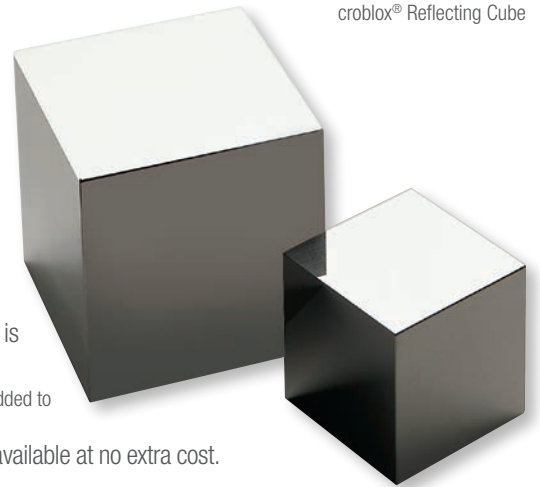


# CROBLOX<sup>®</sup>

## CROBLOX REFLECTING CUBES

Stable and maintenance free, reflecting cubes are ideal for 90° indexing or alignment in optical tooling or inspection.

croblox<sup>®</sup> Reflecting Cube



**TO ORDER, SPECIFY THE FOLLOWING INFORMATION:**

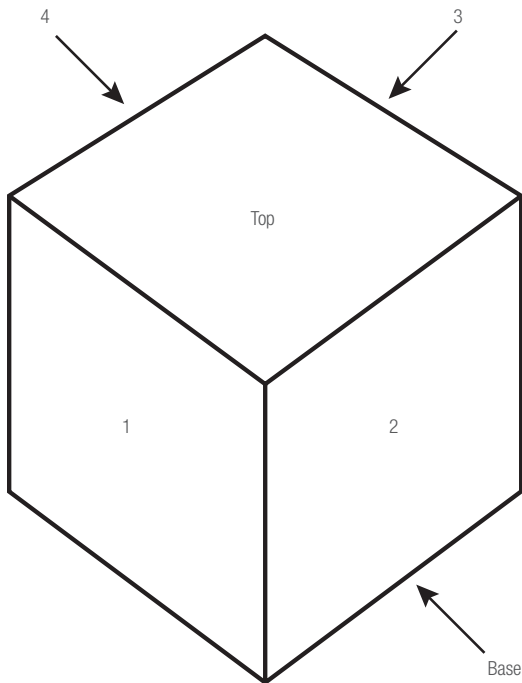
- The number and position of all finished sides, including the base:
  - NOTE:** for fixturing purposes during manufacturing, the bottom face must be one of the finished sides. The bottom face is etched with the Webber logo, a serial number, and face identifications as applicable.
- Specify the manufacturing tolerances of the 90° angles, 1 second, 3 seconds, or other angular specification.
- A certificate of calibration showing the deviation from 90° of the finished sides is available at extra cost.
  - NOTE:** Our uncertainty of measurement is estimated to be ±1.0 seconds. This uncertainty should be added to the manufacturing tolerance to give practical tolerance of the cube.
- If requested, a copy of the material certificate from our supplier of chrome-carbide is available at no extra cost.

**To Order Webber Optical Cubes**

Specify all 6 parts to the part number

Prefix	Size	Face Code	Hole Pattern	Hole Type	Accuracy
CUBE	.50	A thru K (See Face Table)	(blank) or 1 thru 4 (See Hole Pattern Chart)	(blank) or	1 SEC* 3 SEC* 5 SEC 10 SEC
	.75			S=Fine Thrd	
	1.0			T=Coarse Thrd	
	1.5			U=Thru Hole	
	2.0			V=Thru Hole with C-Sink Y=C'Bore thru hole (See Hole Pattern Chart for available dimensions)	

\*Not Available In 0.50" Size



Cubes are made to order from semifinished blanks in six standard sizes: 0.50" (12.7mm), 0.75" (19.0mm), 0.95" (24.1mm), 1.00" (25.4mm), 1.50" (38.1mm), and 2.00" (50.8mm). Also available is a .950" (24.1m) square with a 17/64" (6.7mm) countersunk center hole.

