

# Sets a new benchmark for LED High Bay luminaires



**els::fokus**

## Prime reasons for the new **els::fokus**

1

### COOL – Hightech cooling for hightech LEDs

For High Power LEDs, nothing is more crucial than excellent thermal management. The els::fokus utilises the best technology for thermal control that is available on the market today. There is none better. The integrated hybrid heat exchanger provides thermal conductivity hundreds of times greater than that of aluminum. It is absolutely the best technology for thermal management of high power electronic components such as IGBTs.

**We have brought together what belongs together.**

2

### REASSURING – superior thermal management

In summer temperatures, underneath the roof of a factory or warehouse, the temperature can easily reach 40°C or more. In this situation all common LED High Bay fittings are stressed to their thermal limits and beyond. Inevitably this causes a drastic reduction in lumen output and a significant reduction in LED lifetime. Return on investment calculations become null and void. Therefore, in our High Bay fitting we have put strong emphasis on providing optimum LED function even at ambient temperatures of up to 70°C. This temperature can easily be reached in certain industry segments such as paper or steel manufacture. Superior cooling = long lifetime and maximum return on investment.

**Perfect cooling = longer life.**

3

### OUTSTANDING - First class optical performance

The new els::fokus guarantees: Uniform light output, typical for CoB LEDs; Colour consistency; Minimal glare (UGR <22); Outstanding color rendering index of more than Ra 80 (With an option of Ra90); All of this with unsurpassed quality; Lumen depreciation of less than 20% at 75,000 hours;

**Enduring light performance.**

4

### ECONOMICAL - Unique lighting efficiency

The high performance Citizen and Bridgelux LED modules, in conjunction with our highly effective thermal discharge system, reach unrivalled efficacy values and provide a swift return on investment. With an LED efficacy of up to 135 lm/W, even at ambient temperatures of 50°C, the new els::fokus sets a benchmark. Energy savings of up to 80% vs mercury vapor gas discharge lamps can be achieved.

**Market leading efficacy.**

5

### FUTURE-PROOF - Modular construction with standard components

Those who invest in a LED luminaire today want to be sure that they are not left in a dilemma when the Driver or the LED module have reached the end of life. The els::fokus maximises investment, as both the driver and LED module are easily replaced.

**High efficacy for best economic viability.**

6

### SECURE INVESTMENT - The deciding factor

An investment in LED-luminaires mainly is taken because of the high energy savings. But decisive from a commercial point of view is that the chosen luminaires are operating reliable for many years with a constant good lighting quality. With its unique and superior cooling-technology in combination with the high quality LED-module of CITIZEN and BRIDGELUX the els::fokus offers a maximum safety to reach the promised lifespan of at least 50.000 hours. This is underlined by the extended warranty of 5 years.

**Always on the cutting edge of technology.**

# A new benchmark for LED High Bay Luminaires. **els::fokus**

## 1 Superior Thermal Management

The integrated high performance hybrid heat exchanger removes the waste heat significantly faster and much more efficiently than a cast aluminum heatsink. This marketleading thermal management system ensures that the LED module will operate for its full rated life of 50,000 hours, even at a steady ambient temperature of 70°C

2

## Optimized LED Efficacy Values

With perfect thermal management in conjunction with state of the art LED module technology, the els::fokus achieves maximum efficacy. With up to 135 lm/W, the els::fokus maximises return on investment.

3

## Secure and convenient

Fitted as standard, the toughened safety glass protects the LED and optics, and is easy to clean when required.

6

## High flexibility without compromise

ELS only uses high-grade components for the driver electronics, all of which have an operating temperature up to 70°C. Ingress protection is to IP65/67 and optional DALI or 1-10V interfaces are available for precise light control.

5

## Built for long life

The extraordinary longevity and robustness of the els::fokus is also reflected in the construction of the housing, which features a high quality powder coated sheet steel enclosure with a central galvanized steel mounting hook. The standard paint colour is RAL 7015.

