

THORN



Polar LED

Energy efficient lighting from an innovative and intelligent LED luminaire



Polar LED



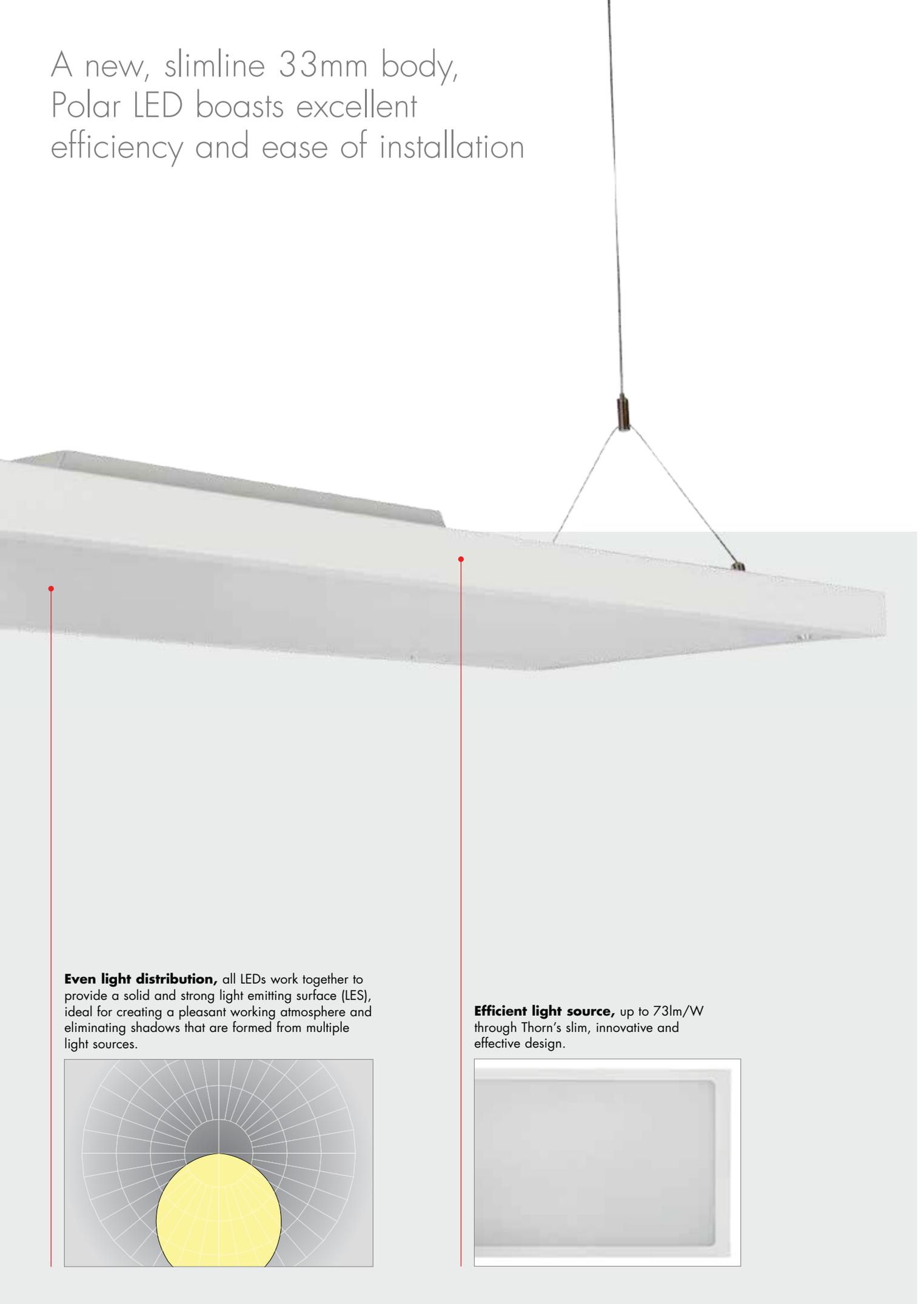
Easy to install, suitable for a wide range of applications; recessed, surface mounting or suspended.



