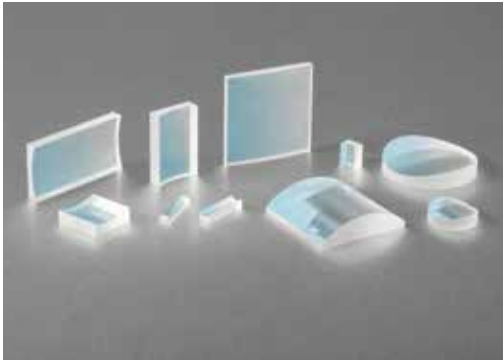


# CYLINDRICAL LENSES



Cylindrical lenses are used to condense, focus or expand light in a single dimension. Typical applications include laser scanners, holography, optical information processing/computing, spectroscopy, dye lasers, and scanning confocal microscopy. CVI Laser Optics' cylindrical lenses are manufactured with precision and are quality-controlled to deliver guaranteed performance in a wide array of industrial, OEM, and research applications, particularly at high laser power.

SELECTION GUIDE .....	64
LASER GRADE PLANO-CONVEX LENSES .....	65
LASER GRADE PLANO-CONCAVE LENSES .....	70

**Don't see exactly what you are looking for?**

CVI Laser Optics specializes in prototype to volume production manufacturing!

Give us a call and we will be honored to assist you with your custom needs.

## NOTES:

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

## SELECTION GUIDE

PRODUCT TYPE	SURFACE QUALITY	WAVELENGTH RANGE	OPERATING CONDITIONS	PAGE
<b>Plano-Convex Cylindrical Lenses</b>				
LASER GRADE FUSED SILICA RECTANGULAR: <a href="#">RCX-UV</a>	20-10	193 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	65
LASER GRADE N-BK7 SQUARE: <a href="#">SCX-C</a>	20-10	380 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	66
LASER GRADE FUSED SILICA SQUARE: <a href="#">SCX-UV</a>	20-10	193 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	67
LASER GRADE FUSED SILICA ROUND: <a href="#">CLCX-UV</a>	20-10	193 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	69
<b>Plano-Concave Cylindrical Lenses</b>				
LASER GRADE FUSED SILICA RECTANGULAR: <a href="#">RCC-UV</a>	20-10	193 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	70
LASER GRADE N-BK7 SQUARE: <a href="#">SCC-C</a>	20-10	380 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	71
LASER GRADE FUSED SILICA SQUARE: <a href="#">SCC-UV</a>	20-10	193 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	72
LASER GRADE FUSED SILICA ROUND: <a href="#">CLCC-UV</a>	20-10	193 – 2100nm	High Energy Lasers, 10 J/cm <sup>2</sup> , 20ns, 20Hz at 1064nm	73

# LASER GRADE FUSED SILICA RECTANGULAR CYLINDRICAL PLANO-CONVEX LENSES: RCX-UV



## Specifications

Product Code: **RCX-UV**

Optical Material:

Standard Grade Corning 7980 1-D (Fused Silica)

Design Wavelength: 248nm

Dimensional Tolerance: +0/-0.25mm

Thickness Tolerance:  $\pm 0.25$ mm

Radius of Curvature Tolerance:  $\pm 0.5\%$

Chamfer: 0.35mm leg width at 45° nominal

Wedge:  $\leq 3$  arc minutes

Surface Quality: 20-10 scratch-dig per MIL-PRF-13830b

Surface Figure:

Cylindrical side:  $< 1.0 \lambda$  (y-axis),

$< 1.0 \lambda/cm$  (x-axis), p-v at 633nm

Plano side:  $< \lambda/4$  p-v at 633nm

Clear Aperture (CA):  $\geq 85\%$  of central dimension

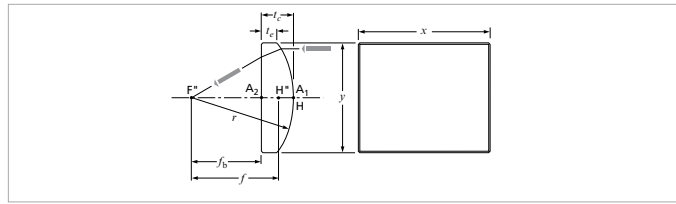
Anti-reflection Coating: Wavelength user specified

Narrowband:  $R \leq 0.25\%$  per surface

Broadband:  $R_{avg} \leq 0.5\%$  per surface

Dualband:  $R \leq 0.3\%$  at 1064,  $R \leq 0.6\%$  at 532 per surface

Damage Threshold: 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm



Rectangular cylindrical plano-convex lens

### BUILD YOUR PART NUMBER

STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
<b>RCX-40.0-25.4-30.5-UV</b>	<b>193</b>

**EXAMPLE: RCX-40.0-25.4-30.5-UV - 193**

### CHOOSE FROM THE OPTIONS BELOW.

#### 1. PRODUCT CODE - SEE TABLE BELOW

#### 2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank

<b>193</b>	<b>355-532</b>	<b>633-1064</b>	<b>1050-1600</b>
<b>248</b>	<b>400</b>	<b>700-900</b>	<b>1064/532</b>
<b>248-355</b>	<b>415-700</b>	<b>800</b>	<b>1550</b>
<b>266</b>	<b>532</b>	<b>1030</b>	
<b>355</b>	<b>633</b>	<b>1064</b>	

