

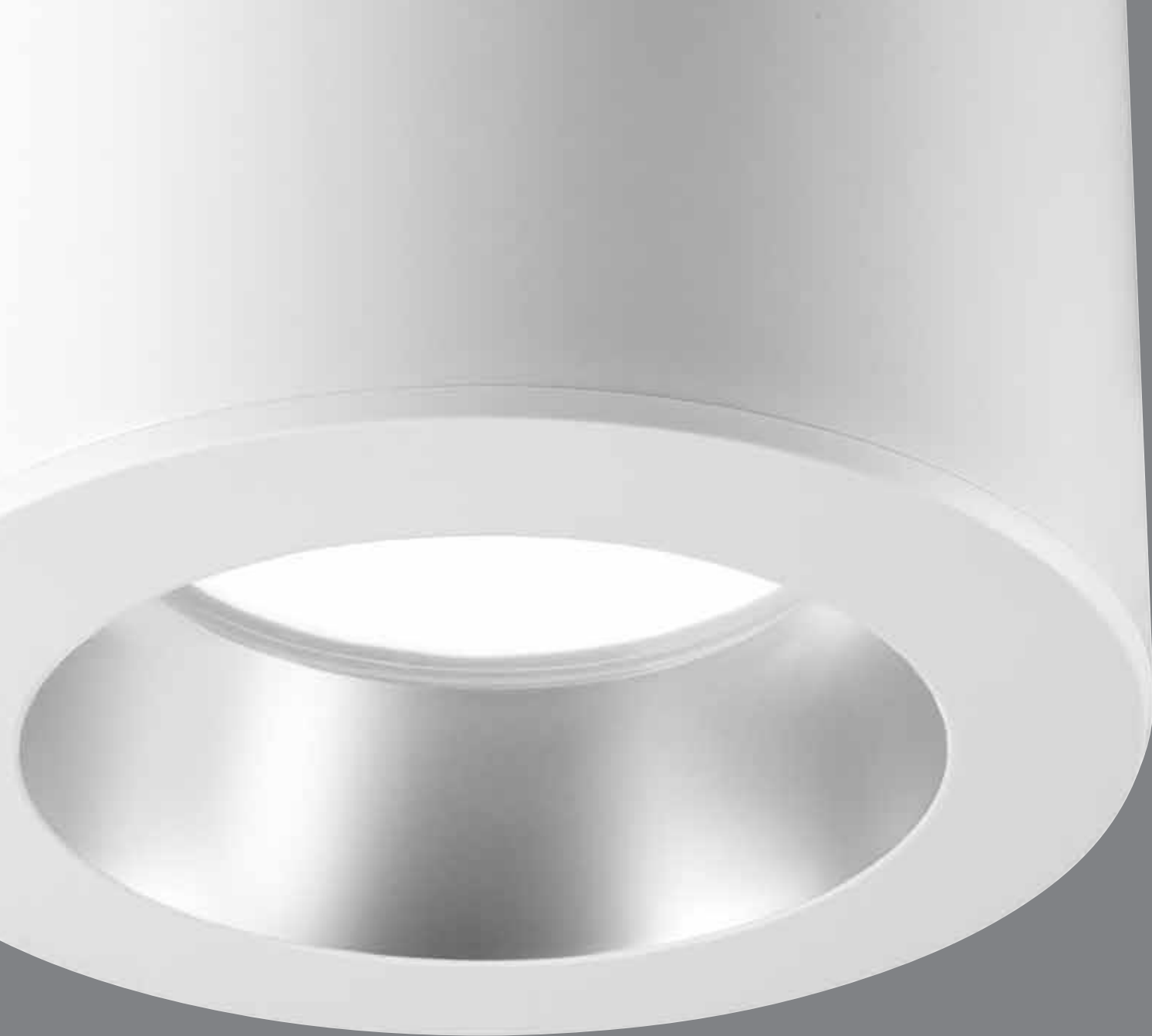
THORN



Base LED

Delivering superior LED downlighting performance with full controllability and emergency options





A new LED downlight - delivering 1000 lumens - has been added to the Base LED range

Like its 650 lumen counterpart, Base LED 1000 delivers superior colour quality, efficiency and longevity, but adds extra lighting control and emergency features. Both have the same aperture: 165 mm cut-out.