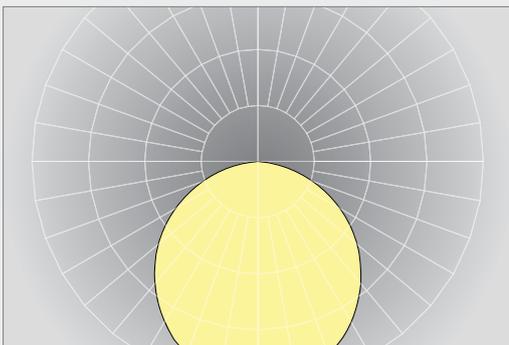
Easy to maintain, Polar LED's quality thermal management system allows the luminaire to perform up to L70 50,000 hours.



A new, slimline 33mm body,
Polar LED boasts excellent
efficiency and ease of installation



Even light distribution, all LEDs work together to provide a solid and strong light emitting surface (LES), ideal for creating a pleasant working atmosphere and eliminating shadows that are formed from multiple light sources.



Efficient light source, up to 73lm/W through Thorn's slim, innovative and effective design.



Thorn's Office Lighting Philosophy

When constructing or refurbishing offices, factors such as lighting design, financial, environmental and social concerns can contribute to the economical efficiency of a building as well as enhancing the work environment. Effective lighting can be linked to reductions of up to 15% in staff absenteeism and an increase of 3-20% in productivity. (Source: BCO/CABE)

Polar LED is the perfect luminaire for office lighting solutions with a wide range of sizes (1200x600, 1200x300, 600x600 and 600x300) and with a choice of colour temperature of 3,000K or 4,000K. The Polar LED has been designed with maximum efficiency and uniformity in mind. With 70% of the initial lumen output after 50,000 hours (L70), this luminaire is a fit and forget solution.

Polar LED is also available with Thorn's integrated LED Emergency Module or SensaDigital Sensor.

Polar LED is an extremely versatile luminaire. The sleek design ensures that the luminaire when installed conveys minimal presence. Polar LED can be recessed in a T-bar system, recessed in a plaster ceiling via a plaster frame accessory, surface mounted or suspended with a suitable mounting kit (refer to the ordering guide, page 11).

This luminaire is constructed to support and comply with all local and national energy efficiency schemes including: The National Construction Code (NCC) and The Australian energy rating systems.

Polar LED is designed and manufactured in Australia.

PEC- Performance, Efficiency, Comfort

P+E+C = Quality Lighting

PEC enables Thorn to use standard lighting components to create tailor-made and environmentally sensitive lighting in order to address the unique needs of every site, user and application.

Performance

The 'Performance' component of PEC addresses the visual effectiveness of the lighting scheme in performing the required task, wherever that may be. Polar LED uses the latest LED technology to provide the required lighting level efficiently.

