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## 1064nm, 20mm Dia., Square Output, High Homogeneity Diffractive Diffuser



HOLOOR Diffractive Diffusers

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### Product Downloads

#### General

High Homogeneity **Note:**

#### Physical & Mechanical Properties

18.00 **Clear Aperture CA (mm):**

20.00 +0.05/-0.1 **Diameter (mm):**

**Thickness (mm):**

3.00 ±0.1

## Optical Properties

Laser V-Coat (1064nm) **Coating:**

1064 **Design Wavelength DWL (nm):**

**Fused Silica** (Corning 7980) **Substrate:**

SMor MM **Input Beam Mode:**

5 **Minimum Beam Diameter (mm):**

Square **Output Shape:**

72 **Overall Efficiency (%):**

2.75 x 2.75 **Full Angle (°):**

**Damage Threshold, Reference:**   
[See Link for More Details](#)

## Regulatory Compliance

**Compliant** **RoHS 2015:**

**View** **Certificate of Conformance:**

**Compliant** **Reach 233:**

## Product Details

- Shape Laser Beams with Homogenized Distribution
- Circular or Square Output Shapes
- Designs for 532nm and 1064nm Nd:YAG Lasers
- Compatible with Single Mode or Multimode Beams

HOLO/OR Diffractive Diffusers, also known as Beam Homogenizers, are diffractive optical elements (DOE) that transform single mode or multimode laser beams into a defined shape with homogenized distribution. Each diffuser has a specified diffusion angle at their design wavelength which in combination with a [lens](#) controls the spot size. HOLO/OR Diffractive Diffusers are available with square or circular shape outputs and are also offered as a high homogeneity version which provides higher homogeneity and lower zero order than standard diffractive diffusers. HOLO/OR Diffractive Diffusers are used as in a variety of laser applications, including beam homogenizing, hot spot reducing, areal treatments, and laser material processing applications.

**Note:** Diffractive optical elements are not intended for use outside of their design wavelength. Diffractive optical elements will have decreased performance if their surfaces become dirty from oil or other substances. It is recommended to always use [gloves or finger cots](#) when handling these optics.

Edmund Optics offers a range of diffractive optical elements from HOLO/OR for laser applications, including:

- **Diffractive Diffusers:** used to convert an input laser beam to a defined shape with homogenized distribution
- **Diffractive Beamsplitters:** used to split an input laser beam into a 1D array or 2D matrix output
- **Diffractive Beam Shapers:** used to transform a nearly-Gaussian laser beam into a defined shape with uniform flat top intensity distribution
- **Diffractive Beam Samplers:** used to transmit an input laser beam while producing two higher order beams that can be used to monitor high power lasers
- **Diffractive Axicons:** used to transform an input laser beam to a Bessel beam that can be focused to a ring
- **Diffractive Vortex Phase Plates:** used to convert a Gaussian profile beam to a donut-shaped energy ring

## Custom

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Compatible Mounts