

Datasheet // FlexLite series

# QUANTUM FLEX 172 patent pending wireless technology

## 48V DC

The Stogger Quantum Flex enables you to light channel box letters and illuminated structures in a new ground-breaking way. You no longer need to worry about wiring! The patent pending system enables the Quantum Flex to be powered wirelessly through the PowerBoard, thus giving you unlimited design freedom.

### Key Features

- Screwable wireless LED module
- Patent pending technology
- Average beam angle 172 degrees
- Dramatically reducing LED assembly time
- Superior lens design, ensuring even square light distribution
- Cutting edge 48V high voltage, low current LED
- Industry leading efficiency >95%
- Ultra-high light output up to 147 lm/W
- Perfect for (thin) light boxes
- Temperature compensated light output to further extend life span



### Technical specifications

Product code	Colour	CRI (Ra)	Voltage	Power	Current	Beam angle	Lum. flux	Weight/piece <sup>1)</sup>
P-13-2301	5700 K	>80	48V DC	1.1 W	23 mA	172 °	147 lm/W	2 gram
P-13-2302	3000 K	>80	48V DC	1.1 W	23 mA	172 °	119 lm/W	2 gram
P-13-2303	6500 K	>80	48V DC	1.1 W	23 mA	172 °	147 lm/W	2 gram
P-13-2304	2700 K	>80	48V DC	1.1 W	23 mA	172 °	119 lm/W	2 gram
P-13-2305	4000 K	>80	48V DC	1.1 W	23 mA	172 °	119 lm/W	2 gram

<sup>1)</sup> Weight including screw

LED lifetime	TM21 life span: reported L70: > 54,000 hours @ 85°C
Dice technology	InGaN technology
Operating & storage temperature	-40 to 100 °C
Maximum amount of Quantum Flex LEDs	250/m <sup>2</sup>
Maximum Torque for screw fixation	23 Ncm
Minimum advised LED pitch distance	60 mm

## Pitch

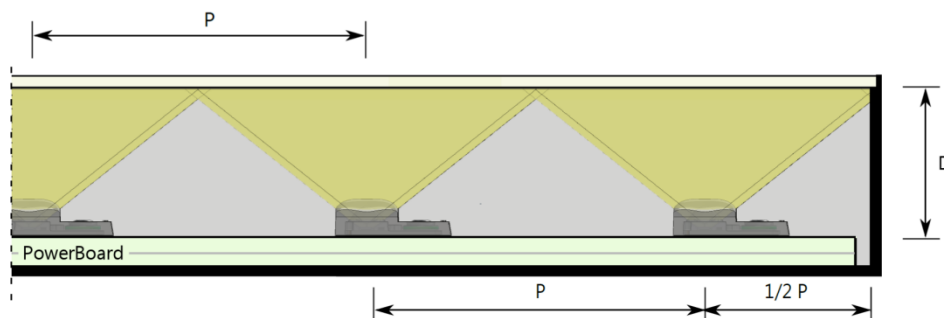
Due to the ultra-high light output of 147 lumen combined with our special lens design, a very large pitch between the LEDs is possible. Our Quantum allows to use up to 60% less LED modules, compared to traditional cabled LED modules.

To calculate the amount of Quantums that you need to use, you first need to know the depth of the light box. With the depth, the right pitch can be determined.

Depth D (mm)	Pitch P (mm)	Quantums per m <sup>2</sup>	Light output (lm/m <sup>2</sup> ) <sup>1)</sup>
40	80	156	4900
50	100	100	2450
60	120	69	1430
70	140	51	950
80	160	39	710
90	180	31	500
100	200	25	375
110	220	21	300
120	240	17	250
130	260	15	210
140	280	13	175
150	300	12	145

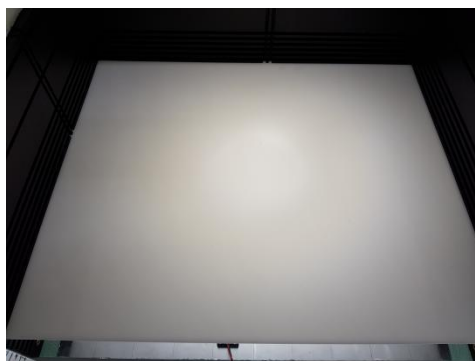
<sup>1)</sup> Use our SignController with PWM dimming if output exceeds your needs. Exact pitch may vary depending on box geometry.

<sup>1)</sup> Output may vary depending on transparent material and thickness.

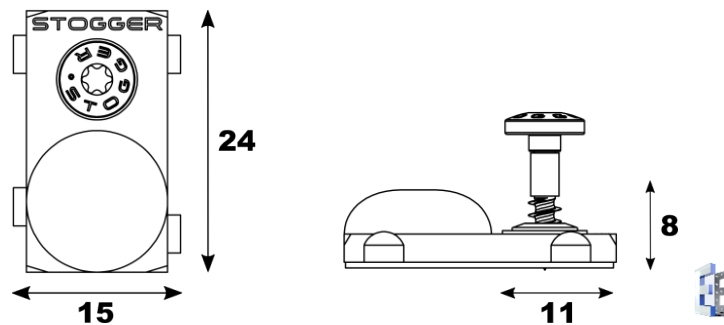


## Light output measurement

The light output was measured in the below measurement set-up. The rated light output is measured on the acrylate opal surface. This plate has a thickness of 5 mm.



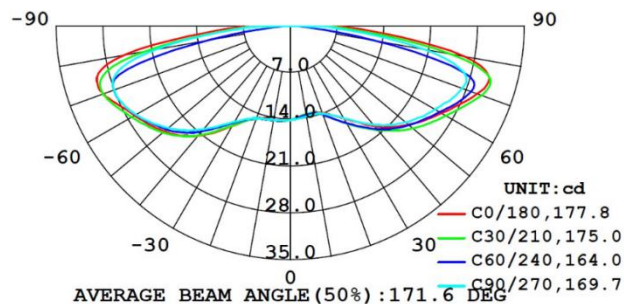
## Dimensions



(All dimensions are in mm)

## Luminous intensity distribution diagram

A superior lens design, with an average beam angle of 172 degrees, ensures an even light distribution.



## Power Supply

We guarantee 5-year good operation using 48V MeanWell power supplies from the HLG-xxx-48 series. We have CE-certified our wireless lighting system with these power supplies.

Maximum PowerSupply load: 100 Watt PSU = 100x Quantum Screw / 240 Watt PSU = 240x Quantum Screw

## Safe and easy installation conform CE-legislation

To conform CE-legislation, we advise to use the Stogger SignFuse or SignController. Both have fast-acting, self-resettable solid-state fuses, which prevents overload and greatly reduces fire risks. The SignFuse or SignController is installed between the Power Supply and the PowerBoard. By using our wireless lighting system with these systems, the installed system conforms the CE-legislation.

## Energy label