	Base LED 1000	Halogen QPAR20	26W TC-DEL
Lamp type	LED	Halogen	CFL
Luminaire lumen	1000 (LOR 1.0)	1100 (LOR 1.0)	936 (LOR 0.52)
Input power (W)	18	75	28.5
Rated life hours	≥50,000	≥2,500	10,000



Energy saving

Base LED 1000:

At 18W and with an output of 1000 lumens, the downlight produces light comparable to a 75W QPAR halogen fixture, saving approximately 75 per cent in energy consumption.

A 1 x 26W compact fluorescent electronic downlight uses about 50 per cent more power than the Base LED to achieve the same light level.

Base LED 650:

Emitting 650 luminaire lumens, output is equivalent to a 1x18W compact fluorescent or 50W halogen downlight. Using just 12 Watts energy savings are equally impressive.

Superior colour technique

Base LED delivers warm and neutral white light, in 2700K or 3500K colour temperature options, without emitting any UV or IR radiation. These give an initial $R_a > 92$ (1000lm)/ $R_a > 94$ (650lm) and these colour rendering values are maintained over the life of the product. This is achieved by adding red LEDs.



Durability

Ongoing lifetime testing predicts a rated life of 50,000 hours to 70 per cent of initial lumens (L70@Ta25°C). Base LED's electronic, thermal and mechanical design is finely tuned to maximise the rated life for full customer satisfaction and true sustainability.

Applications

Available with a choice of three inner bezel rings, Base LED 1000 is ideal for many commercial and residential applications:

The mirror bright bezel enables use in office spaces (UGR <19). The satin silver bezel lessens direct glare (UGR <22) for entrance areas, common and assembly rooms.

The white bezel (UGR <25) gives satisfactory glare quality for corridors, secondary rooms and circulation areas, such as staircases.

Base LED 650 features UGR <22 for all available bezel variants.

For all downlights, the splash proof IP44 (from below the luminaire) rating extends applications to bathrooms, kitchens or toilet facilities.

Emergency lighting

Base LED 1000 versions are suitable for use with a central battery DC emergency lighting supply. When the mains supply fails and the DC supply is activated the light output is reduced to approximately 200 lm and DALI control is disabled during DC operation. The recessed versions have a single battery, 3 hour emergency lighting version, as standard. Customised emergency solutions are possible for surface mounted downlights.

Lighting Controls

Base LED 1000 has three control options:

- DALI control creates the opportunity to interface with a facility management system, making a significant contribution to energy efficiency and the flexibility of the building as a whole
- SwitchDIM provides simple, cost-effective and extremely user-friendly control via retractable switches. Ideal for small and medium scale applications
- Corridor-function. Instead of being switched-off abruptly if no movement is detected in stairwells, corridors or entrance halls, the lighting level is dimmed to 10 per cent and then switched off after a defined delay. As soon as someone enters the space the light is returned to its full level. For easy control apply Sensor 96100101 SENSALINK MRE SENDLDSW.

Base LED 650 can be externally dimmed or switched:

- Dimming 100-25 per cent via standard phase cut dimmers (either leading or trailing edge)
- Applying more sophisticated controls using DALI or DSI Bus-controlled dimming devices.

PEC

At Thorn we recognise our sustainability responsibilities, and with the PEC programme we have introduced a wide-ranging philosophy that underpins our approach to lighting design and implementation.

The programme is based on the principle that performance, efficiency and comfort determine the visual effectiveness of lighting.

LEDs offer new opportunities for colour rendition and efficacy. With modern LED light engines, suitable for downlights, colour rendering (R_a) figures above 90 can be easily achieved at negligible sacrifice to efficacy. LED lamp-eficacies already exceed the 1980s figures and are expected to steadily improve.

Base LED takes advantage of LED development, combining high colour rendering with high luminaire efficiency. Providing all the required features for easy application and installation the range gives specifiers and contractors a freedom of choice not previously available to them, which will have sustainable and financial implications, not only today, but for years to come.

Performance

The LED technology delivers high colour rendering, exceeding requirements for commercial lighting. In areas where glare is important, including office spaces, the UGR rating can be easily improved by adding the relevant bezel ring.

Efficiency

LED technology reduces power demand and conserves energy. Base LED offers upto 56 luminaire lumens/circuit Watt efficacy exceeding all current building regulation target values. Dimming offers further energy savings and increases efficacy without colour shift. The ability to link lighting controls provides further gains in energy savings and facilitates the provision of lighting at the times required, from single room applications to larger premises.