### LASER GRADE FUSED SILICA RECTANGULAR CYLINDRICAL PLANO-CONVEX LENSES

f (mm)	x (mm)	y (mm)	r (mm)	t <sub>c</sub> (mm)	t <sub>e</sub> (mm)	f/#	f <sub>b</sub> (mm)	PRODUCT CODE
12.7	12.7	6.4	6.5	3.0	2.2	2.3	10.8	RCX-12.7-6.4-6.5-UV
20.0	12.7	6.4	10.2	3.0	2.5	3.7	18.1	RCX-12.7-6.4-10.2-UV
25.0	25.4	12.7	12.7	5.0	3.3	2.3	21.8	RCX-25.4-12.7-12.7-UV
30.0	40.0	25.4	15.3	11.0	4.2	1.4	23.0	RCX-40.0-25.4-15.3-UV
40.0	25.0	15.0	20.3	5.0	3.6	3.1	36.8	RCX-25.0-15.0-20.3-UV
40.0	40.0	20.0	20.3	6.0	3.4	2.4	36.2	RCX-40.0-20.0-20.3-UV
50.0	40.0	25.4	25.4	9.0	5.6	2.3	44.2	RCX-40.0-25.4-25.4-UV
60.0	40.0	25.4	30.5	7.0	4.2	2.8	55.5	RCX-40.0-25.4-30.5-UV
75.0	40.0	25.4	38.1	5.0	2.8	3.5	71.8	RCX-40.0-25.4-38.1-UV
100.0	40.0	25.4	50.9	5.0	3.4	4.6	96.8	RCX-40.0-25.4-50.9-UV
125.0	40.0	25.4	63.6	5.0	3.7	5.8	121.8	RCX-40.0-25.4-63.6-UV
150.0	40.0	25.4	76.3	5.0	3.9	6.9	146.8	RCX-40.0-25.4-76.3-UV
200.0	30.0	20.0	101.7	5.0	4.5	11.8	196.8	RCX-30.0-20.0-101.7-UV
200.0	40.0	25.4	101.7	5.0	4.2	9.3	196.8	RCX-40.0-25.4-101.7-UV
250.0	30.0	20.0	127.1	5.0	4.6	14.7	246.8	RCX-30.0-20.0-127.1-UV
250.0	40.0	25.4	127.1	5.0	4.4	11.6	246.8	RCX-40.0-25.4-127.1-UV
300.0	40.0	25.4	152.6	5.0	4.5	13.9	296.8	RCX-40.0-25.4-152.6-UV
400.0	40.0	25.4	203.4	5.0	4.6	18.5	396.8	RCX-40.0-25.4-203.4-UV
500.0	40.0	25.4	254.3	5.0	4.7	23.2	496.8	RCX-40.0-25.4-254.3-UV
750.0	40.0	25.4	381.4	5.0	4.8	34.7	746.8	RCX-40.0-25.4-381.4-UV
1000.0	40.0	25.4	508.6	5.0	4.8	46.3	996.8	RCX-40.0-25.4-508.6-UV

## LASER GRADE N-BK7 SQUARE CYLINDRICAL PLANO-CONVEX LENSES: SCX-C



### Specifications

Product Code: **SCX-C**

Optical Material: N-BK7

Dimensional Tolerance: +0/-0.25mm

Thickness Tolerance: ±0.25mm

Radius of Curvature Tolerance: ±0.5%

Chamfer: 0.35mm leg width at 45° nominal

Wedge: ≤ 3 arc minutes

Surface Quality: 20-10 scratch-dig per MIL-PRF-13830b

Surface Figure:

Cylindrical side: < 1.0 λ (y-axis),

< 1.0 λ/cm (x-axis), p-v at 633nm

Plano side: < λ/4 p-v at 633nm

Clear Aperture (CA): ≥ 85% of central dimension

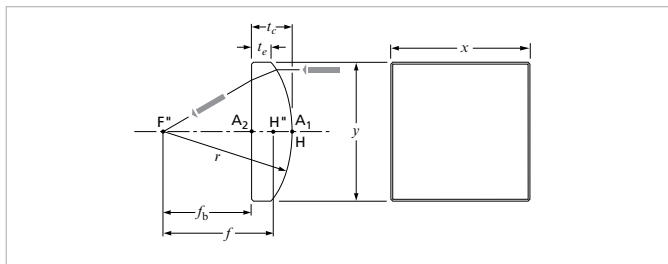
Anti-reflection Coating: Wavelength user specified

Narrowband: R ≤ 0.25% per surface

Broadband: R<sub>avg</sub> ≤ 0.5% per surface

Dualband: R ≤ 0.3% at 1064, R ≤ 0.6% at 532 per surface

Damage Threshold: 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm



Square cylindrical plano-convex lens

### BUILD YOUR PART NUMBER

STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
<b>SCX-50.8-152.6-C</b>	<b>1064</b>
<b>EXAMPLE: SCX-50.8-152.6-C - 1064</b>	

### CHOOSE FROM THE OPTIONS BELOW.

1. PRODUCT CODE - SEE TABLE BELOW			
2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank			
400	633	800	1050-1600
415-700	633-1064	1030	1064/532
532	700-900	1064	1550

Please see page T-31 for Anti-Reflective Coating Traces.