**Example: CUBE 1.0 A 3SEC**

CUBE 1.0 = 1" Cube  
 A = finished 6 sides  
 1SEC = orthogonal to 3 second accuracy.  
 (No holes were specified in this example.)

Reflectivity of finished faces is nominally:  
 Visible Blue Light ( $\lambda = 4200 \text{ \AA}$ )  $\approx 50\%$   
 Visible Red Light ( $\lambda = 6900 \text{ \AA}$ )  $\approx 60\%$   
 Infrared ( $\lambda = 10.6 \mu\text{m}$ )  $> 80\%$   
 We are unable to measure or certify reflectivity. If reflectivity testing is required, the user must arrange for testing through a third party.

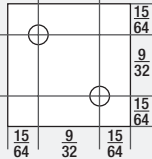
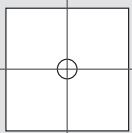
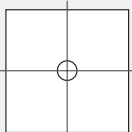
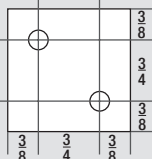
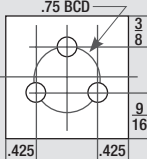
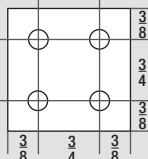
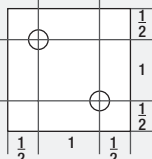
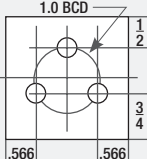
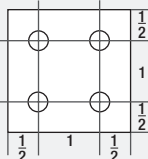
**Face Code Table**

Face Code	No. of Finished Faces	Finished Faces
A	6	ALL
B	5	1-2-3-4-Base
C	5	1-2-3-Top-Base
D	4	1-2-3-Base
E	4	1-3-Top-Base
F	4	1-2-Top-Base
G	3	1-3-Base
H	3	1-2-Base
J	3	1-Top-Base
K	2	1-Base



**Hole Pattern Dimensions and Hole Types**

Dimensions are shown in Inches.

	Hole Pattern-1	Hole Pattern-2	Hole Pattern-3	Hole Pattern-4
<b>CUBE .50</b>	 <p>Min. Good Thread .28                      T1 S1                      T2 S2                      U0 U1                      U2 U3                      V0 V1                      C'Bore Depth = .20"                      Y0 Y1                      Y2</p>			
<b>CUBE .75</b>	 <p>Min. Good Thread .40                      T1 S1                      T2 S2                      U1 U2                      U3 U4                      V1 V2                      V3 V4                      C'Bore Depth = .38"                      Y1 Y2                      Y3</p>	 <p>Min. Good Thread .40                      T1 S1                      T2 S2                      U1 U2                      U3                      C'Bore Depth = .38"                      Y1</p>		
<b>CUBE .95</b>	 <p>.266 Dia. Thru Hole                      72° C-Sink.                      Min. 100" Deep for                      #8 Flat Head Screw</p>			
<b>CUBE 1.0</b>	 <p>Min. Good Thread .50                      T2 S2                      T3 S3                      T4 S4                      U2 U3                      U4                      V2 V3                      V4                      C'Bore Depth = .50"                      Y2 Y3                      Y4</p>	 <p>Min. Good Thread .50                      T2 S2                      T3 S3                      U2 U3                      U4                      C'Bore Depth = .50"                      Y2</p>	 <p>.50 BCD                      Min. Good Thread .50                      T2 S2                      T3 S3                      U2 U3                      U4                      C'Bore Depth = .50"                      Y2</p>	 <p>Min. Good Thread .50                      T2 S2                      T3 S3                      U2 U3                      U4                      C'Bore Depth = .50"                      Y2</p>
<b>CUBE 1.5</b>	 <p>Min. Good Thread .62                      T3 S3                      T4 S4                      U3 U4                      U5                      V3 V4                      V5                      C'Bore Depth = .75"                      Y3 Y4                      Y5</p>	 <p>Min. Good Thread .62                      T3 S3                      T4 S4                      U3 U4                      U5                      V3 V4                      C'Bore Depth = .75"                      Y3 Y4</p>	 <p>.75 BCD                      Min. Good Thread .62                      T3 S3                      T4 S4                      U3 U4                      U5                      V3 V4                      C'Bore Depth = .75"                      Y3 Y4</p>	 <p>Min. Good Thread .62                      T3 S3                      T4 S4                      U3 U4                      U5                      V3 V4                      C'Bore Depth = .75"                      Y3 Y4</p>
<b>CUBE 2.0</b>	 <p>Min. Good Thread .75                      T3 S3                      T4 S4                      U4 U5                      U6                      V3 V4                      V5                      C'Bore Depth = 1.25"                      Y4 Y5</p>	 <p>Min. Good Thread .75                      T3 S3                      T4 S4                      U4 U5                      U6                      V3 V4                      V5                      C'Bore Depth = 1.25"                      Y4 Y5</p>	 <p>1.0 BCD                      Min. Good Thread .75                      T3 S3                      T4 S4                      U4 U5                      U6                      V3 V4                      V5                      C'Bore Depth = 1.25"                      Y4 Y5</p>	 <p>Min. Good Thread .75                      T3 S3                      T4 S4                      U4 U5                      U6                      V3 V4                      V5                      C'Bore Depth = 1.25"                      Y4 Y5</p>

