

## Ground Glass Diffusers | DFB1/DFSQ1

RoHS

Ground glass diffuser has a large area diffusion of an incident light. It is widely used in prevention of imaging of lamp filament, to diffuse a large area of projected light or used as a screen.

- The ground glass diffuser with sandblasted surface at a grit range from #240 to #1500. The higher the grit number the finer the sandblast size.
- BK7 for visible and NIR and for Ultraviolet we recommend Synthetic fused silica substrates.



## Specifications

Material	DFB1: BK7 DFSQ1: Synthetic fused silica	
Surface condition	Front surface	Sand abrasive surface at various sand number range
	Rear surface	Polished (Surface flatness: about 4λ)
Wavelength Range	DFB1: 400 – 2000nm DFSQ: 200 – 2000nm	
Clear aperture	90% of Actual Aperture	

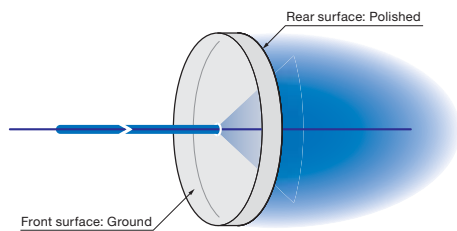
## Guide

- ▶ Ground glass on both surfaces or specific custom size substrates are available, please contact our Sales Division with your request.

## Attention

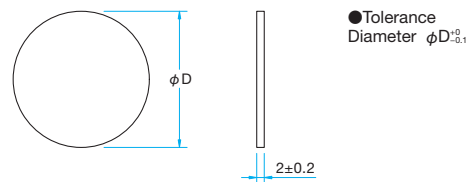
- ▶ The characteristic graph shown below is just a reference measurement and is not a measured result of our products.
- ▶ Use the sandblast surface for screen application. The backside may have 4% reflectivity and it may cause a ghost imaging phenomena.

## Schematic



## Outline Drawing

(in mm)



## BK7

Part Number	Diameter φD [mm]	Sand blasted surface (sand number range)
DFB1-30C02-240	φ30	#240
DFB1-30C02-400	φ30	#400
DFB1-30C02-600	φ30	#600
DFB1-30C02-800	φ30	#800
DFB1-30C02-1000	φ30	#1000
DFB1-30C02-1500	φ30	#1500
DFB1-50C02-240	φ50	#240
DFB1-50C02-400	φ50	#400
DFB1-50C02-600	φ50	#600
DFB1-50C02-800	φ50	#800
DFB1-50C02-1000	φ50	#1000
DFB1-50C02-1500	φ50	#1500

## Synthetic fused silica

Part Number	Diameter φD [mm]	Sand blasted surface (sand number range)
DFSQ1-30C02-240	φ30	#240
DFSQ1-30C02-400	φ30	#400
DFSQ1-30C02-600	φ30	#600
DFSQ1-30C02-800	φ30	#800
DFSQ1-30C02-1000	φ30	#1000
DFSQ1-30C02-1500	φ30	#1500
DFSQ1-50C02-240	φ50	#240
DFSQ1-50C02-400	φ50	#400
DFSQ1-50C02-600	φ50	#600
DFSQ1-50C02-800	φ50	#800
DFSQ1-50C02-1000	φ50	#1000
DFSQ1-50C02-1500	φ50	#1500

## Compatible Optic Mounts

FHS-25, -50 / LHA-60

Application Systems

Optics &amp; Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators &amp; Adjusters

Motorized Stages

Light Sources &amp; Laser Safety

Index

Guide

Mirrors

Beamsplitters

Polarizers

Lenses

Multi-Element Optics

Filters

Prisms

Substrates/Windows

Optical Data

Maintenance

Selection Guide

ND Filters

Diffusers

Colored Glass Filters

Dielectric Filters

Etalon



### ■ Diffuser characteristics

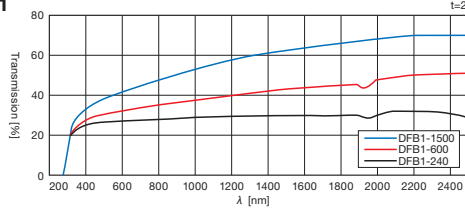
The characteristic of the diffuser depends on the sandblast grit range.

The sand number range at #240 & #400 with large surface roughness the light incident is strongly diffused and the transmitted light is projected onto larger area. The sand number range at #1000 & #1500 with small surface roughness the diffused light is weak and the transmitted beam diffuse gradually the surrounding of the beam.

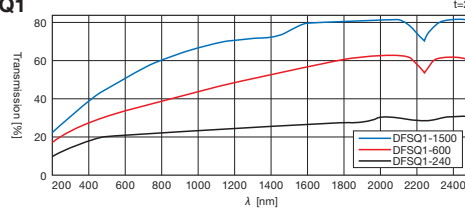
The diffusion of the light is different in accordance with the wavelength, the long wavelength light has lower diffusion capability.

Please see the graph here below for your reference:

**DFB1**



**DFSQ1**



Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

MotORIZED Stages

Light Sources & Laser Safety

Index

Guide

Mirrors

Beamsplitters

Polarizers

Lenses

Multi-Element Optics

Filters

Prisms

Substrates/Windows

Optical Data

Maintenance

Selection Guide

ND Filters

Diffusers

Colored Glass Filters

Dielectric Filters

Etalon