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## 60° Diffusing Angle 12.5mm Unmounted



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### Product Downloads

### General

Holographic Diffuser **Type:**

### Physical & Mechanical Properties

12.50 **Diameter (mm):**

±0.5 **Dimensional Tolerance (mm):**

Thickness (mm):  
0.78

Construction:  
Unmounted

## Optical Properties

Angle Tolerance (°):  
±6

Diffusing Angle (°):  
60 (FWHM)

Substrate:   
Polycarbonate

Transmission (%):  
>85

Wavelength Range (nm):  
400 - 700

Damage Threshold, By Design:   
0.22 J/cm<sup>2</sup> @ 1064nm, 10ns (typical)

## Environmental & Durability Factors

Operating Temperature (°C):  
-30 to +100 (Maximum of 240 Hours)

## Regulatory Compliance

RoHS 2015:  
[Compliant](#)

Certificate of Conformance:  
[View](#)

Reach 247:  
[Compliant](#)

## Product Details

- Transmission Efficiency >85%
- Elliptical and Circular Diffusing Outputs
- Ideal for Visible and Near-Infrared Applications
- [UV Holographic Diffusers](#) Also Available

Holographic Diffusers are used to control the diffuse area of illumination and increase transmission efficiency to greater than 90% from filament lamps, LEDs, arc lamps, and other sources. [Standard ground glass](#) and [opal glass](#) will produce diffuse illumination, but the diffuse light area will often exceed the requirements of the system. This over-illumination, associated with traditional diffusers, reduces efficiency and can often lead to added costs by requiring higher power illumination sources, lenses, and possibly filters. It is important to note that diffusing angles are given for a collimated input beam and angular divergence will vary for different incidence angles.

Unlike many holographic elements, these specific polycarbonate components transmit light in both the visible and near-infrared. Zero order, or a specular component, of transmitted light is less than 1% for visible wavelengths, but maybe higher if these diffusers are used at wavelengths >700nm. Available individually, as unmounted sheets, or in sets of four filters. Holographic Diffusers can be cleaned with a de-ionized water rinse, followed by a forced air drying. Wipe gently with lens tissue soaked with methanol, followed with a forced clean air or nitrogen drying. Holographic Diffusers are resistant to methanol and methylene chloride.

**Note:** Matte surface should face the light source. To clean holographic diffusers, dampen a lint free cloth wipe with methanol and gently wipe the entire diffuser surface in a gentle, circular pattern. Immediately and carefully blow off the clean diffuser area with dry compressed air. Caution: cleaning may cause a change in the optical performance of the diffuser.

## Technical Information





*Filament Imaged Through Low Angle Circular Diffuser*



*Projected Image of Lamp Filament*



*Filament Imaged Through Elliptical Diffuser*



## Compatible Mounts