

# DF050

## Technical Datasheet



## Diffuser

A diffuser can be any translucent material that scatters light, most commonly applied in the form of a panel or cover that is placed directly over a light source. Its main purpose is to diffuse (or “spread out”) light in a more uniform manner. It can help reduce the sharpness of shadows or greatly reduce harsh, unwanted glare

### Specification Highlights

<b>USEFUL RANGE :</b>	400-1100nm	<b>DIFFUSE LIGHT TRANSMISSION :</b>	48%
<b>THICKNESS :</b>	1.5mm	<b>PARALLEL LIGHT TRANSMISSION :</b>	2%
<b>COLOR TEMPERATURE :</b>	6750K	<b>HAZE :</b>	96%
<b>TOTAL LIGHT TRANSMISSION :</b>	50%		

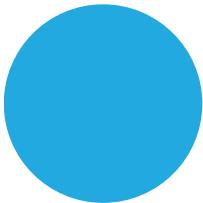
Revised 06/05/2023

## Full Specifications

<b>Useful Range :</b>	400-1100nm	<b>Diffuse Light Transmission :</b>	48%
<b>Thickness :</b>	1.5mm	<b>Parallel Light Transmission :</b>	2%
<b>Color Temperature :</b>	6750K	<b>Haze :</b>	96%
<b>Total Light Transmission :</b>	50%		

## How to Order

This Item is cut to order and is therefore available in nearly any shape and size. To order, please reference the tables below to generate a part number or provide a custom drawing and send a quote request to support@machinevisiondirect.com



### For Circular Parts

**DF050-D** \_\_\_\_\_  
 DIAMETER IN MM

EXAMPLE PART NUMBERS:  
 10.75mm Diameter: DF050-D10.75  
 20mm Diameter: DF050-D20  
 32mm Diameter: DF050-D32



### For Square Parts

**DF050-R** \_\_\_\_\_  
 SIDE LENGTH IN MM

EXAMPLE PART NUMBERS:  
 10.75mm Square: DF050-R10.75  
 20mm Square: DF050-R20  
 32mm Square: DF050-R32



### For Rectangular Parts

**DF050-R** \_\_\_\_\_ x \_\_\_\_\_  
 LENGTH IN MM      WIDTH IN MM

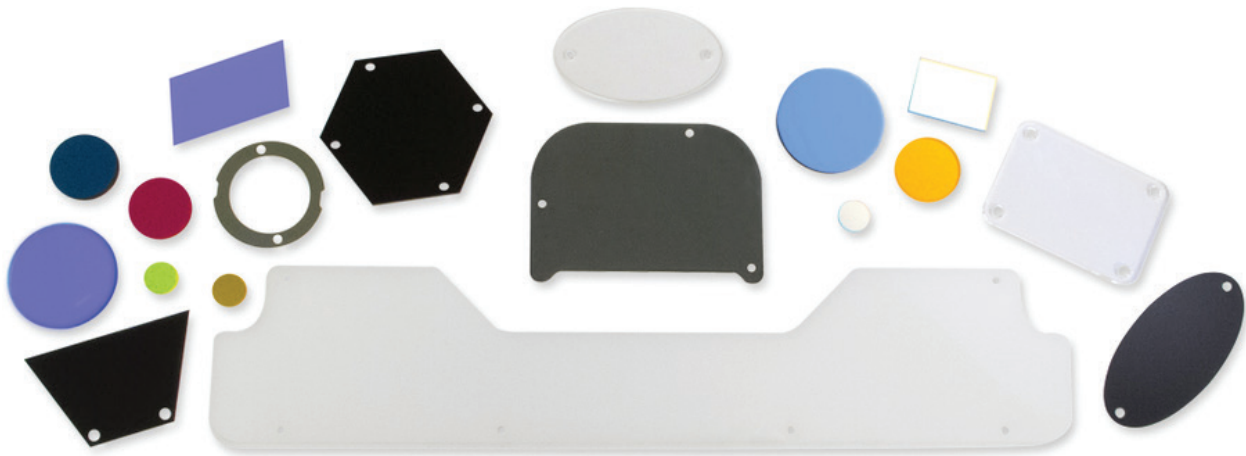
EXAMPLE PART NUMBERS:  
 10.75mm x 20mm Rectangle: DF050-R10.75x20  
 30mm x 20mm Rectangle: DF050-R30x20  
 32mm x 24mm Rectangle: DF050-R32x24



**For Custom Parts**  
**Send us a Drawing**

support@machinevisiondirect.com

## CUSTOM CUT TO ORDER



MidOpt is the industry leader in machine vision filters and optical solutions, and custom shape and size requests are our specialty. All MidOpt filters can be precision cut to your exact specifications and system requirements—in high volumes and with short lead times (custom shapes and sizes are typically fabricated with one day to two week lead times). A wide variety of shapes are available, and custom sizing options up to 165mm sq. are possible for most filters. Acrylic filters can be custom cut up to 900mm sq.

## ABOUT DIFFUSERS

A diffuser can be any translucent material that scatters light, most commonly applied in the form of a panel or cover that is placed directly over a light source. Its main purpose is to diffuse (or “spread out”) light in a more uniform manner. It can help reduce the sharpness of shadows or greatly reduce harsh, unwanted glare. One common application is to eliminate lamp filament or LED “hot spots”, which can at times be very intense. A diffuser is commonly used over LED light sources to distribute light output more evenly over a given area while also affording some protection for the LEDs.

Machine Vision Direct offers both glass and acrylic options. Various thicknesses and specific transmission levels (from 5 – 93%) can be provided. Common diffuser types include ground glass, molded/textured acrylic, thin plastic film, flashed or solid opal glass, molded/textured glass and diffractive diffusers. The latter are generally much more costly but can be used to manipulate LED light output to provide a more precise spatial configuration and intensity profile, all while keeping light loss due to back-scattering to a minimum.