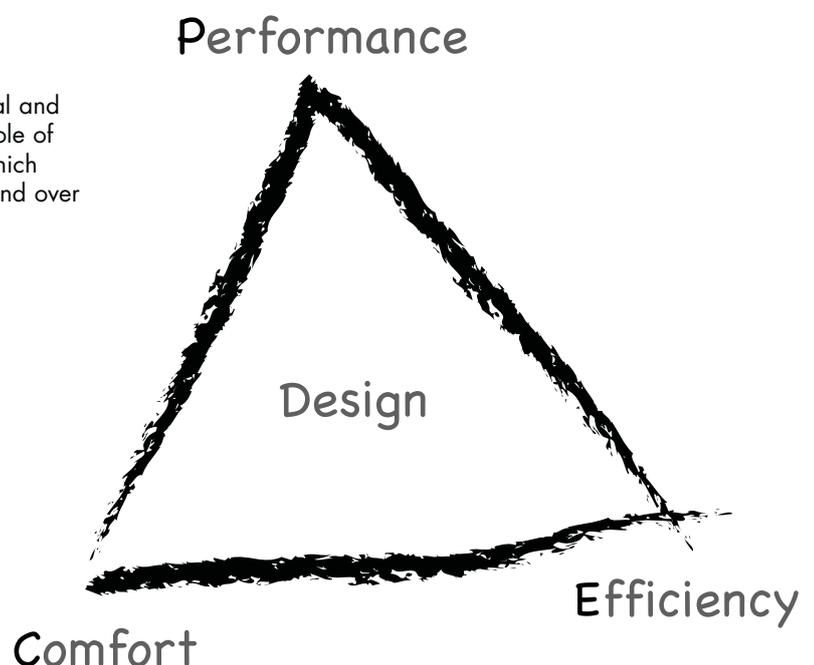
Efficiency

Truly 'efficient' lighting not only reduces direct energy consumption but also minimises wasted light, resources and addresses the broader concerns of sustainability.

Polar LEDs highly efficient LED technology (up to 73lm/W) which complements the outstanding photometric performance is achieved by a design that offers excellent light output, minimises material usage and reduces installation time and effort. Combined with integrated controls, Polar LED is the ideal efficient solution.

Comfort

The 'Comfort' component of PEC addresses the physiological and psychological needs of people and recognises the proven role of light in influencing mood, stimulation and wellness, all of which are vital in an office environment where individuals can spend over 1800 hours per year.



Polar LED

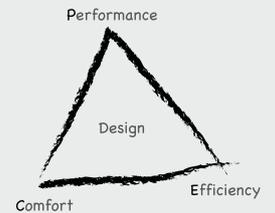
An innovative, efficient solution for Office Lighting



- Ease of installation with reduced maintenance
- A full range of options and accessories to support a wide range of applications
- Excellent efficiency with up to 73lm/W and a long efficient life of up to 70% of the initial lumen output after 50,000 hours (L70)



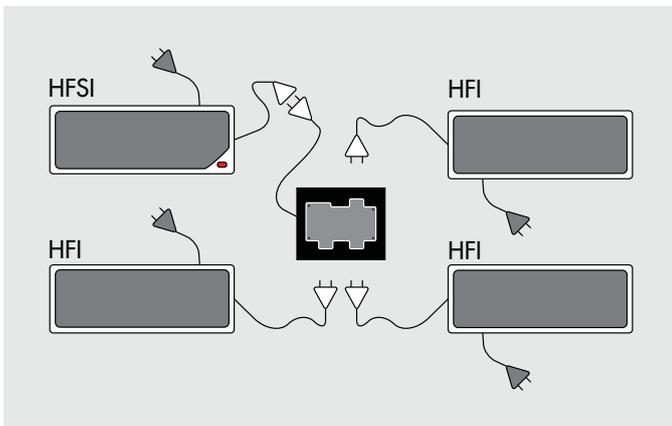
Built-in Lighting Controls



SensaDigital

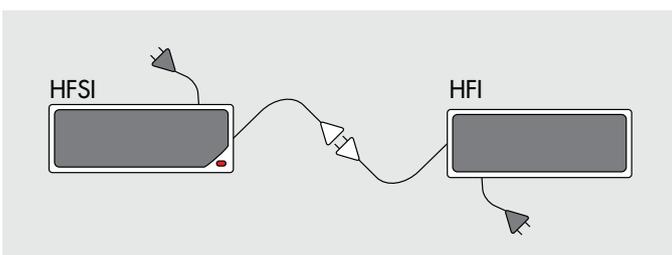
The first step in improving comfort and energy efficiency in office applications, via Thorn's SensaDigital (luminaires with built-in sensors, offering presence detection, daylight-linking and infrared remote control).

Configuration



HFI: dimmable with DALI/DSI protocol, HFSI: dimmable with SensaDigital sensor.

Plug and Play connection box for SensaDigital system, allows the installer to easily connect up to three other luminaires to be driven by one SensaDigital luminaire (top left luminaire).



The demand for flexibility and energy efficiency has made lighting controls an integral part of the modern office. Polar LED has a built-in controls option that suits a wide range of applications. This makes it easier to create a well lit environment that captures the Thorn PEC Philosophy.

Performance

Providing the best visual effectiveness

The ability to dim and create lighting scenes gives flexibility, ensuring that the lighting is appropriate to the task and user, whatever their requirements may be.

