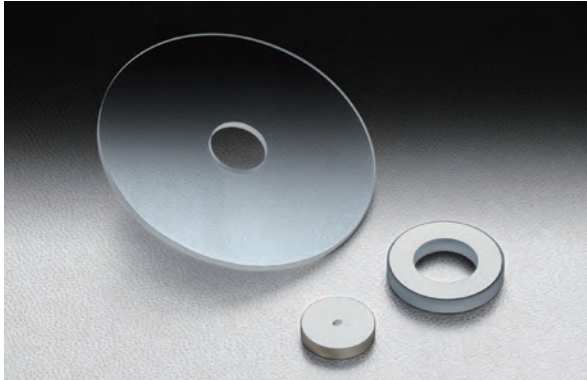


We can provide custom made holes on an optic or window to meet your requirements. We can make through-holes, counterbore holes, taper holes, inclined holes, blind holes or any type of holes. Please contact our Sales Division with your requests.

- Ultrasonic machining system is used to avoid damaging the optic.
- We can do polishing on machined hole with no cracks on the inner edge of the hole.
- We can provide custom made holes any size. There may be a fee for the tooling (jig), please contact our Sales Division with your requests.



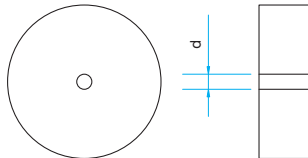
Specifications		
Possible to specify type of hole	Through-hole d (mm)	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10, 12, 13, 15, 17, 18, 20, 22, 25, 28, 30
	Blind hole d (mm)	3.0, 5.0, 7.0, 10, 15, 20
Processing tolerance	Hole size (mm)	$D_{-0}^{+0.15}$
	Hole position (mm)	$X \pm 0.2$

Processing specification		
Machining Type	Hole size d [mm]	Specifying part number code (□□ is hole sized)
Vertical hole	$\leq \phi 2.5$	-SH□□
	$\phi 3 - \phi 10$	
	$\phi 12 - \phi 30$	
Counterbore hole	$\leq \phi 2.5$	-SZH□□
	$\phi 3 - \phi 10$	
	$\phi 12 - \phi 30$	
45° taper hole	$\leq \phi 2.5$	-TH□□-45
	$\phi 3 - \phi 10$	
	$\phi 12 - \phi 30$	
Incline hole	$\leq \phi 2.5$	-KH□□-45
	$\phi 3 - \phi 10$	
	$\phi 12 - \phi 30$	
Vertical blind hole	$\leq \phi 7$	-SMH□□
	$\phi 10 - \phi 20$	

[Example of specification]
 Part number of Optical Flats ($\phi 30$ t5): OPB-30C05-4-5
 When need to make a dia 10mm vertical hole on the substrate.
 ⇒ OPB-30C05-4-5-SH10

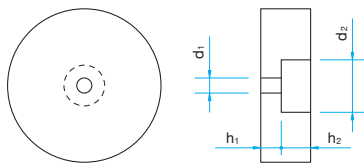
Outline Drawing (in mm)

Vertical hole type (-SH□□)



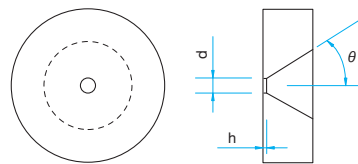
Hole size	d
Chamfering size	c (0 if no specifications)
Hole position	Center or specify the position (XY)

Counterbore hole type (-SZH□□)



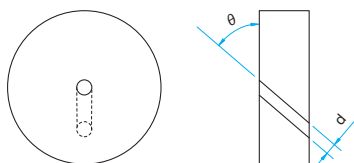
Hole size	d_1
Hole depth	h_1
Counterbore hole size	d_2
Counterbore hole depth	h_2
Chamfering size	c (0 if no specifications)
Hole position	Center or specify the position (XY)

45° taper hole type (-TH□□-45)



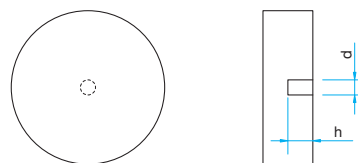
Hole size	d
Hole depth	h (h > specify as 0.15)
Taper angle	$\theta = 45^\circ$ (45° unless specify)
Chamfering size	No chamfer
Hole position	Center or specify the position (XY)

Incline hole type (-KH□□-45)



Hole size	d (Hole form)
Incline angle	$\theta = 45^\circ$ (45° unless specify)
Chamfering size	No chamfer
Hole position	Center or specify the position (XY)

Vertical blind hole type (-SMH□□)



Hole size	d
Hole depth	h
Chamfering size	c (0 if no specifications)
Hole position	Center or specify the position (XY)



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