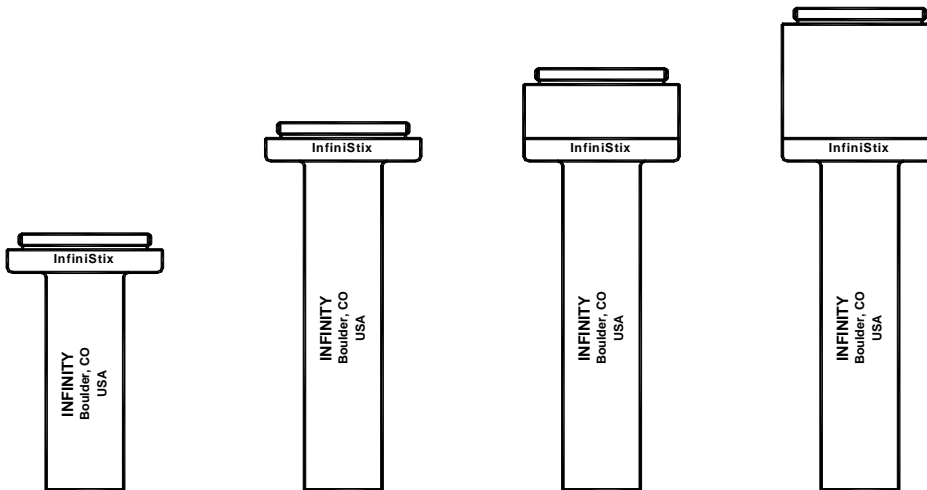


PROXIMITY SERIES:

InfiniStix™



INFINITY Photo-Optical Company • *Manufacturers of precision optical instruments.*

2530 Frontier Ave., Boulder, CO 80301 • Tel: (303) 440-4544 • Fax: (303) 440-4144 • E-mail: info@infinity-usa.com • Web: www.infinity-usa.com

Copyright 2012 Infinity Photo-Optical Company. All Rights Reserved.



InfiniStix™ Standard Series Video Lenses

InfiniStix Standard Series

InfiniStix Standard are compatible with all C-mount and CS-mount* video cameras. There are nineteen InfiniStix Standard lenses; each provides extraordinary image quality at a fixed magnification and field of view. InfiniStix Standard lenses are the simple but effective means to solve some of your most difficult or challenging video imaging problems. Constructed entirely from optical glass and 6061 aluminum, InfiniStix Standard are built to withstand industrial environments. Yet, except for their mounting flanges, InfiniStix Standard are only 15mm in diameter, allowing easy access in restricted areas.

Simply choose the appropriate InfiniStix Standard lens in steps ranging from 0.45x up to 6x, position it at the specified working distance (from 18mm, 44mm, 68mm, 76mm, 94mm or 130mm)—and you will automatically obtain the specified magnification and field of view. There's no guesswork or fiddling with extension tubes, etc. Superb imagery really is that easy—every time.

All InfiniStix Standard lenses can be amplified 2x by an optional DL Doubler Tube. Although the DL Tube adds 12mm to system length, it maintains the original working distance. In addition, 21mm fiber optic ring lights can be mounted on the InfiniStix Standard by using a simple step-up adapter.

*CS-mount requires a 5mm spacer.

Tables for Standard Series:

Select the most appropriate lens based on the CCD camera sensor's size. InfiniStix are designed for 1/4-in., 1/3-in., and 1/2-in. CCD Camera sensors. The standard sizes are always 3:4 height to width ratio. For instance, the 1/2-in. sensor is twice the size of the 1/4-in. Although the 1/2-in. is the most common format, 1/3-in. and 1/4-in. formats are becoming increasingly popular. The Tube Factors listed below are based in the 1/2-in. video sensor.

To select the InfiniStix most appropriate for your application, choose the best combination of FOV (field of view) and WD (working distance). Remember that when the DL Doubler tube is added, the FOV is halved.

