Milo

Innovative beam adjustment and image projection with outdoor LED spotlights
We have used patented innovations to provide designers and architects with Milo, LED spotlights with unlimited possibilities for reliable, flexible and creative effects.

Milo is an outdoor spotlight for lighting designers and architects who require a compact projector. It is ideal for areas with limited space but is powerful enough to project up to 10 metres.

Available in five colours, Milo uses LED technology combined with a patented optical system which allows the beam to be adjusted from intensive to extensive, using just a simple tool.

“Milo: the compact, creative system that enables designers to define and re-invent shapes with light.”

– Patrick Rimoux

**Why LED?**

LED technology offers unique benefits that enable it to surpass alternative solutions in both performance and functionality.

- Compact size – design flexibility
- Long operating life
- Maintenance cost saving
- High efficiency
- Low wattage
- Low voltage
- Cold beam, no UV, instant light
- High optical performance, beam control
- Choice of colours
- Dimming
**Designer:** Patrick Rimoux

* Simple to use patented beam adjustment, which allows the beam to be altered after installation
* Due to the superior optical system, which is similar to camera optics, additional accessories are not needed to provide your desired beam control. Adjustment is simple using an Allen key.
* LEDs combine reduced power consumption with lower maintenance costs
* Full range includes underwater models (Milo S) and versions with remote or integral gear (Milo R and I)

- **Milo S** provides IP68 protection offering an inexpensive alternative to fibre optics. Due to the LED light source no maintenance is required.
- Unique gobo support accessory available for outdoor image projection (see page 5)
- Gobo support accessory has a fully weatherproofed IP65 compact body.
- All models have a contact temperature of 45°C
- Durable aluminium construction offering longer luminaire life and UV resistance

**Lamps**
- 2.4W LED (Pre-fixed PCB with 1 LED)
  - Available in white (5500K), red, blue, green and yellow.

**Materials/Finish**
- Body/Frame: injected aluminium textured grey powder coated finish (close to RAL 9007) Other RAL colours available to order.
- Lenses: polycarbonate
- Endcaps: stainless steel
- Gasket: silicone

**Installation/Mounting**
- Base secured with two M6 (Milo I) or three M4 (Milo R and S) x 25mm screws. Installation aided with a fixing centre template to be found on installation instructions.
- Cable type required: HO7 RN- F 2x1mm². Through wiring possible and product is supplied with two cable glands.
- Product supplied with two Allen screws to fix the orientation of optics (not with Milo S as position is fixed). Extensive beam is 24° and Intensive beam is 10°.
- For Milo R and S the maximum number of products in a series is 35.
- For Milo R and S the maximum number of products in a series is 5 when using the corresponding external gear, with a maximum distance between products of 33m for Milo R and 100m for Milo S.

**Gobo Support [image projection]**
- Insert gobo image (not supplied) in the gobo support, then directly thread without tool on to Milo R or I (not possible with Milo S)
- Required dimensions for the gobo image:
  - external diameter: 25.8mm
  - image diameter: 20mm printed on glass, metal or plastic (see page 7).

**Standards**
- Designed and manufactured to comply with EN 60598
  - Class II Electrical (Milo I)
  - Class III Electrical (Milo R and S)
  - IK 09 impact resistance
  - To -20/+40°C
  - IP65 (Milo I and R)
  - IP68 (Milo S, to 1m depth underwater)
  - CE

**Specification**
- To specify state:
  - LED spotlight for 2.4W LED's, with gobo attachment, integral or remote gear and submersible versions available.
  - As Thorn Milo I/R/S/gobo
Applications

Milo has been designed to produce stunning effects for applications where a traditional large projector is not practical.

Applications

Milo is a single LED spotlight, which can obtain dramatic lighting effects by adjusting the beam (extensive or intensive). Milo S, the IP68 version can be installed in any submersible application. All these features make Milo suitable for use in shopping and business centres, hotels, monuments and fountains.