Efficiency

Conserving energy and effort

Presence and daylight linking conserve energy by ensuring unnecessary lighting is turned off. Constant illuminance control via 'look down' sensors can maintain the correct light level on the working surface. Throughout the maintenance cycle, this saves the energy that conventional systems waste by initially over lighting the space.

Comfort

Giving people satisfaction and stimulation

Personalised lighting via dimming or scene setting allows the ambience of the space to be altered to suit the user or varied over time, creating a more satisfactory and stimulating environment.



Built-in Emergency Lighting

LED Emergency Module

The demand for a single luminaire to provide optimum emergency lighting spacing has resulted in the research and development of a unique D40 LED Emergency Module that can be discreetly integrated into Polar LED.



Easy to test and maintain

An emergency lighting installation requires maintenance, Thorn's integrated LED Emergency Module provides a more reliable emergency solution without the need of lamp replacement.

Due to the importance of emergency lighting there are stringent legal requirements to regularly inspect, test and maintain the luminaire, which can be costly and time consuming.

Hence, the LED emergency versions of Polar LED incorporates a simple test button and is also available in DALI for central test functions. Both options make it easy to maintain a fully functional emergency lighting scheme.

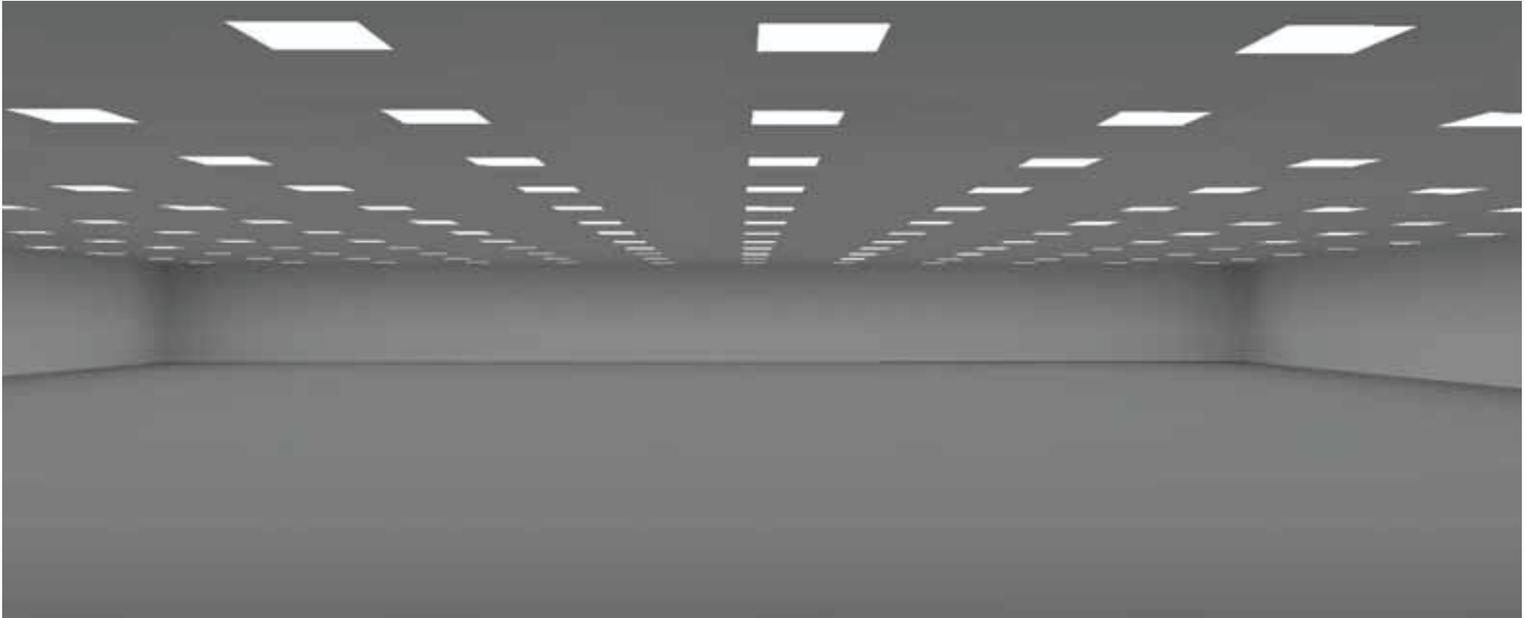
Open area emergency lighting needs to provide sufficient lighting to avoid panic in an emergency or during a mains failure. If this feature is integrated into the chosen office luminaire, rather than using separate emergency modules, it naturally improves the interior design whilst reducing installation cost and complexity.