Standard Series Magnification Options

Working Distance				
18mm	2.00x	3.00x	4.00x	6.00x
44mm	1.00x	1.50x	2.00x	3.00x
68mm	0.66x	1.00x	1.33x	2.00x
76mm	0.73x			
94mm	0.50x	0.75x	1.00x	1.50x
130mm	0.73x			

Standard Series Magnification and Horizontal Field of View

Horizontal Fields of View for 1/2-in. Video Sensors										
Working Distance	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag
18mm			3.20	2.00	2.13	3.00	1.60	4.00	1.07	6.00
44mm			6.40	1.00	4.27	1.50	3.20	2.00	2.13	3.00
68mm			9.60	0.67	6.40	1.00	4.80	1.33	3.20	2.00
76mm			8.77	0.73						
94mm	14.22	0.45	12.80	0.50	8.53	0.75	6.40	1.00	4.27	1.50
130mm			8.77	0.73						

Horizontal Fields of View for 1/3-in. Video Sensors										
Working Distance	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag
18mm			2.40	2.00	1.60	3.00	1.20	4.00	0.80	6.00
44mm			4.80	1.00	3.20	1.50	2.40	2.00	1.60	3.00
68mm			7.20	0.67	4.80	1.00	3.60	1.33	2.40	2.00
76mm			6.58	0.73						
94mm	10.67	0.45	9.60	0.50	6.40	0.75	4.80	1.00	3.20	1.50
130mm			6.58	0.73						

Horizontal Fields of View for 1/4-in. Video Sensors										
Working Distance	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag	FOV mm	Mag
18mm			1.60	2.00	1.07	3.00	0.80	4.00	0.53	6.00
44mm			3.20	1.00	2.13	1.50	1.60	2.00	1.07	3.00
68mm			4.80	0.67	3.20	1.00	2.40	1.33	1.60	2.00
76mm			4.38	0.73						
94mm	7.11	0.45	6.40	0.50	4.27	0.75	3.20	1.00	2.13	1.50
130mm			4.38	0.73						

InfiniStix Standard Series Resolution Data

Numerical Aperture (NA) InfiniStix																				
Magnification		2x	3x	4x	6x	1x	1.5x	2x	3x	0.66x	1x	1.33x	2x	0.73x	0.45x	0.5x	0.75x	1x	1.5x	0.73x
Working Distance																				
18mm		0.044	0.064	0.096	0.116															
44mm						0.032	0.048	0.068	0.068											
68mm										0.025	0.039	0.052	0.052							
76mm														0.032						
94mm															0.019	0.024	0.034	0.055	0.055	
130mm																				0.030

Resolution InfiniStix (microns)																				
Magnification		2x	3x	4x	6x	1x	1.5x	2x	3x	0.66x	1x	1.33x	2x	0.73x	0.45x	0.5x	0.75x	1x	1.5x	0.73x
Working Distance																				
18mm		8	5	3	3															
44mm						10	7	5	5											
68mm										13	9	6	6							
76mm														10						
94mm															18	14	10	6	6	
130mm																				11

Lines per Millimeter InfiniStix (l/mm)																				
Magnification		2x	3x	4x	6x	1x	1.5x	2x	3x	0.66x	1x	1.33x	2x	0.73x	0.45x	0.5x	0.75x	1x	1.5x	0.73x
Working Distance																				
18mm		132	192	288	348															
44mm						96	144	204	204											
68mm										76	116	156	156							
76mm														96						
94mm															57	72	102	165	165	
130mm																				90

Depth of Field (DOF) InfiniStix (mm)																				
Magnification		2x	3x	4x	6x	1x	1.5x	2x	3x	0.66x	1x	1.33x	2x	0.73x	0.45x	0.5x	0.75x	1x	1.5x	0.73x
Working Distance																				
18mm		0.282	0.133	0.059	0.040															
44mm						0.533	0.237	0.118	0.118											
68mm										0.850	0.365	0.202	0.202							
76mm														0.533						
94mm															1.512	0.948	0.472	0.180	0.180	
130mm																				0.606

