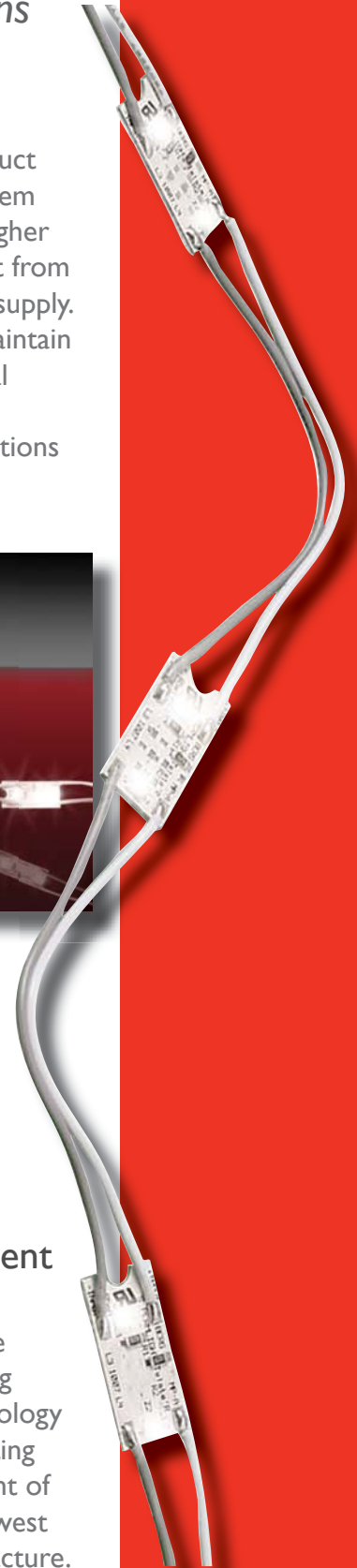
### Twister And The Environment

Customers can expect up to 100% more savings in operating cost. The system is also manufactured utilizing Permlight's patented thermal technology to efficiently maintain stable operating condition. Utilizing the least amount of parts, the system has one of the lowest overall carbon footprint to manufacture.

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PFSLM752-0309-07\_UK

**led  
modules**



**PERMLIGHT**  
for signs

**Technical Specifications**

Power Consumption.....(see color specification matrix)

Maximum Input Voltage ..... 12.3VDC

Estimated Life .....(see color specification matrix)

Operating Temperature @ 90% relative humidity ..... -40°C to +50°C

LED Module Dimension..... 12.70mm x 25.40mm

Recommendede Modules per Meter ..... 10

Content Per Package ..... 50 modules per package

System Certifications:

UL Recognized File ..... E213411

UL Classified File (retrofit applications)..... E246705

Product Warranty ..... 5 Year Limited (see Permlight for Signs website for details)

**Required Components**

30-12D-B-240.....30 Watt LED Driver(240VAC Input - 12VDC Output)

60-12D-B-240.....60 Watt LED Driver(240VAC Input - 12VDC Output)

120-12DC-B-240 ..... 120 Watt LED Driver(240VAC Input - 12VDC Output)

240-12DC-B-240 ..... 240 Watt LED Driver(240VAC Input - 12VDC Output)

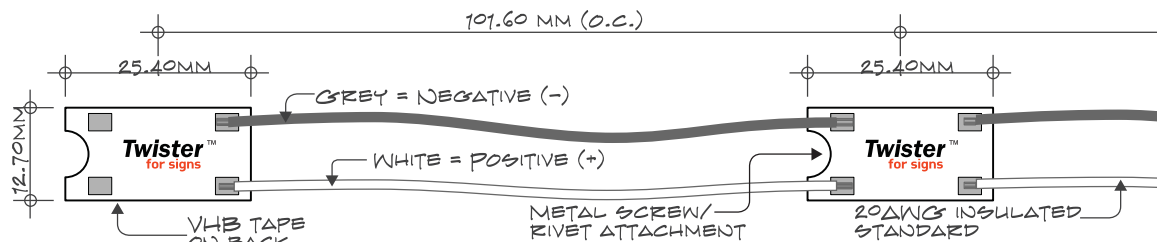
**Color Specification**

Part Number	Color: Wavelength (nm)/ Temperature (K)	Est. Life @ 70% Light Output (hours)	Avg. Power per Module (Watts)	Max. Modules 30-12D-B-240 <sup>[1]</sup> (units)	Max Modules 60-12D-B-240 <sup>[1]</sup> (units)
PFS1630R	Red (630nm)	100,000	0.4	75	150
PFS1630A	Amber (590nm)	100,000	0.4	75	150
PFS1630B	Blue (470nm)	40,000	0.43	70	140
PFS1630G	Green (525nm)	40,000	0.43	70	140
PFS1630W80	Ultra White (8000K)	40,000	0.5	60	120
PFS1630W28	Warm White (2850K)	40,000	0.5	60	120
PFS1630W35	Halogen White (3500K)	40,000	0.5	60	120

Notes:

<sup>[1]</sup> The 30-12D-B-240 and 60-12D-B-240 are single output LED Drivers. The 120-12DC-B-240 (2-output) and 240-12DC-B-240 (4-output) LED Drivers have a limited output of 60Watts per channel, see product specification sheet for details.

**Mechanical Dimension**



led  
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