**Legend for Hole Types**

Threaded Hole		Thru Hole	72° Countersunk Hole	Counterbore Hole for Cap Head Screw	
T1 = 6-32	S1 = 6-40	U0 = 0.128 Dia. for #4 Screw	V0 = 0.128 Dia. for #4 Screw	Y0 = for #4 Screw 0.128 Dia. Thru Hole	0.21 Dia. C'Bore
T2 = 8-32	S2 = 8-36	U1 = 0.156 Dia. for #6 Screw	V1 = 0.156 Dia. for #6 Screw	Y1 = for #6 Screw 0.180 Dia. Thru Hole	0.29 Dia. C'Bore
T3 = 10-24	S3 = 10-32	U2 = 0.180 Dia. for #8 Screw	V2 = 0.180 Dia. for #8 Screw	Y2 = for #8 Screw 0.180 Dia. Thru Hole	0.29 Dia. C'Bore
T4 = 1/4-20	S4 = 1/4-28	U3 = 0.206 Dia. for #10 Screw	V3 = 0.206 Dia. for #10 Screw	Y3 = for #10 Screw 0.206 Dia. Thru Hole	0.34 Dia. C'Bore
		U4 = 0.266 Dia. for 1/4" Screw	V4 = 0.266 Dia. for 1/4" Screw	Y4 = for 1/4" Screw 0.266 Dia. Thru Hole	0.40 Dia. C'Bore
		U5 = 0.328 Dia. for 5/16" Screw	V5 = 0.328 Dia. for 5/16" Screw	Y5 = for 5/16" Screw 0.332 Dia. Thru Hole	0.50 Dia. C'Bore
		U6 = 0.391 Dia. for 3/8" Screw			

Tolerances are ± .010" except for Counterbore depth: ± .020"

**Example: CUBE 1.5 D 2 Y4 1SEC**

CUBE 1.5 = 1-1/2" Cube

D = finished front, right, and base

2 = two holes located in corners of the cube (See Pattern Table for hole location)

Y4 = .266 Dia. thru hole with .40 Dia C'Bore for 1/4" cap screw

For 1.5" cube, C'Bore depth = .75" (See Pattern Table)

1SEC = finished sides orthogonal to 1 second accuracy

