

Concave Mirror Substrate for Laser

LCBS

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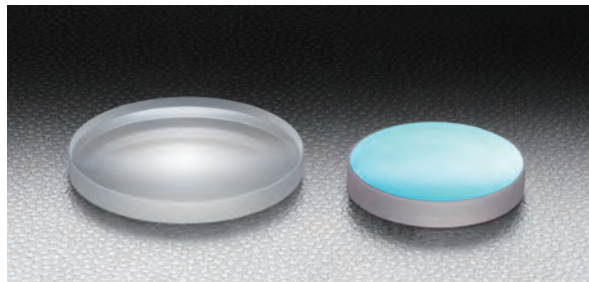
Wedged Substrates

Concave Mirror
Substrates

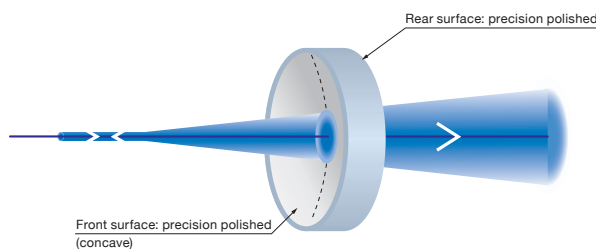
Master Optics

Windows

These concave substrates are the primary substrate used by mirrors for the laser resonator. It is processed with high surface flatness on both the front and back surface of the concave mirror. Concave mirrors are also available with a dielectric multi-layer film with high laser damage threshold.

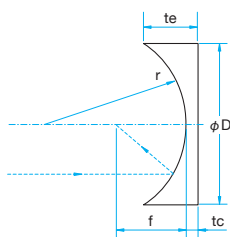


Schematic



Outline Drawing

(in mm)



- Tolerance
Diameter $\phi D: \pm 0.1$
Thickness $t_c \pm 0.2$

- Relationship between focal length "f" and the radius of curvature "r" of the concave mirror
 $r = 2f$

- Large selection of diameter and focal length is available on our website and in our catalog.
- Because it is also polished on the back side, it is possible to use for input of excitation laser or extraction of sample beam.
- The substrate can also be used as a test plate for convex lens surface because of the high accuracy and precision of the radius of curvature.

Specifications

Material	BK7
Surface accuracy	Front (concave) $\lambda/4$ Rear (flat) $\lambda/4$
Radius Tolerance	$\pm 1\%$
Coating	Uncoated
Clear aperture	90% of actual diameter
Surface Quality (Scratch-Dig)	20-10

Guide

- Concave reflector mirror substrate (TCA) is also available for use with a light source or lamp reflector telescope.

Attention

- The outer periphery of the concave edge is chamfered and thickness of edge (te) may vary. For this reason, please use the back side as the reference plane.

φ10

Part Number	Diameter ϕD [mm]	Edge thickness t_e [mm]	Center thickness t_c [mm]	Radius of curvature r [mm]	Focal length f [mm]
LCBS-10C05-10	φ10	5	3.7	10	5
LCBS-10C05-15	φ10	5	4.1	15	7.5
LCBS-10C05-20	φ10	5	4.4	20	10
LCBS-10C05-25	φ10	5	4.5	25	12.5
LCBS-10C05-30	φ10	5	4.6	30	15
LCBS-10C05-40	φ10	5	4.7	40	20
LCBS-10C05-50	φ10	5	4.7	50	25
LCBS-10C05-60	φ10	5	4.8	60	30
LCBS-10C05-70	φ10	5	4.8	70	35
LCBS-10C05-80	φ10	5	4.8	80	40
LCBS-10C05-90	φ10	5	4.9	90	45
LCBS-10C05-100	φ10	5	4.9	100	50
LCBS-10C05-120	φ10	5	4.9	120	60
LCBS-10C05-150	φ10	5	4.9	150	75
LCBS-10C05-200	φ10	5	4.9	200	100
LCBS-10C05-250	φ10	5	4.9	250	125
LCBS-10C05-300	φ10	5	5.0	300	150
LCBS-10C05-400	φ10	5	5.0	400	200
LCBS-10C05-500	φ10	5	5.0	500	250
LCBS-10C05-600	φ10	5	5.0	600	300
LCBS-10C05-700	φ10	5	5.0	700	350
LCBS-10C05-800	φ10	5	5.0	800	400
LCBS-10C05-1000	φ10	5	5.0	1000	500
LCBS-10C05-1500	φ10	5	5.0	1500	750
LCBS-10C05-2000	φ10	5	5.0	2000	1000
LCBS-10C05-2500	φ10	5	5.0	2500	1250
LCBS-10C05-3000	φ10	5	5.0	3000	1500
LCBS-10C05-4000	φ10	5	5.0	4000	2000
LCBS-10C05-5000	φ10	5	5.0	5000	2500
LCBS-10C05-10000	φ10	5	5.0	10000	5000
LCBS-10C05-30000	φ10	5	5.0	30000	15000