Integrated loop through wiring capability eases installation even in wide space applications.

Comfort

High-quality white light (R_a 90+, 2700K and 3500K) creates a warm and welcoming atmosphere. The use of lighting controls can tailor lighting levels to user requirements.





Light Quality

Most people have become used to the sufficient, but not excellent, colour rendering from compact fluorescent downlights and a colour rendering value of $R_a > 80$ has been considered acceptable for office environments. Perception of colour is often sacrificed to provide increased lamp lumens or more efficient lamps. Incandescent and tungsten halogen sources are becoming outdated for lighting circulation spaces in hospitality and leisure-related facilities, due to their short lamp life, excessive heat and low efficacy, but the colour quality is often preferred.

Thus an efficient light source substitute with natural colour rendition is the preferred requirement.

Base LED has been designed for those who demand colour performance and efficiency. The two are no longer mutually exclusive. The 1000/650 luminaire-lumen downlights have high system efficacy (56/54 lm/W) and high colour rendering ($R_a > 92$). Incandescent lighting can now be, in part, substituted with minimal reduction in light quality (colour rendition, switch and dimming properties). Compact fluorescent can be substituted, while improving system efficacy, colour performance and dimming.

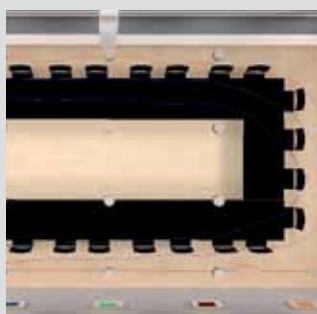
In a world increasingly focused on energy, yet demanding long life, good quality lighting Base LED downlights offer an obvious solution.

Case Study: University doubles the light for a fifth the cost
The Panum Institute, part of Copenhagen University's Faculty of Health Sciences, was one of the earliest adopters of Base LED. Eighty six Base LED 650 downlights are installed in one of the building's four lecture theatres where lighting is operated for long periods (see picture above).

By replacing 60W lamps the university has cut its electricity consumption by 80% (from 5.16 kW to 1.03 kW), and retained the quality of light, while the level of illuminance has increased from 110 lux in places to an average 200 lux.



Schemes



Average lighting level	50lx	300lx
Total energy consumption	48W	360W

For specific Life Cycle Costing please use the ecoCALC tool at <http://www.thornlighting.com/ecocalc>

Product features

Lamp

☑ 12W/18W high performance Cree LED light engine featuring Cree True White™ technology, Ra >94/>92, CCT 2700K or 3500K, designed for rated life of 50,000 hours (L70@ta25°C)

Materials/Finish

Luminaire: die-cast aluminium body with bezel matt white finish and integral/remote driver unit. White decorative bezels of injection moulded PC with active inner ring surface in white (WHI), satin silver (RSB) or mirror bright (RMB).

Installation/Mounting

Recessed version held in place via two rubber sleeved spring clips; for ceiling thickness between 10-25mm; featuring integral/remote driver with terminal for max. 2x3x1.5mm²/2x5x1.5mm² (loop-in, loop-out). Cut-out: Ø 165mm.

Decorative bezel accessories snap easily into place. Surface version mounted to the housing with a twist lock bracket.

Standards

Designed and manufactured to comply with EN 60598
 Ⓢ Class I Electrical
 IP44 (recessed version)
 IP20 (surface mounted version)
 Emergency lighting (recessed version only) with SelfTest/DALI option available as standard for Base LED 1000.
 CE

Specification

To specify state:
 High colour rendering LED downlight, recessed or ceiling mounted, features 12W LED light engine (True White™ technology) with integral driver, choice of CCT 2700K or 3500K at R_a 94, housing of pressure die-cast aluminium with integral heat sink, bezel matt white finish, for ceiling thickness 10-25mm, held in place by 2 rubber sleeved spring clips, 165mm ceiling cut out, features phase cut dim option using common incandescent or electronic dimming devices.
 As Thorn Base LED 650.