### LASER GRADE N-BK7 SQUARE CYLINDRICAL PLANO-CONVEX LENSES

f (mm)	x = y (mm)	r (mm)	t <sub>c</sub> (mm)	t <sub>e</sub> (mm)	f/#	f <sub>b</sub> (mm)	PRODUCT CODE
50.0	25.4	25.4	9.0	5.6	2.3	44.1	SCX-25.4-25.4-C
60.0	20.0	30.5	5.0	3.3	3.5	56.7	SCX-20.0-30.5-C
75.0	20.0	38.1	5.0	3.7	4.4	71.7	SCX-20.0-38.1-C
100.0	20.0	50.9	5.0	4.0	5.9	96.7	SCX-20.0-50.9-C
100.0	50.8	50.9	10.0	3.2	2.3	93.4	SCX-50.8-50.9-C
125.0	25.4	63.6	5.0	3.7	5.8	121.7	SCX-25.4-63.6-C
150.0	20.0	76.3	5.0	4.3	8.8	146.7	SCX-20.0-76.3-C
150.0	25.4	76.3	5.0	3.9	6.9	146.7	SCX-25.4-76.3-C
200.0	25.4	101.7	5.0	4.2	9.3	196.7	SCX-25.4-101.7-C
250.0	25.4	127.1	5.0	4.4	11.6	246.7	SCX-25.4-127.1-C
300.0	25.4	152.6	5.0	4.5	13.9	296.7	SCX-25.4-152.6-C
300.0	50.8	152.6	6.4	4.2	6.9	295.8	SCX-50.8-152.6-C
400.0	20.0	203.4	5.0	4.7	23.5	396.7	SCX-20.0-203.4-C
500.0	20.0	254.3	5.0	4.8	29.4	496.7	SCX-20.0-254.3-C
500.0	50.8	254.3	6.4	5.1	11.6	495.8	SCX-50.8-254.3-C
750.0	50.8	381.4	6.4	5.5	17.4	745.8	SCX-50.8-381.4-C
2000.0	50.8	1000.0	6.4	6.0	46.3	1995.8	SCX-50.8-1000.0-C
10000.0	50.8	5000.0	6.4	6.3	231.6	9995.8	SCX-50.8-5000.0-C

# LASER GRADE FUSED SILICA SQUARE CYLINDRICAL PLANO-CONVEX LENSES: SCX-UV



Other focal lengths and dimensions available.  
Contact us for pricing and delivery details.

- ▶ UV laser-line focusing
- ▶ Anamorphic beam shaping and laser projection
- ▶ Illumination of detector arrays
- ▶ Low loss, high energy AR coatings

## Specifications

Product Code: **SCX-UV**

### Optical Material:

Standard Grade Corning 7980 1-D (Fused Silica)

Design Wavelength: 248nm

Dimensional Tolerance: +0/-0.25mm

Thickness Tolerance:  $\pm 0.25$ mm

Radius of Curvature Tolerance:  $\pm 0.5\%$

Chamfer: 0.35mm leg width at 45° nominal

Wedge:  $\leq 3$  arc minutes

Surface Quality: 20-10 scratch-dig per MIL-PRF-13830b

### Surface Figure:

Cylindrical side:  $< 1.0 \lambda$  (y-axis),

$< 1.0 \lambda/cm$  (x-axis), p-v at 633nm

Plano side:  $< \lambda/4$  p-v at 633nm

Clear Aperture (CA):  $\geq 85\%$  of central dimension

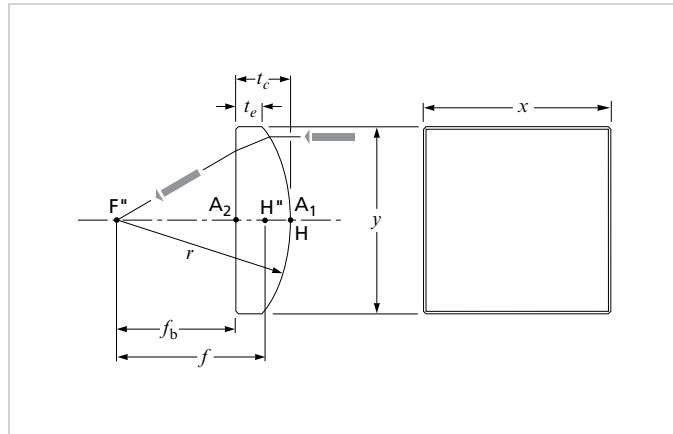
Anti-reflection Coating: Wavelength user specified

Narrowband:  $R \leq 0.25\%$  per surface

Broadband:  $R_{avg} \leq 0.5\%$  per surface

Dualband:  $R \leq 0.3\%$  at 1064,  $R \leq 0.6\%$  at 532 per surface

Damage Threshold: 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm



Square cylindrical plano-convex lens

## BUILD YOUR PART NUMBER

STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
<b>SCX-50.8-152.6-UV</b>	<b>1064</b>

**EXAMPLE: SCX-50.8-152.6-UV - 1064**

CHOOSE FROM THE OPTIONS BELOW.