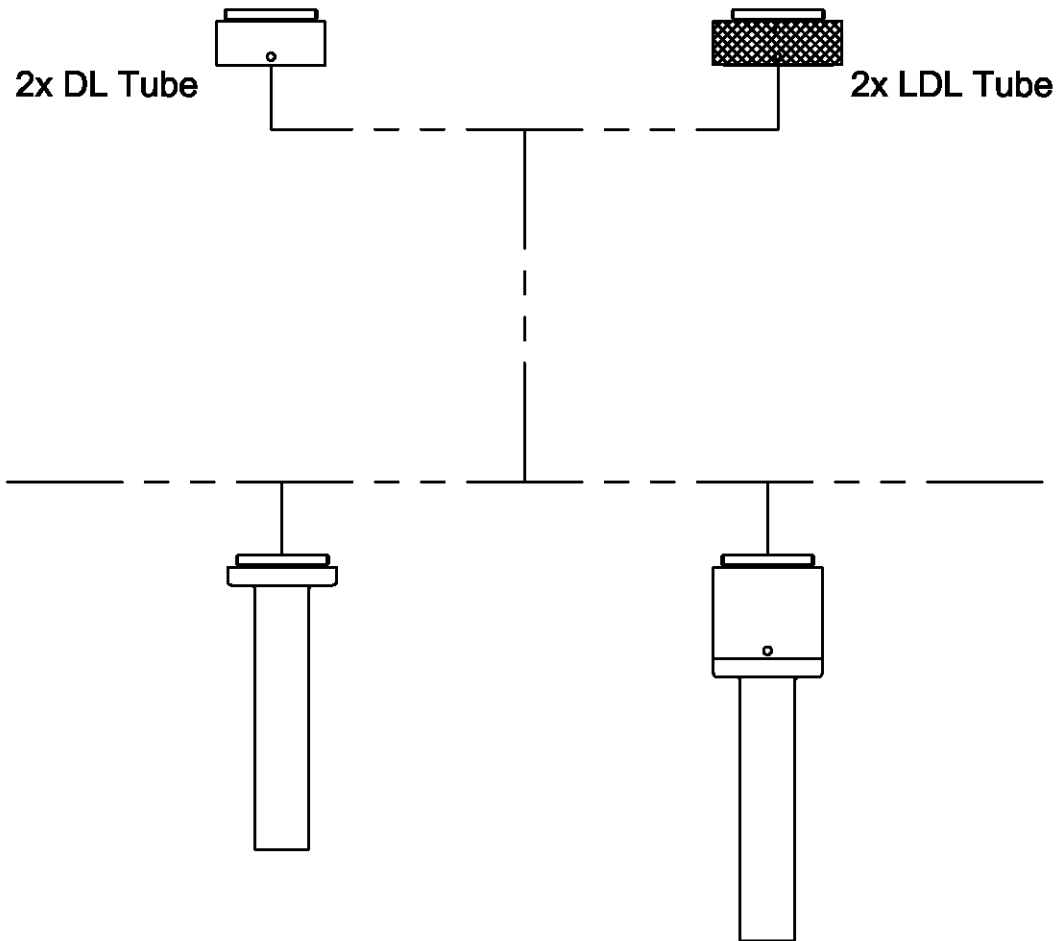
Video Formats

Format	Factor	Diagram
1/4"	0.5	
1/3"	0.75	
1/2"	1.0	
2/3"	1.375	
1"	2.0	

Unless otherwise noted all data is given for 1/2" camera sensors. For FOV or magnification in other sensor sizes use the factors listed. For example, a FOV of 25mm listed for a 1/3" camera would be $25 \times 0.75 = 18.75\text{mm}$.

InfiniStix™

Power Module Amplifier
(optional)



