

Upstream FreeForm Optics Data Sheet

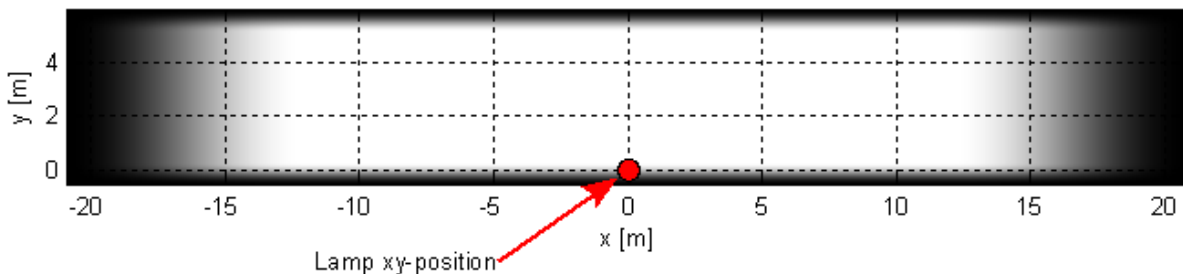
Overview

Upstream FreeForm optics are based on an advanced proprietary design algorithms that are allowing unbeatable efficiency and light distribution characteristics for LED lighting applications. It is especially good choice when a wide area needs to be illuminated uniformly. The FreeForm technology provides uniform solid beam with smaller optics size.

Upstream FreeForm optics can create the desired light beam for your application - whether you prefer rectangular or circular beam shape with wide or narrow angle. With the optimized application specific light distribution, all the light from the LED chip is used to illuminate the object without wasting light and energy for undesired places. This provides very significant - up to 80% - energy saving compared to normal LED lamps.

Features

- Available with various beam shapes and angles
 - Square, rectangular, circular or elliptical
 - Beam angles from 20° to 160° FWHM
 - Rectangles from 1:1 to 1:5 aspect ratios
 - Sharp or smooth edges
 - Uniform beam or desired non-uniformity
 - Symmetric or asymmetric beam forms
 - Beam offset 0-100%
- Ultra small size
- High collection efficiency
- Available with the brightest LED chips

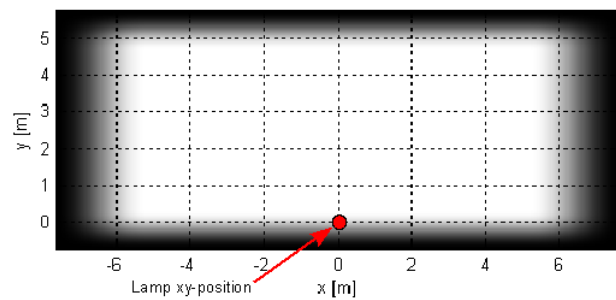


Applications

- Street lights
- Parking lot and site lighting
- Hall lighting
- Art lighting
- Retail lighting
- Vehicle front lamps
- Navigation area lamps
- Machine vision illumination
- Specialty illumination

Example 1.

Rectangular beam with 45° x 100° full opening angle and 95% offset in y-direction. The figure shows the beam cross section at a street from a 6 m pole height.



Example 2.

Rectangular beam with 50° x 150° full opening angle, 100% offset in y-direction, and smoothed x-edges. The figure shows the beam cross section at a street from a 6 m pole height.

Contact Information

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