4

## Brilliant Optics

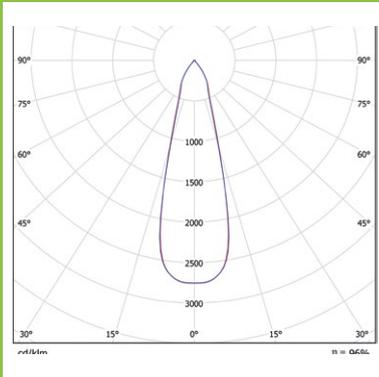
Aesthetically appealing and providing maximum light output, the integrated LED reflector features a light output ratio of up to 92% and is available in various beam angles. This allows the els::fokus to be used at a wide range of mounting heights.



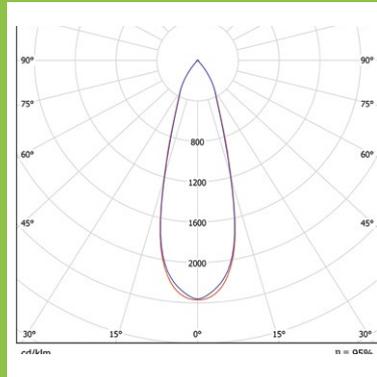
Optimal high efficiency LED heat exchanger. **els::fokus**

Market leading and reliable cooling, even at ambient temperatures of up to 70°C

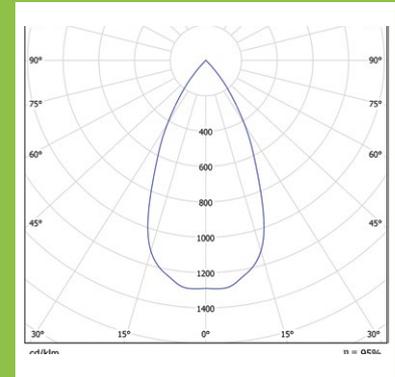
# els::fokus in detail



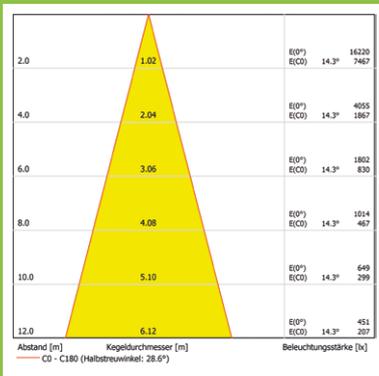
Beam angle 28°



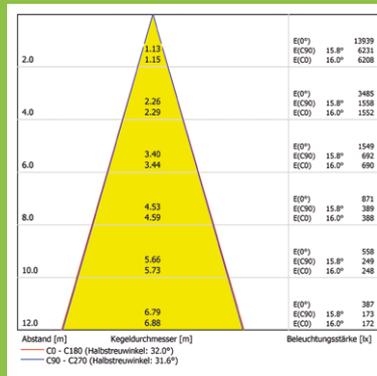
Beam angle 32°



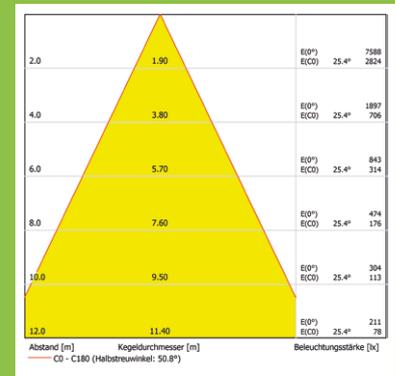
Beam angle 51°



WT-170 with beam angle 28°



WT-170 with beam angle 32°



WT-170 with beam angle 51°

The new els::fokus represents a milestone in the development of LED high bay luminaires. The els::fokus is capable of working in ambient temperatures up to 70c. This is an industry first, as nearly all other high bay luminaires are only rated up to a maximum of 40c ambient. Thanks to superior thermal management, the els::fokus offers unrivaled efficacy of up to 132 lm/W, even at 70c ambient. This outstanding performance is due to the combination of a siper efficient two phase heat-exchanger and state-of-the-art LED-modules from leading manufacturers such as CITIZEN and Bridgelux. These high efficacy LED-COBs are mounted directly onto