		Mounting Spacing/Mounting Height (m)															
Classification		2.1	2.4	2.7	3	3.3	3.6	4	4.5	5	6	7	8	9	10	15	20
C0	D40	16.7	17.4	18	18.6	19.1	19.6	20.1	20.8	21.3	22.1	22.7	23	23.1	23.1	19.4	-
C90	D40	16.7	17.4	18	18.6	19.1	19.6	20.1	20.8	21.3	22.1	22.7	23	23.1	23.1	19.4	-

Integrated Emergency LED Module only available for recessed and surface mounted versions of Polar LED.



Area: 900m²
Spacing: 2.4m x 2.7m
Polar LED's Wattage: 31W
Total Watts: 4,092W (4.55 W/m²)
Number of Polar LEDs: 132
Average Lux: 338 lux



Area: 900m²
Spacing: 2.4m x 2.4m
Polar LED's Wattage: 31W
Total Watts: 4,464W (4.96 W/m²)
Number of Polar LEDs: 144
Average Lux: 376 lux

Product Features

Material/Finish

Body: white painted steel

Diffuser: high uniformity opal diffuser

Suspension kit: single iron steel wire 1.5m (pair) and transparent main cable 5 core 1.5m

Surface kit: white painted steel

Installation/Mounting

Suitable for recessed mounting in T-bar (Plaster Frame needs to be ordered separately for plaster ceilings), surface mounting or suspension via a specific kit (ordered separately). Pre-wired 1.5m flex and 3pin plug for HF versions.

Standards

Designed and manufactured to comply with AS/ NZS60598.

⚡ Class I electrical.

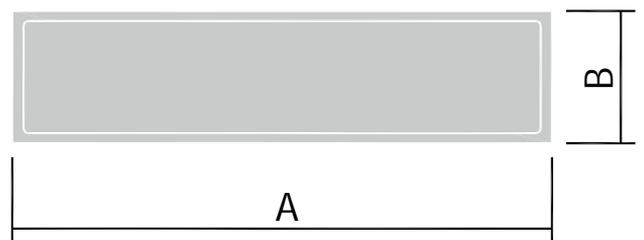
Customisation

1200 x 400 version available on request.

Air handling options for 1200 x 600, 1200 x 400 and 600 x 600 versions available on request.

Dimensions

DIMENSIONS (mm)				
Module Size	A	B	C	D
1200 x 600	1195	595	33	68
1200 x 300	1195	295	33	68
600 x 600	595	595	33	68
600 x 300	595	295	33	68



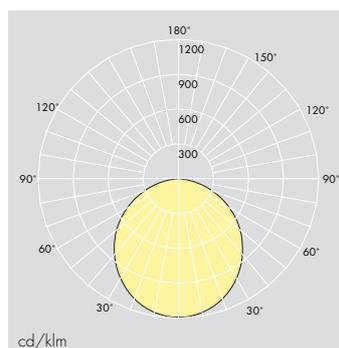
Ordering Guide Supplied complete with LEDs