### 1. PRODUCT CODE - SEE TABLE ON NEXT PAGE

### 2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank

193	355-532	633-1064	1050-1600
248	400	700-900	1064/532
248-355	415-700	800	1550
266	532	1030	
355	633	1064	

Please see page T-31 for Anti-Reflective Coating Traces.

continued on next page

LASER GRADE FUSED SILICA SQUARE CYLINDRICAL PLANO-CONVEX LENSES: SCX-UV

LASER GRADE FUSED SILICA SQUARE CYLINDRICAL PLANO-CONVEX LENSES							
$f$ (mm)	$x = y$ (mm)	$r$ (mm)	$t_c$ (mm)	$t_e$ (mm)	$f/\#$	$f_e$ (mm)	PRODUCT CODE
25.0	20.0	12.7	8.0	3.1	1.5	19.9	SCX-20.0-12.7-UV
40.0	15.0	20.3	5.0	3.6	3.1	36.8	SCX-15.0-20.3-UV
40.0	25.4	20.3	9.0	4.5	1.9	34.2	SCX-25.4-20.3-UV
50.0	25.4	25.4	9.0	5.6	2.3	44.2	SCX-25.4-25.4-UV
50.0	30.0	25.4	9.0	4.1	2.0	44.2	SCX-30.0-25.4-UV
60.0	25.4	30.5	7.0	4.2	2.8	55.5	SCX-25.4-30.5-UV
75.0	25.4	38.1	5.0	2.8	3.5	71.8	SCX-25.4-38.1-UV
75.0	30.0	38.1	7.0	3.9	2.9	70.5	SCX-30.0-38.1-UV
75.0	50.8	38.1	12.7	3.0	1.7	66.9	SCX-50.8-38.1-UV
100.0	20.0	50.9	5.0	4.0	5.9	96.8	SCX-20.0-50.9-UV
100.0	25.4	50.9	5.0	3.4	4.6	96.8	SCX-25.4-50.9-UV
100.0	50.8	50.9	10.0	3.2	2.3	93.6	SCX-50.8-50.9-UV
125.0	20.0	63.6	5.0	4.2	7.4	121.8	SCX-20.0-63.6-UV
125.0	25.4	63.6	5.0	3.7	5.8	121.8	SCX-25.4-63.6-UV
125.0	50.8	63.6	8.5	3.2	2.9	119.6	SCX-50.8-63.6-UV
150.0	20.0	76.3	5.0	4.3	8.8	146.8	SCX-20.0-76.3-UV
150.0	25.4	76.3	5.0	3.9	6.9	146.8	SCX-25.4-76.3-UV
150.0	50.8	76.3	8.0	3.6	3.5	144.9	SCX-50.8-76.3-UV
200.0	25.4	101.7	5.0	4.2	9.3	196.8	SCX-25.4-101.7-UV
200.0	50.8	101.7	6.4	3.1	4.6	195.9	SCX-50.8-101.7-UV
250.0	20.0	127.1	5.0	4.6	14.7	246.8	SCX-20.0-127.1-UV
250.0	25.4	127.1	5.0	4.4	11.6	246.8	SCX-25.4-127.1-UV
250.0	50.8	127.1	6.4	3.8	5.8	245.9	SCX-50.8-127.1-UV
300.0	25.4	152.6	5.0	4.5	13.9	296.8	SCX-25.4-152.6-UV
300.0	50.8	152.6	6.4	4.2	6.9	295.9	SCX-50.8-152.6-UV
400.0	20.0	203.4	5.0	4.7	23.5	396.8	SCX-20.0-203.4-UV
400.0	50.8	203.4	6.4	4.8	9.3	395.9	SCX-50.8-203.4-UV
500.0	20.0	254.3	5.0	4.8	29.4	496.8	SCX-20.0-254.3-UV
500.0	25.4	254.3	5.0	4.7	23.2	496.8	SCX-25.4-254.3-UV
500.0	50.8	254.3	6.4	5.1	11.6	495.9	SCX-50.8-254.3-UV
750.0	25.4	381.4	5.0	4.8	34.7	746.8	SCX-25.4-381.4-UV
750.0	50.8	381.4	6.4	5.5	17.4	745.9	SCX-50.8-381.4-UV
1000.0	20.0	508.6	5.0	4.9	58.8	996.8	SCX-20.0-508.6-UV
1000.0	25.4	508.6	5.0	4.8	46.3	996.8	SCX-25.4-508.6-UV
1000.0	50.8	508.6	6.4	5.7	23.2	995.9	SCX-50.8-508.6-UV
2000.0	50.8	1000.0	6.4	6.0	46.3	1995.9	SCX-50.8-1000.0-UV
10000.0	50.8	5000.0	6.4	6.3	231.6	9995.9	SCX-50.8-5000.0-UV

# LASER GRADE FUSED SILICA ROUND CYLINDRICAL PLANO-CONVEX LENSES: CLCX-UV



## Specifications

Product Code: **CLCX-UV**

**Optical Material:**

Standard Grade Corning 7980 1-D (Fused Silica)