φ15

Part Number	Diameter ϕD [mm]	Edge thickness t_e [mm]	Center thickness t_c [mm]	Radius of curvature r [mm]	Focal length f [mm]
LCBS-15C07-10	φ15	7	3.6	10	5
LCBS-15C07-15	φ15	7	5.0	15	7.5
LCBS-15C05-20	φ15	5	3.5	20	10
LCBS-15C05-25	φ15	5	3.8	25	12.5
LCBS-15C05-30	φ15	5	4.0	30	15
LCBS-15C05-40	φ15	5	4.3	40	20
LCBS-15C05-50	φ15	5	4.4	50	25
LCBS-15C05-60	φ15	5	4.5	60	30
LCBS-15C05-70	φ15	5	4.6	70	35
LCBS-15C05-80	φ15	5	4.6	80	40
LCBS-15C05-90	φ15	5	4.7	90	45
LCBS-15C05-100	φ15	5	4.7	100	50
LCBS-15C05-120	φ15	5	4.8	120	60
LCBS-15C05-150	φ15	5	4.8	150	75
LCBS-15C05-200	φ15	5	4.9	200	100
LCBS-15C05-250	φ15	5	4.9	250	125
LCBS-15C05-300	φ15	5	4.9	300	150
LCBS-15C05-400	φ15	5	4.9	400	200
LCBS-15C05-500	φ15	5	4.9	500	250
LCBS-15C05-600	φ15	5	5.0	600	300
LCBS-15C05-700	φ15	5	5.0	700	350
LCBS-15C05-800	φ15	5	5.0	800	400
LCBS-15C05-1000	φ15	5	5.0	1000	500
LCBS-15C05-1500	φ15	5	5.0	1500	750
LCBS-15C05-2000	φ15	5	5.0	2000	1000
LCBS-15C05-2500	φ15	5	5.0	2500	1250
LCBS-15C05-3000	φ15	5	5.0	3000	1500
LCBS-15C05-4000	φ15	5	5.0	4000	2000
LCBS-15C05-5000	φ15	5	5.0	5000	2500
LCBS-15C05-10000	φ15	5	5.0	10000	5000
LCBS-15C05-30000	φ15	5	5.0	30000	15000



$\phi 20 - \phi 25$					
Part Number	Diameter ϕD [mm]	Edge thickness t_e [mm]	Center thickness t_c [mm]	Radius of curvature r [mm]	Focal length f [mm]
LCBS-20C08-15	$\phi 20$	8	4.2	15	7.5
LCBS-20C08-20	$\phi 20$	8	5.3	20	10
LCBS-20C08-25	$\phi 20$	8	5.9	25	12.5
LCBS-20C05-30	$\phi 20$	5	3.3	30	15
LCBS-20C05-40	$\phi 20$	5	3.7	40	20
LCBS-20C05-50	$\phi 20$	5	4.0	50	25
LCBS-20C05-60	$\phi 20$	5	4.2	60	30
LCBS-20C05-70	$\phi 20$	5	4.3	70	35
LCBS-20C05-80	$\phi 20$	5	4.4	80	40
LCBS-20C05-90	$\phi 20$	5	4.4	90	45
LCBS-20C05-100	$\phi 20$	5	4.5	100	50
LCBS-20C05-120	$\phi 20$	5	4.6	120	60
LCBS-20C05-150	$\phi 20$	5	4.7	150	75
LCBS-20C05-200	$\phi 20$	5	4.7	200	100
LCBS-20C05-250	$\phi 20$	5	4.8	250	125
LCBS-20C05-300	$\phi 20$	5	4.8	300	150
LCBS-20C05-400	$\phi 20$	5	4.9	400	200
LCBS-20C05-500	$\phi 20$	5	4.9	500	250
LCBS-20C05-600	$\phi 20$	5	4.9	600	300
LCBS-20C05-700	$\phi 20$	5	4.9	700	350
LCBS-20C05-800	$\phi 20$	5	4.9	800	400
LCBS-20C05-1000	$\phi 20$	5	5.0	1000	500
LCBS-20C05-1500	$\phi 20$	5	5.0	1500	750
LCBS-20C05-2000	$\phi 20$	5	5.0	2000	1000
LCBS-20C05-2500	$\phi 20$	5	5.0	2500	1250
LCBS-20C05-3000	$\phi 20$	5	5.0	3000	1500
LCBS-20C05-4000	$\phi 20$	5	5.0	4000	2000
LCBS-20C05-5000	$\phi 20$	5	5.0	5000	2500
LCBS-20C05-10000	$\phi 20$	5	5.0	10000	5000
LCBS-20C05-30000	$\phi 20$	5	5.0	30000	15000
LCBS-25C10-15	$\phi 25$	10	3.3	15	7.5
LCBS-25C07-20	$\phi 25$	7	2.6	20	10
LCBS-25C07-25	$\phi 25$	7	3.7	25	12.5
LCBS-25C07-30	$\phi 25$	7	4.3	30	15
LCBS-25C07-40	$\phi 25$	7	5.0	40	20
LCBS-25C07-50	$\phi 25$	7	5.4	50	25
LCBS-25C05-60	$\phi 25$	5	3.7	60	30
LCBS-25C05-70	$\phi 25$	5	3.9	70	35
LCBS-25C05-80	$\phi 25$	5	4.0	80	40
LCBS-25C05-90	$\phi 25$	5	4.1	90	45
LCBS-25C05-100	$\phi 25$	5	4.2	100	50
LCBS-25C05-120	$\phi 25$	5	4.3	120	60
LCBS-25C05-150	$\phi 25$	5	4.5	150	75
LCBS-25C05-200	$\phi 25$	5	4.6	200	100
LCBS-25C05-250	$\phi 25$	5	4.7	250	125
LCBS-25C05-300	$\phi 25$	5	4.7	300	150
LCBS-25C05-400	$\phi 25$	5	4.8	400	200
LCBS-25C05-500	$\phi 25$	5	4.8	500	250
LCBS-25C05-600	$\phi 25$	5	4.9	600	300
LCBS-25C05-700	$\phi 25$	5	4.9	700	350
LCBS-25C05-800	$\phi 25$	5	4.9	800	400
LCBS-25C05-1000	$\phi 25$	5	4.9	1000	500
LCBS-25C05-1500	$\phi 25$	5	4.9	1500	750
LCBS-25C05-2000	$\phi 25$	5	5.0	2000	1000
LCBS-25C05-2500	$\phi 25$	5	5.0	2500	1250
LCBS-25C05-3000	$\phi 25$	5	5.0	3000	1500
LCBS-25C05-4000	$\phi 25$	5	5.0	4000	2000
LCBS-25C05-5000	$\phi 25$	5	5.0	5000	2500
LCBS-25C05-10000	$\phi 25$	5	5.0	10000	5000
LCBS-25C05-30000	$\phi 25$	5	5.0	30000	15000