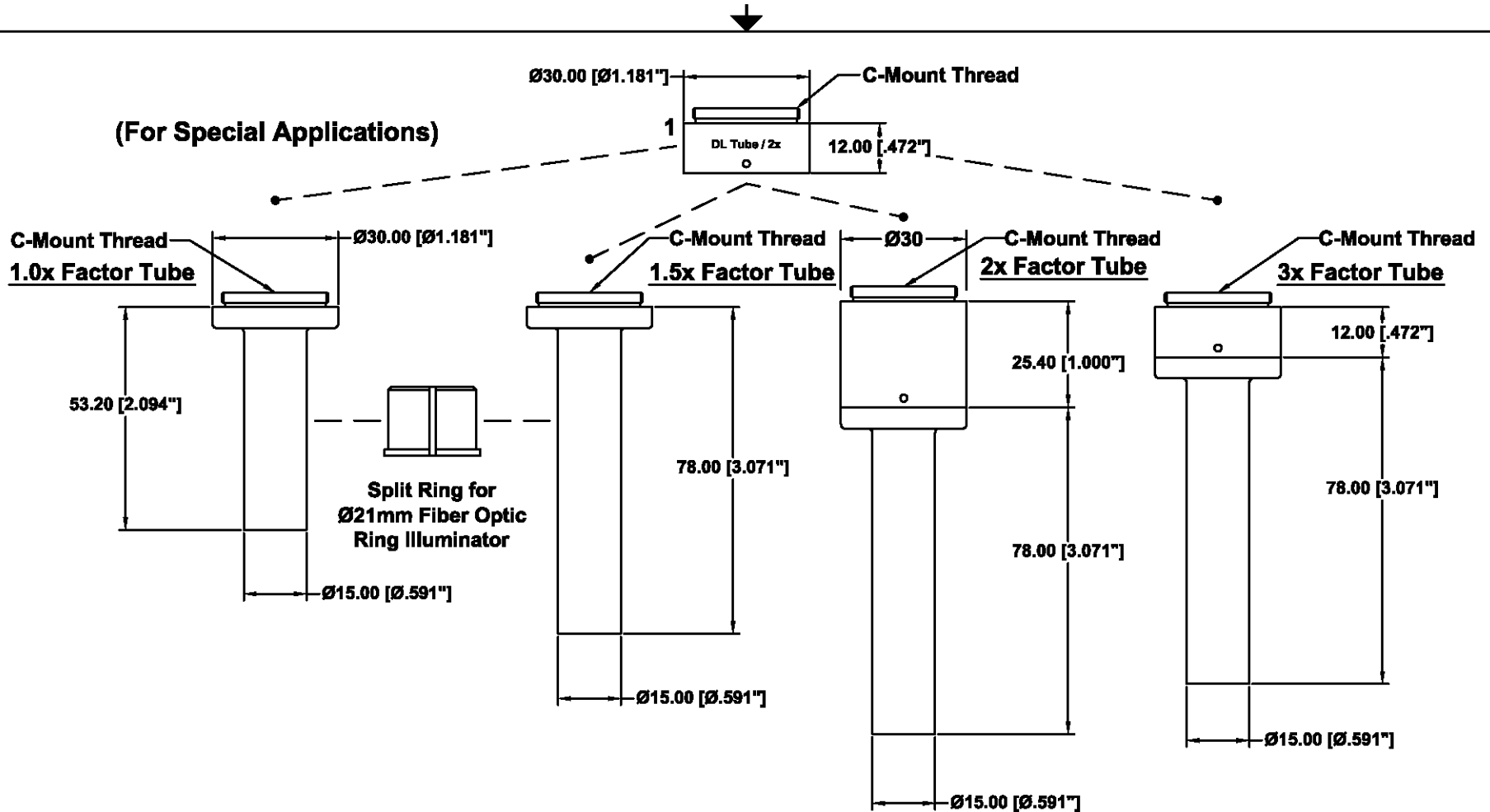
18mm W.D./2.00x
44mm W.D./1.00x
68mm W.D./0.66x
94mm W.D./0.50x

18mm W.D./3.00x
44mm W.D./1.50x
68mm W.D./1.00x
94mm W.D./0.75x

18mm W.D./4.00x
44mm W.D./2.00x
68mm W.D./1.33x
94mm W.D./1.00x

18mm W.D./6.00x
44mm W.D./3.00x
68mm W.D./2.00x
94mm W.D./1.50x

(For Special Applications)



Notes:

1. One DL Tube may be used with the InfiniStix objective to further amplify the magnification.
2. A C5 Spacer is required when used with a CS-mount camera.

ALL DIM ARE mm
[Inches] AND ARE FOR
REFERENCE ONLY
AND ARE SUBJECT
TO CHANGE.