**Design Wavelength:** 248nm

**Dimensional Tolerance:** +0/-0.25mm

**Thickness Tolerance:** ±0.25mm

**Radius of Curvature Tolerance:** ±0.5%

**Chamfer:** 0.35mm leg width at 45° nominal

**Wedge:** ≤ 3 arc minutes

**Surface Quality:** 20-10 scratch-dig per MIL-PRF-13830b

**Surface Figure:**

**Cylindrical side:** < 1.0 λ (y-axis),

< 1.0 λ/cm (x-axis), p-v at 633nm

**Plano side:** < λ/4 p-v at 633nm

**Clear Aperture (CA):** ≥ 85% of central dimension

**Anti-reflection Coating:** Wavelength user specified

**Narrowband:** R ≤ 0.25% per surface

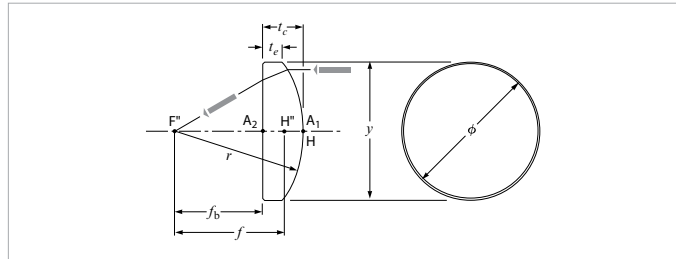
**Broadband:** R<sub>avg</sub> ≤ 0.5% per surface

**Dualband:** R ≤ 0.3% at 1064, R ≤ 0.6% at 532 per surface

**Damage Threshold:** 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm

Other focal lengths and dimensions available. Contact us for pricing and delivery details.

- ▶ Anamorphic beam shaping and laser projection
- ▶ Illumination of detector arrays
- ▶ Low loss, high energy AR coatings



Round cylindrical plano-convex lens

### BUILD YOUR PART NUMBER

STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
CLCX-25.4-25.4-UV	193

**EXAMPLE: CLCX-25.4-25.4-UV - 193**

CHOOSE FROM THE OPTIONS BELOW.

#### 1. PRODUCT CODE - SEE TABLE BELOW

#### 2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank

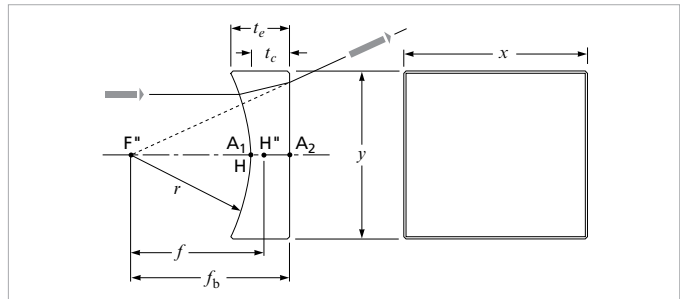
193	355-532	633-1064	1050-1600
248	400	700-900	1064/532
248-355	415-700	800	1550
266	532	1030	
355	633	1064	

Please see page T-31 for Anti-Reflective Coating Traces.

### LASER GRADE FUSED SILICA ROUND CYLINDRICAL PLANO-CONVEX LENSES

f (mm)	Ø (mm)	r (mm)	t <sub>c</sub> (mm)	t <sub>e</sub> (mm)	f/#	f <sub>b</sub> (mm)	PRODUCT CODE
30.0	25.4	15.3	11.0	4.2	1.4	23.0	CLCX-25.4-15.3-UV
50.0	25.4	25.4	7.4	4.0	2.3	45.3	CLCX-25.4-25.4-UV
60.0	25.4	30.5	7.0	4.2	2.8	55.5	CLCX-25.4-30.5-UV
75.0	25.4	38.1	6.2	4.0	3.5	71.0	CLCX-25.4-38.1-UV
100.0	25.4	50.9	5.6	4.0	4.6	96.4	CLCX-25.4-50.9-UV
100.0	50.8	50.9	10.0	3.2	2.3	93.6	CLCX-50.8-50.9-UV
150.0	25.4	76.3	5.1	4.0	6.9	146.7	CLCX-25.4-76.3-UV
150.0	50.8	76.3	8.0	3.6	3.5	144.9	CLCX-50.8-76.3-UV

LASER GRADE FUSED SILICA RECTANGULAR CYLINDRICAL PLANO-CONCAVE LENSES: RCC-UV



Laser grade rectangular cylindrical plano-concave lens

Specifications

Product Code: **RCC-UV**

Optical Material:

Standard Grade Corning 7980 1-D (Fused Silica)

Design Wavelength: 248nm

Dimensional Tolerance: +0/-0.25mm

Thickness Tolerance: ±0.25mm

Radius of Curvature Tolerance: ±0.5%

Chamfer: 0.35mm leg width at 45° nominal

Wedge: ≤ 3 arc minutes

Surface Quality: 20-10 scratch-dig per MIL-PRF-13830b

Surface Figure:

Cylindrical side: < 1.0 λ (y-axis),

< 1.0 λ/cm (x-axis), p-v at 633nm

Plano side: < λ/4 p-v at 633nm

Clear Aperture (CA): ≥ 85% of central dimension

Anti-reflection Coating: Wavelength user specified

Narrowband: R ≤ 0.25% per surface

Broadband: R<sub>avg</sub> ≤ 0.5% per surface

Dualband: R ≤ 0.3% at 1064, R ≤ 0.6% at 532 per surface

Damage Threshold: 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm

BUILD YOUR PART NUMBER

STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
<b>RCC-40.0-25.4-25.4-UV</b>	<b>633</b>

EXAMPLE: RCC-40.0-25.4-25.4-UV - 633

CHOOSE FROM THE OPTIONS BELOW.