the printed circuit board, giving optimum heat dissipation, and because of the high packaging density a very homogenous light output. Special LED reflectors with a light output ration of over 90% direct the light to where it's needed. Beam angles from 25° up to 51° are currently available and cover a

wide range of requirements, beginning with 7m mounting height. Therefore in nearly all cases, the els::fokus enables a direct 1:1 replacement of old mercury vapour or metal halide lamps without the need for new suspensions or new wiring. Installation is simplicity itself.

Typ of lamp	Lamp power	els::fokus	Energy savings*
HQL	400W	90W	80%
HQL	700W	150W	80%
HQI	250W	110W	60%
HQI	400W	150W	60%

(\*comparison between the total power consumption)



### Technische Daten / Bestellinformationen

Artikel-Nummer	LED-Modul	Thermal management	Luminous flux (lumens)*	Power consumption*	Ta max.
ELS-HSL-WT-80	Bridgelux Vero29	Heat Exchanger-Technology	10.000 Lumen	86 Watt	70° C
ELS-HSL-WT-90	Bridgelux Vero29	Heat Exchanger-Technology	11.000 Lumen	98 Watt	70° C
ELS-HSL-WT-110	Bridgelux Vero29	Heat Exchanger-Technology	13.000 Lumen	115 Watt	70° C
ELS-HSL-WT-125	Bridgelux Vero29	Heat Exchanger-Technology	14.000 Lumen	129 Watt	70° C
ELS-HSL-WT-150	Citizen CLL052-1825	Heat Exchanger-Technology	18.000 Lumen	157 Watt	70° C
ELS-HSL-WT-170	Citizen CLL052-1825	Heat Exchanger-Technology	21.000 Lumen	177 Watt	70° C

\*valid for 5000K @ Tc=25°, nominal values for luminous flux, max. values for power consumption

#### Scope of use:

1:1 replacement of existing mercury vapour and metal halide lamps (250-700W) in interior installations, with mounting heights from 7- up to 20m. Perfect for warehouses, production areas, distribution centres and large retail spaces.

#### LED-Technology:

COB-Module with excellent heat dissipation and homogenous light output.

#### Optical system:

Integrated high performance LED-reflector fitted as standard, with an output ratio of up to 96%. Also available with Aluminium or Acrylic-reflector

#### Colour temperature:

2700K, 3000K, 4000K, 5000K

#### Lighting Control:

Dimming options via DALI- or 1-10V-interface

#### Electrical data:

input voltage 90-305 V /AC, overload and over voltage protection, 3-core connection cable, standard length 30cm, special lengths or with male- or female connection socket upon request

#### Compliance:

All electronic components are CE and RoHS approved and certified according to UL, VDE or ENEC in compliance with European standards and safety requirements like EN 61347-1, EN 610003-2, EN 61347-2 -13 or EN55015.

#### Protection rating:

Luminaires: IP 23 (IP54/65 to order)

LED-driver: IP 67

Housing: powder coated sheet steel with standard paint colour RAL 7015

#### Mounting method:

Central suspension eye.



#### Energieeffiziente Licht-Systeme GmbH & Co. KG

Piderits Bleiche 17 · 33689 Bielefeld · Germany

Phone +49 (0) 52 05.72 88 75-0

E-Mail [info@els-lichtsysteme.de](mailto:info@els-lichtsysteme.de)

[www.els-lichtsysteme.de](http://www.els-lichtsysteme.de)

Representative and distribution for the UK:

**crescent**

AN ENERGY FOCUS COMPANY

Crescent Lighting Ltd  
8 Rivermead, Pipers Lane  
Thatcham RG194EP UK  
+44 1635 878888 (office)  
[www.crescent.co.uk](http://www.crescent.co.uk)