High colour rendering LED downlight, recessed or ceiling mounted, features 18W LED light engine (True White™ technology) with remote driver, choice of CCT 2700K or 3500K at R_a 92, housing of pressure die-cast aluminium with integral heat sink, bezel matt white finish, for ceiling thickness 10-25mm, held in place by 2 rubber sleeved spring clips, 165mm ceiling cut out, features DALI control as well as switch-dim and corridor function option.
 As Thorn Base LED 1000.

Ordering Guide Dimensions

Lighting Controls

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

The continuing 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 given a fresh impetus to the drive for more efficient controls.



12W with white reflector (WHI)

18W without reflector

18W with Satin silver reflector (RSB)

18W with Silver bright reflector (RMB)

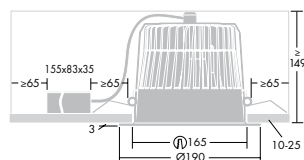
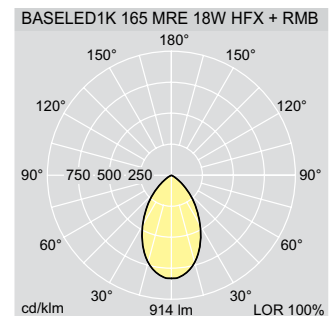
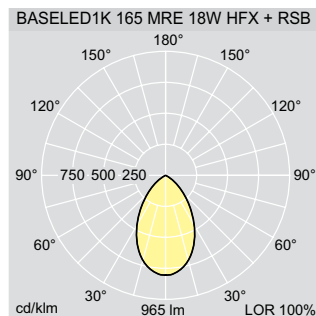
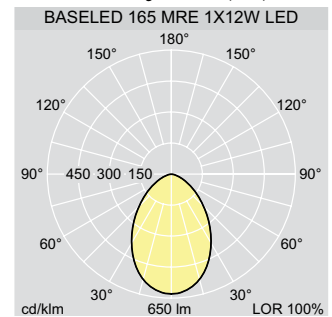
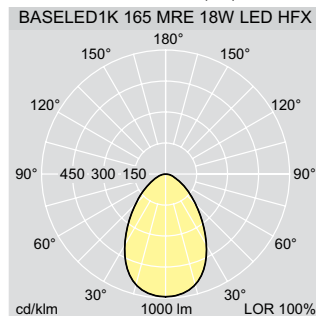
Ordering Guide Supplied complete with LEDs

Description	Weight (kg)	SAP Code
Base LED 1000 Recessed, DALI/SwitchDim		
BASELED1K 165 MRE 18W LED L927 HFX	1.5	96107983
BASELED1K 165 MRE 18W LED L935 HFX	1.5	96107984
Base LED 1000 Surface mounted, DALI/SwitchDim		
BASELED1K 165 MCE 18W LED L927 HFX	2.3	96107987
BASELED1K 165 MCE 18W LED L935 HFX	2.3	96107988
Base LED 1000 Recessed, DALI, Emergency lighting/SelfTest/DALI*		
BASELED1K 165 MRE 18W LED L927 HFX E3TX	3.2	96107989
BASELED1K 165 MRE 18W LED L935 HFX E3TX	3.2	96107990
Base LED 1000 Accessories		
BASELED1K 165 WHI BEZELRING WHI	0.1	96107993
BASELED1K 165 WHI BEZELRING RSB	0.1	96107994
BASELED1K 165 WHI BEZELRING RMB	0.1	96107995
Base LED 650 Recessed		
BASELED 165 MRE 1X12W LED L927	1.3	96107294
BASELED 165 MCE 1X12W LED L935	1.3	96107303
Base LED 650 Surface mounted		
BASELED 165 MCE 1X12W LED L927	2.2	96107308
BASELED 165 MCE 1X12W LED L935	2.2	96107310
Base LED 650 Accessories		
BASELED1K 165 WHI BEZELRING WHI	0.1	96107393
BASELED1K 165 WHI BEZELRING RSB	0.1	96107394

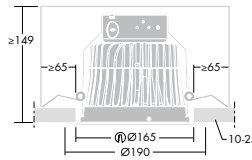
* Available early 2011

Order decorative inner bezel rings separately.

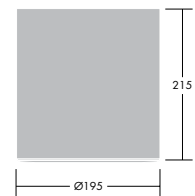
L927 - 2700K, L935 - 3500K, WHI - white, RSB - satin silver, RMB - mirror bright



Recessed 18W



Recessed 12W



Surface 12W + 18W

THORN

Lighting people and places

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