1. PRODUCT CODE - SEE TABLE BELOW

2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank			
193	355-532	633-1064	1050-1600
248	400	700-900	1064/532
248-355	415-700	800	1550
266	532	1030	
355	633	1064	

Please see page T-31 for Anti-Reflective Coating Traces.

LASER GRADE FUSED SILICA RECTANGULAR CYLINDRICAL PLANO-CONCAVE LENSES								
f (mm)	x (mm)	y (mm)	r (mm)	t <sub>c</sub> (mm)	t <sub>e</sub> (mm)	f/#	f <sub>b</sub> (mm)	PRODUCT CODE
-10.0	12.7	6.4	5.1	2.0	3.0	-1.8	-11.3	RCC-12.7-6.4-5.1-UV
-12.7	12.7	6.4	6.5	4.0	4.8	-2.3	-15.3	RCC-12.7-6.4-6.5-UV
-20.0	25.0	15.0	10.2	2.8	6.0	-1.6	-21.8	RCC-25.0-15.0-10.2-UV
-25.0	40.0	20.0	12.7	4.2	9.0	-1.5	-27.7	RCC-40.0-20.0-12.7-UV
-30.0	25.0	15.0	15.3	3.1	5.0	-2.4	-32.0	RCC-25.0-15.0-15.3-UV
-40.0	40.0	25.4	20.3	4.6	9.0	-1.9	-42.9	RCC-40.0-25.4-20.3-UV
-50.0	40.0	25.4	25.4	5.0	8.4	-2.3	-53.2	RCC-40.0-25.4-25.4-UV
-75.0	40.0	25.4	38.1	5.0	7.2	-3.5	-78.2	RCC-40.0-25.4-38.1-UV
-100.0	40.0	25.4	50.9	5.0	6.6	-4.6	-103.2	RCC-40.0-25.4-50.9-UV
-200.0	40.0	25.4	101.7	5.0	5.8	-9.3	-203.2	RCC-40.0-25.4-101.7-UV
-250.0	40.0	25.4	127.1	5.0	5.6	-11.6	-253.2	RCC-40.0-25.4-127.1-UV
-300.0	40.0	25.4	152.6	5.0	5.5	-13.9	-303.2	RCC-40.0-25.4-152.6-UV
-400.0	40.0	25.4	203.4	5.0	5.4	-18.5	-403.2	RCC-40.0-25.4-203.4-UV
-500.0	40.0	25.4	254.3	5.0	5.3	-23.2	-503.2	RCC-40.0-25.4-254.3-UV
-1000.0	40.0	25.4	508.6	5.0	5.2	-46.3	-1003.2	RCC-40.0-25.4-508.6-UV



# LASER GRADE N-BK7 SQUARE CYLINDRICAL PLANO-CONCAVE LENSES: SCC-C



## Specifications

Product Code: **SCC-C**

Optical Material: N-BK7

Dimensional Tolerance: +0/-0.25mm

Thickness Tolerance: ±0.25mm

Radius of Curvature Tolerance: ±0.5%

Chamfer: 0.35mm leg width at 45° nominal

Wedge: ≤ 3 arc minutes

Surface Quality: 20-10 scratch-dig per MIL-PRF-13830b

Surface Figure:

Cylindrical side: < 1.0 λ (y-axis),

< 1.0 λ/cm (x-axis), p-v at 633nm

Plano side: < λ/4 p-v at 633nm

Clear Aperture (CA): ≥ 85% of central dimension

Anti-reflection Coating: Wavelength user specified

Narrowband: R ≤ 0.25% per surface

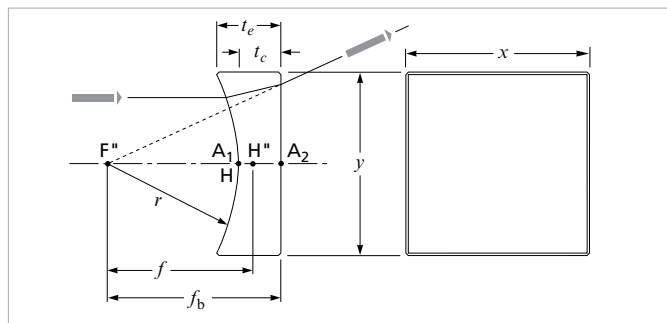
Broadband: R<sub>avg</sub> ≤ 0.5% per surface

Dualband: R ≤ 0.3% at 1064, R ≤ 0.6% at 532 per surface

Damage Threshold: 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm

Other focal lengths and dimensions available. Contact us for pricing and delivery details.

- ▶ Anamorphic beam shaping and laser projection
- ▶ Illumination of detector arrays
- ▶ Low loss, high energy AR coatings



Laser grade square cylindrical plano-concave lens

### BUILD YOUR PART NUMBER

STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
<b>SCC-50.8-50.9-C</b>	<b>800</b>

**EXAMPLE: SCC-50.8-50.9-C - 800**

### CHOOSE FROM THE OPTIONS BELOW TO BUILD YOUR PART

#### 1. PRODUCT CODE - SEE TABLE BELOW

#### 2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank

<b>400</b>	<b>633</b>	<b>800</b>	<b>1050-1600</b>
<b>415-700</b>	<b>633-1064</b>	<b>1030</b>	<b>1064/532</b>
<b>532</b>	<b>700-900</b>	<b>1064</b>	<b>1550</b>

Please see page T-31 for Anti-Reflective Coating Traces.

