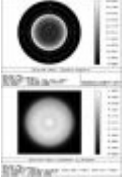
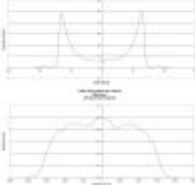
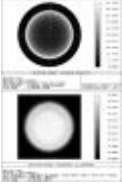
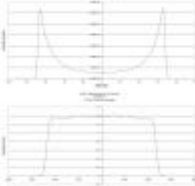

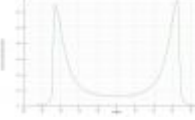




## 20.0MM BUBBLE 130 BUBBLE

**Status** Production  
**Part no.** 10406  
**Drawing no.** 60505  
**Product type** Optic  
**Type** Bubble  
**Pieces** 1  
**Diameter** 20.0  
**Height** 10.00  
**Beam** Bubble 130  
**Flange** No  
**Files** [Customer drawing \(PDF\)](#)  
[Customer 3D model \(.igs\)](#)



LEDs & Performances	Eff.	FWHM	Cd/lm	Spot	Cross-section	Files
Lumileds Luxeon Rebel Cool White	94.0%	130	0.1			10406_130deg_BubbleOptic_rebel_14-12-2009.IES
Cree XP-E XLamp® White	94.0%	130	0.1			10406_130deg_bubbleOptic_cree-xpe_14-12-2009.IES
Lumileds ES Luxeon Rebel Cool White	93.7%	130	0.7			_10406_1 130 deg Bubble _ ES _Lu22_I0_P0_X0_Y0.ies
Cree XP-G XLamp® White	93.8%	130	0.7			_10406 130 deg bubble _ XP-G _Cr05_I0_P0_X0_Y0.ies

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#### Handling instructions

- Do not handle or install lenses without wearing gloves, skin oils may damage the lens or the light transmission.
- Clean lenses with a mild soap and water and dry with a clean soft cloth.
- Do not use any commercial solvents on lenses.
- Mount holders with low Odour epoxy's and allow time for them to out gas to stop lenses fogging.

Please note that flow lines, weld lines, surface scratches and small black or white inclusions within the lenses are acceptable if the optical performance of the lens is within the specification described below.

#### **For all optics except Rippled and Frosted;**

- FWHM = Datasheet Value +/-10%.

#### **For all Rippled and Frosted Optics;**

- FWHM = Datasheet Value +/-20%.

#### **For all Optics;**

- Efficiency = Datasheet Value +infinity / -10%

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