$\phi 30$					
Part Number	Diameter ϕD [mm]	Edge thickness t_e [mm]	Center thickness t_c [mm]	Radius of curvature r [mm]	Focal length f [mm]
LCBS-30C10-20	$\phi 30$	10	3.2	20	10
LCBS-30C10-25	$\phi 30$	10	5.0	25	12.5
LCBS-30C07-30	$\phi 30$	7	3.0	30	15
LCBS-30C07-40	$\phi 30$	7	4.1	40	20
LCBS-30C07-50	$\phi 30$	7	4.7	50	25
LCBS-30C07-60	$\phi 30$	7	5.1	60	30
LCBS-30C07-70	$\phi 30$	7	5.4	70	35
LCBS-30C07-80	$\phi 30$	7	5.6	80	40
LCBS-30C07-90	$\phi 30$	7	5.7	90	45
LCBS-30C07-100	$\phi 30$	7	5.9	100	50
LCBS-30C05-120	$\phi 30$	5	4.1	120	60
LCBS-30C05-150	$\phi 30$	5	4.2	150	75
LCBS-30C05-200	$\phi 30$	5	4.4	200	100
LCBS-30C05-250	$\phi 30$	5	4.5	250	125
LCBS-30C05-300	$\phi 30$	5	4.6	300	150
LCBS-30C05-400	$\phi 30$	5	4.7	400	200
LCBS-30C05-500	$\phi 30$	5	4.8	500	250
LCBS-30C05-600	$\phi 30$	5	4.8	600	300
LCBS-30C05-700	$\phi 30$	5	4.8	700	350
LCBS-30C05-800	$\phi 30$	5	4.9	800	400
LCBS-30C05-1000	$\phi 30$	5	4.9	1000	500
LCBS-30C05-1500	$\phi 30$	5	4.9	1500	750
LCBS-30C05-2000	$\phi 30$	5	4.9	2000	1000
LCBS-30C05-2500	$\phi 30$	5	5.0	2500	1250
LCBS-30C05-3000	$\phi 30$	5	5.0	3000	1500
LCBS-30C05-3500	$\phi 30$	5	5.0	3500	1750
LCBS-30C05-4000	$\phi 30$	5	5.0	4000	2000
LCBS-30C05-5000	$\phi 30$	5	5.0	5000	2500
LCBS-30C05-10000	$\phi 30$	5	5.0	10000	5000
LCBS-30C05-30000	$\phi 30$	5	5.0	30000	15000

Compatible Optic Mounts

MHG-HS25-NL, -HS30-NL / LHCM-10, -15 / ALHN-25-5RO, -30-5RO

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