### LASER GRADE N-BK7 SQUARE CYLINDRICAL PLANO-CONCAVE LENSES

f (mm)	x = y (mm)	r (mm)	t <sub>c</sub> (mm)	t <sub>e</sub> (mm)	f/#	f <sub>b</sub> (mm)	PRODUCT CODE
-30.0	20.0	15.3	4.3	8.0	-1.8	-32.8	<b>SCC-20.0-15.3-C</b>
-60.0	25.4	30.5	4.3	7.0	-2.8	-62.8	<b>SCC-25.4-30.5-C</b>
-75.0	50.8	38.1	8.0	17.6	-1.7	-80.3	<b>SCC-50.8-38.1-C</b>
-100.0	50.8	50.9	8.0	14.7	-2.3	-105.3	<b>SCC-50.8-50.9-C</b>
-250.0	50.8	127.1	6.0	8.5	-5.8	-254.0	<b>SCC-50.8-127.1-C</b>
-400.0	20.0	203.4	3.8	4.0	-23.5	-402.5	<b>SCC-20.0-203.4-C</b>
-500.0	20.0	254.3	3.9	4.0	-29.4	-502.6	<b>SCC-20.0-254.3-C</b>
-500.0	50.8	254.3	6.0	7.3	-11.6	-504.0	<b>SCC-50.8-254.3-C</b>
-1000.0	20.0	508.6	3.9	4.0	-58.8	-1002.6	<b>SCC-20.0-508.6-C</b>

# LASER GRADE FUSED SILICA SQUARE CYLINDRICAL PLANO-CONCAVE LENSES: SCC-UV



## Specifications

Product Code: **SCC-UV**

**Optical Material:**

Standard Grade Corning 7980 1-D (Fused Silica)

**Design Wavelength:** 248nm

**Surface Quality:** 20-10 scratch-dig per MIL-PRF-13830b

**Dimensional Tolerance:** +0/-0.25mm

**Thickness Tolerance:** ±0.25mm

**Radius of Curvature Tolerance:** ±0.5%

**Chamfer:** 0.35mm leg width at 45° nominal

**Wedge:** ≤ 3 arc minutes

**Surface Figure:** Cylindrical side: < 1.0 λ (y-axis), < 1.0 λ/cm (x-axis), p-v at 633nm

Plano side: < λ/4 p-v at 633nm

**Clear Aperture (CA):** ≥ 85% of central dimension

**Damage Threshold:** 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm

BUILD YOUR PART NUMBER	
STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
SCC-25.4-152.6-UV	355
EXAMPLE: SCC-25.4-152.6-UV - 355	

CHOOSE FROM THE OPTIONS BELOW.

**1. PRODUCT CODE - SEE TABLE BELOW**

**2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank**

193	355-532	633-1064	1050-1600
248	400	700-900	1064/532
248-355	415-700	800	1550
266	532	1030	
355	633	1064	

Please see page T-31 for Anti-Reflective Coating Traces.

LASER GRADE FUSED SILICA SQUARE CYLINDRICAL PLANO-CONCAVE LENSES							
f (mm)	x = y (mm)	r (mm)	t <sub>c</sub> (mm)	t <sub>e</sub> (mm)	f/#	f <sub>b</sub> (mm)	PRODUCT CODE
-20.0	15.0	10.2	2.8	6.0	-1.6	-21.9	SCC-15.0-10.2-UV
-25.0	12.7	12.7	3.7	5.4	-2.3	-27.5	SCC-12.7-12.7-UV
-40.0	25.4	20.3	4.6	9.0	-1.9	-42.9	SCC-25.4-20.3-UV
-50.0	25.4	25.4	5.0	8.4	-2.3	-53.2	SCC-25.4-25.4-UV
-60.0	25.4	30.5	4.3	7.0	-2.8	-62.8	SCC-25.4-30.5-UV
-75.0	25.4	38.1	5.0	7.2	-3.5	-78.2	SCC-25.4-38.1-UV
-100.0	25.4	50.9	5.0	6.6	-4.6	-103.2	SCC-25.4-50.9-UV
-100.0	50.8	50.9	8.0	14.7	-2.3	-105.1	SCC-50.8-50.9-UV
-125.0	25.4	63.6	5.0	6.3	-5.8	-128.2	SCC-25.4-63.6-UV
-150.0	20.0	76.3	3.4	4.0	-8.8	-152.2	SCC-20.0-76.3-UV
-200.0	25.4	101.7	5.0	5.8	-9.3	-203.2	SCC-25.4-101.7-UV
-250.0	25.4	127.1	5.0	5.6	-11.6	-253.2	SCC-25.4-127.1-UV
-300.0	25.4	152.6	5.0	5.5	-13.9	-303.2	SCC-25.4-152.6-UV
-500.0	25.4	254.3	5.0	5.3	-23.2	-503.2	SCC-25.4-254.3-UV
-500.0	50.8	254.3	6.0	7.3	-11.6	-503.8	SCC-50.8-254.3-UV
-750.0	25.4	381.4	5.0	5.2	-34.7	-753.2	SCC-25.4-381.4-UV
-750.0	50.8	381.4	6.0	6.8	-17.4	-753.8	SCC-50.8-381.4-UV
-1000.0	25.4	508.6	5.0	5.2	-46.3	-1003.2	SCC-25.4-508.6-UV
-1000.0	50.8	508.6	6.0	6.6	-23.2	-1003.8	SCC-50.8-508.6-UV
-2000.0	50.8	1000.0	6.0	6.3	-46.3	-2003.8	SCC-50.8-1000.0-UV
-10000.0	50.8	5000.0	6.0	6.1	-231.6	-10003.8	SCC-50.8-5000.0-UV