Description	Wt(kg)	SAP No
Standard		
POLAR LED 3000 12X6 3K FP	9.0	96538276
POLAR LED 3000 12X6 4K FP	9.0	96538277
POLAR LED 2000 12X3 3K FP	5.0	96538271
POLAR LED 2000 12X3 4K FP	5.0	96538272
POLAR LED 3000 12X3 3K FP	5.0	96538273
POLAR LED 3000 12X3 4K FP	5.0	96538274
POLAR LED 2000 6X6 3K FP	5.0	96538278
POLAR LED 2000 6X6 4K FP	5.0	96538279
POLAR LED 1000 6X3 3K FP	3.0	96538306
POLAR LED 1000 6X3 4K FP	3.0	96538307
Dimming		
POLAR LED 2000 HFI 12X3 3K FP	5.0	96538308
POLAR LED 2000 HFI 12X3 4K FP	5.0	96538309
POLAR LED 3000 HFI 12X3 3K FP	5.0	96538310
POLAR LED 3000 HFI 12X3 4K FP	5.0	96538311
POLAR LED 2000 HFI 6X6 3K FP	5.0	96538582
POLAR LED 2000 HFI 6X6 4K FP	5.0	96538583
POLAR LED 3000 HFI 6X6 3K FP	5.0	96538584
POLAR LED 3000 HFI 6X6 4K FP	5.0	96538585
POLAR LED 1500 HFI 6X3 3K FP	3.0	96538586
POLAR LED 1500 HFI 6X3 4K FP	3.0	96538587
SensaDigital		
POLAR LED 3000 HFSI 12X6 4K FP	9.0	96538593
POLAR LED 2000 HFSI 12X3 4K FP	5.0	96538590
POLAR LED 3000 HFSI 12X3 4K FP	5.0	96538591
POLAR LED 2000 HFSI 6X6 4K FP	5.0	96538594
POLAR LED 3000 HFSI 6X6 4K FP	5.0	96538595

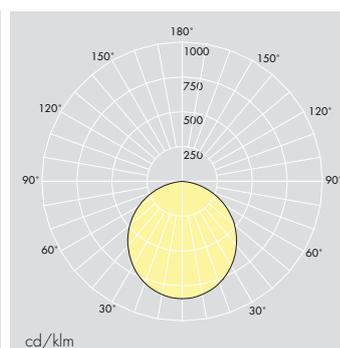
Description	Wt(kg)	SAP No
Emergency		
POLAR LED 3000 12X6 4K EL2 FP	9.0	96538599
POLAR LED 3000 HFI 12X6 4K EL2 FP	9.0	96538605
POLAR LED 2000 12X3 4K EL2 FP	5.0	96538596
POLAR LED 3000 12X3 4K EL2 FP	5.0	96538597
POLAR LED 3000 12X3 4K EL2X FP	5.0	96538609
POLAR LED 2000 HFI 12X3 4K EL2 FP	5.0	96538603
POLAR LED 3000 HFI 12X3 4K EL2 FP	5.0	96538604
POLAR LED 3000 HFI 12X3 4K EL2X FP	5.0	96538610
POLAR LED 2000 6X6 4K EL2 FP	5.0	96538600
POLAR LED 3000 6X6 4K EL2 FP	5.0	96538601
POLAR LED 2000 HFI 6X6 4K EL2 FP	5.0	96538606
POLAR LED 3000 HFI 6X6 4K EL2 FP	5.0	96538607
Accessories		
POLAR LED SUSPENSION MOUNTING KIT 12X3		96538611
POLAR LED SURFACE MOUNTING KIT 12X3		96538612
POLAR LED SURFACE MOUNTING KIT 6X6		96538659
POLAR LED SURFACE MOUNTING KIT 6X3		96538658
SENSABOX (plug & play connection box)		96065512
SENSA SENRC (remote controller)		96004175
SENSA SENP (programming tool)		96004189

HFI: dimmable with DALI/DSI protocol
HFSI: SensaDigital with DALI/DSI (max 4 ballast)
3K-4K: colour temperature
FP: Flex&Plug
EL2: emergency lighting D40 LED
EL2X: emergency lighting D40 LED for DALI monitoring

Lumen category:	
1000	16W
1500	24W
2000	31W
3000	46W



POLAR LED 3000 12X3 4K FP
Light source: LEDs 46W C90=C0



POLAR LED 2000 12X3 4K FP
Light source: LEDs 31W C90=C0

Lighting Controls



e-Control is Thorn's initiative to increase the use of dimming and lighting controls in products and lighting solutions.

The rising importance of efficient energy use (on both cost and environmental grounds), together with a need for more flexible application of lighting, has led to a reassessment of lighting techniques and provided a fresh impetus to drive for more efficient controls.

THORN

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