Colours

Milo is available with the following colour options:
- White (5500K)
- Red
- Blue
- Green
- Yellow
Milo gobo support accessory can be combined with Milo R and I to create an imaginative tool. By attaching Milo’s gobo image projector the possibilities for creating effects are endless. This unique image projection accessory combined with LED technology delivers a temperature so cool you can print your own gobo on any material (glass, metal, or even plastic) with a high quality printer. The Milo gobo simply screws into place over your transparency then the superb optical system projects onto your chosen surface, without distortion. Projection of colour images, photographs, text or shapes formerly only possible using expensive gobo projectors are now possible.
Ordering Guide

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<tr>
<th>Description</th>
<th>Weight (kg)</th>
<th>SAP Code</th>
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<tr>
<td><strong>Milo R - IP65/Beam adjustment/No gear</strong></td>
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<td><strong>Extensive beam</strong></td>
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<td><strong>Support for image projection (Milo I &amp; R Only)</strong></td>
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<td><strong>IP65 Gear for Milo R or Milo S</strong></td>
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<td>MILO S GT 25W 0.5A-24V</td>
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WHI - white, BLU - Blue, GRN - Green, RED - Red, YEL - Yellow

Support for image projection (Milo I & R Only)

Remote gear Milo R:
240(V) x 50(W) x 50(H)
Remote gear Milo S:
230(V) x 105(W) x 79(H)

[1] Intensive beam
[2] Extensive beam

Remote gear Milo R:
240(V) x 50(W) x 50(H)
Remote gear Milo S:
230(V) x 105(W) x 79(H)

[1] Intensive beam
[2] Extensive beam
For image projection, you can install Milo (R or I) with the gobo accessory support. The gobo accessory support operates exactly like a camera zoom (focal 28 mm to 70 mm). This accessory enables you to project any picture by a simple print or stencil of the required image on any material (glass, metal or even plastic).

Requirements for the gobo image: external diameter: 25.8 mm and image diameter: 20 mm

Image size (diameter of the projected image) and focus (precision of the projected image) obtained by adjusting the beam using Milo’s patented optical lens system.

Different elements will have an effect on the distance between the Milo gobo and the projected image, e.g. LED colour, type of image (cut-out shape/logo or picture) and ambient light. Minimum required distance between Milo with gobo and the projection surface is 1 metre. A 20 mm gobo image projected at a distance of 3 m offers an image projection, which is adjustable from 0.9 m to 2.2 m.

To project a 2 m image size, it is possible to install Milo from 2.8 m to 6.7 m in front of the projected surface.

The beam angle for Milo R and I is adjustable using the patented optical system. For Milo S please choose intensive or extensive fixed beam as shown above.

Examples for Milo white LED with gobo. Intensity will vary with other LED colours.
Thorn Lighting Limited

UK
Silver Screens, Elstree Way, Borehamwood, Hertfordshire, WD6 1FE

UK Sales desk -
Orders/Stock Enquiries
Tel: 08701 610 610
Fax: 08701 610 611
Project Enquiries:
Tel: 08701 610 710
Fax: 08701 610 711

Ireland
320 Harold’s Cross Road, Dublin 6W
Tel: [353] 1 4922 877
Fax: [353] 1 4922 724
E-mail: enq.dublin@thornlight.com

Outdoor Lighting
Silver Screens, Elstree Way, Borehamwood, Hertfordshire, WD6 1FE
Tel: 020 8732 9829
Fax: 020 8732 9825
E-mail: enquiries.outdoor@thornlight.com

Airfield Lighting
Silver Screens, Elstree Way, Borehamwood, Hertfordshire, WD6 1FE
Tel: 020 8732 9804
Fax: 020 8732 9803
Email: airfield@thornlight.com
Website: www.thornairfield.com

Spare Parts
Tel: 0191 301 3131
Fax: 0191 301 3038
E-mail: spares@thornlight.com

Technical Support
Tel: 0870 600 8111
Fax: 0191 301 3907
E-mail: technical@thornlight.com

Brochureline Answering Service
Brochures on specific products/ranges
Tel: 020 8732 9898
Fax: 020 8732 9899
E-mail: brochures@thornlight.com

International Sales
Silver Screens, Elstree Way, Borehamwood, Hertfordshire, WD6 1FE
Tel: 020 8732 9802
Fax: 020 8732 9803
E-mail: international.sales@thornlight.com

Thorn Lighting Ltd Dubai
Al Shoala Building, Office 301,
Block E, PO Box 1200, Deira, Dubai, UAE
Tel: (971) 4 2940181
Fax: (971) 4 2948838
E-mail: tluae@emirates.net.ae

Thorn Gulf LLC
Al Shoala Building, Office 301/2,
Block E, PO Box 1200, Deira, Dubai, UAE
Tel: (971) 4 2948938
Fax: (971) 4 2948838
E-mail: thorg@emirates.net.ae

Other Offices in:
Australia, Austria, China, Czech Republic, Denmark, Estonia, France, Hong Kong, Italy, Latvia, Lithuania, New Zealand, Norway, Poland, Russia, Singapore, Sweden and UAE
www.thornlighting.co.uk

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