# LASER GRADE FUSED SILICA ROUND CYLINDRICAL PLANO-CONCAVE LENSES: CLCC-UV



## Specifications

Product Code: **CLCC-UV**

**Optical Material:**

Standard Grade Corning 7980 1-D (Fused Silica)

**Design Wavelength:** 248nm

**Dimensional Tolerance:** +0/-0.25mm

**Thickness Tolerance:** ±0.25mm

**Radius of Curvature Tolerance:** ±0.5%

**Chamfer:** 0.35mm leg width at 45° nominal

**Wedge:** ≤ 3 arc minutes

**Surface Quality:** 20-10 scratch-dig per MIL-PRF-13830b

**Surface Figure**

**Cylindrical side:** < 1.0 λ (y-axis),

< 1.0 λ/cm (x-axis), p-v at 633nm

**Plano side:** < λ/4 p-v at 633nm

**Clear Aperture (CA):** ≥ 85% of central dimension

**Anti-reflection Coating:** Wavelength user specified

**Narrowband:** R ≤ 0.25% per surface

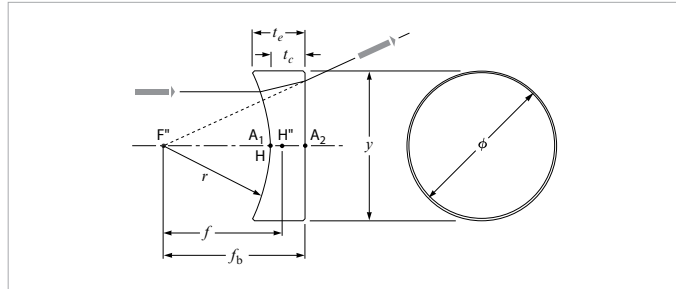
**Broadband:** R<sub>avg</sub> ≤ 0.5% per surface

**Dualband:** R ≤ 0.3% at 1064, R ≤ 0.6% at 532 per surface

**Damage Threshold:** 10 J/cm<sup>2</sup>, 20ns, 20Hz at 1064nm

Other focal lengths and dimensions available. Contact us for pricing and delivery details.

- ▶ Anamorphic beam shaping and laser projection
- ▶ Illumination of detector arrays
- ▶ Low loss, high energy AR coatings



Laser grade round cylindrical plano-concave lens

### BUILD YOUR PART NUMBER

STEP-1	STEP-2
PRODUCT CODE	WAVELENGTH OF AR COATING (nm) for uncoated leave blank
CLCC-25.4-38.1-UV	193

EXAMPLE: CLCC-25.4-38.1-UV - 193

### CHOOSE FROM THE OPTIONS BELOW.

#### 1. PRODUCT CODE - SEE TABLE BELOW

#### 2. WAVELENGTH OF AR COATING (nm); for uncoated leave blank

193	355-532	633-1064	1050-1600
248	400	700-900	1064/532
248-355	415-700	800	1550
266	532	1030	
355	633	1064	

Please see page T-31 for Anti-Reflective Coating Traces.

### LASER GRADE FUSED SILICA ROUND CYLINDRICAL PLANO-CONCAVE LENSES

f (mm)	Ø (mm)	r (mm)	t <sub>c</sub> (mm)	t <sub>b</sub> (mm)	f/#	f <sub>b</sub> (mm)	PRODUCT CODE
-25.0	20.0	12.7	4.2	9.1	-1.5	-27.7	CLCC-20.0-12.7-UV
-40.0	25.4	20.3	4.6	9.1	-1.9	-43.1	CLCC-25.4-20.3-UV
-50.0	25.4	25.4	5.0	8.4	-2.3	-53.2	CLCC-25.4-25.4-UV
-75.0	25.4	38.1	5.0	7.2	-3.5	-78.2	CLCC-25.4-38.1-UV
-150.0	25.4	76.3	5.0	6.1	-6.9	-153.2	CLCC-25.4-76.3-UV

## OEM Optical Mechanical Sub Assembly

CVI Laser Optics has supported the following markets with precision optical assemblies for over 40 years. We specialize in vertical integration of optical component manufacturing and mechanical system integration to provide a plug and play optical box for your OEM needs. Experience with optical systems ranging from deep UV to NIR.

### Semiconductor • Industrial • Defense • Medical

- 10,000+ square feet of clean room environment for optical assembly
- Experience duplicating customers' acceptable test procedure to ensure functionality
- Over 40 years of optics experience
- Quick ramp up for OEM volumes
- Various laser wavelength testing capabilities
- Electrical and actuator integration with firmware testing capabilities
- In house environmental testing capabilities for optical components

**Please give us a call and we will be honored to assist you with your custom OEM system integration needs.**