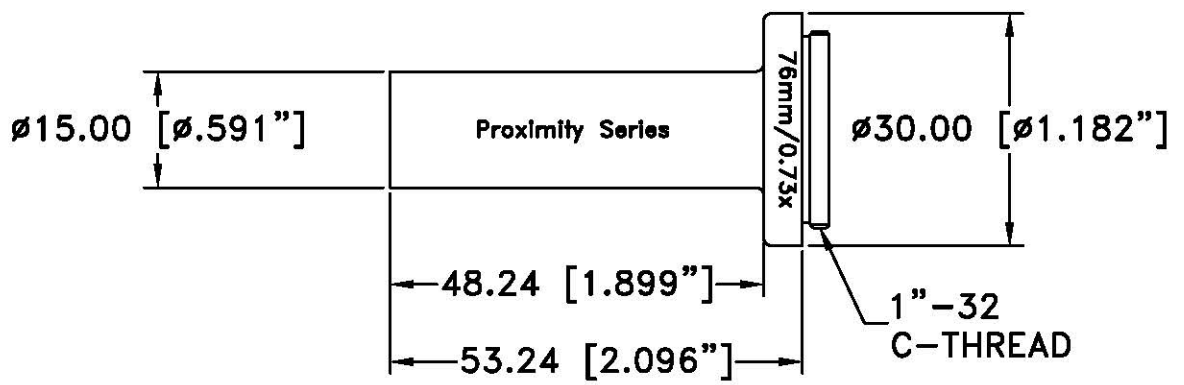
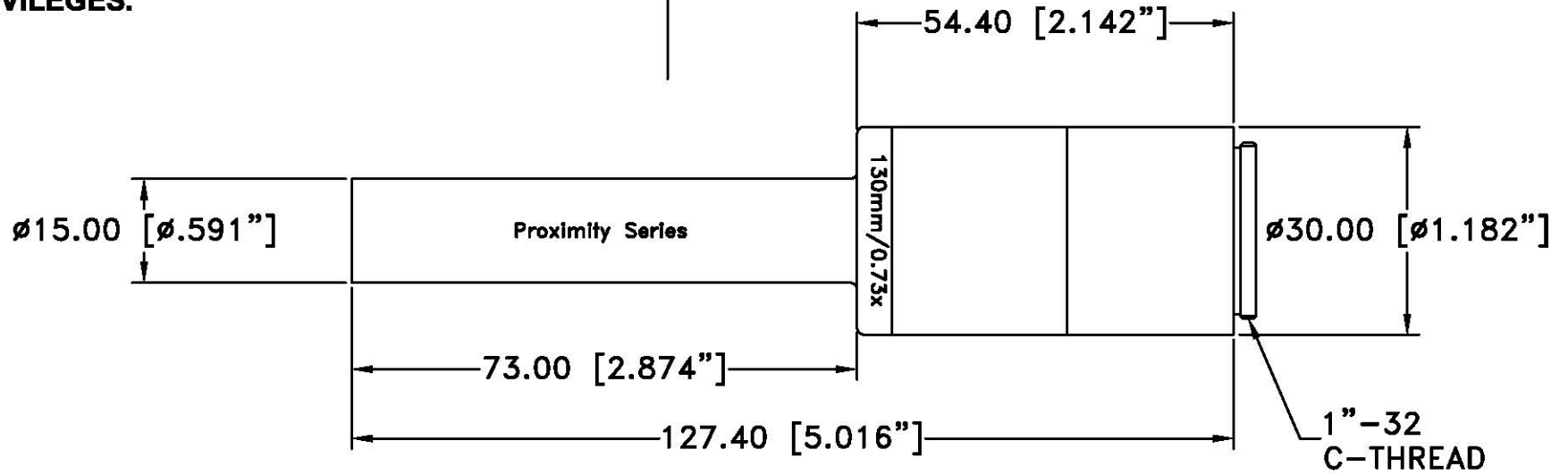
INFINITY Photo-Optical Company
2530 Frontier Ave., Boulder, CO 80301
303/440-4544 Fax 303/440-4144

INFINISTIX CONFIGURATION

Date: 12/02/1998 MS	SIZE B	FSCM NO.	DWG NO.	REV C
Modified: 11/21/08 MB	SCALE NONE	SHEET 1 of 1		

NOTE: THIS DRAWING IS FOR INFORMATIONAL PURPOSES ONLY AND CONVEYS NO OTHER RIGHTS OR PRIVILEGES.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



THIS DRAWING IS THE PROPERTY OF THE INFINITY PHOTO-OPTICAL COMPANY AND IT MUST BE TREATED AS CONFIDENTIAL.
 SURFACE FINISH: OUTSIDE DIAMETERS FINISH IS CRITICAL. BEAD BLAST INTERNAL RETAINERS
 ALL DIMS. ARE IN mm [INCH].
 DIMS. ARE AFTER ANODIZING
 TOL: DIAMETERS: ±0.025 [±0.001"]
 OTHERS: ±0.102 [±0.004"]
 UNIFIED THREADS ARE CLASS 2
 METRIC THREADS ARE MEDIUM FIT
 BREAK ALL SHARP EDGES TO R0.25 [R.010"]

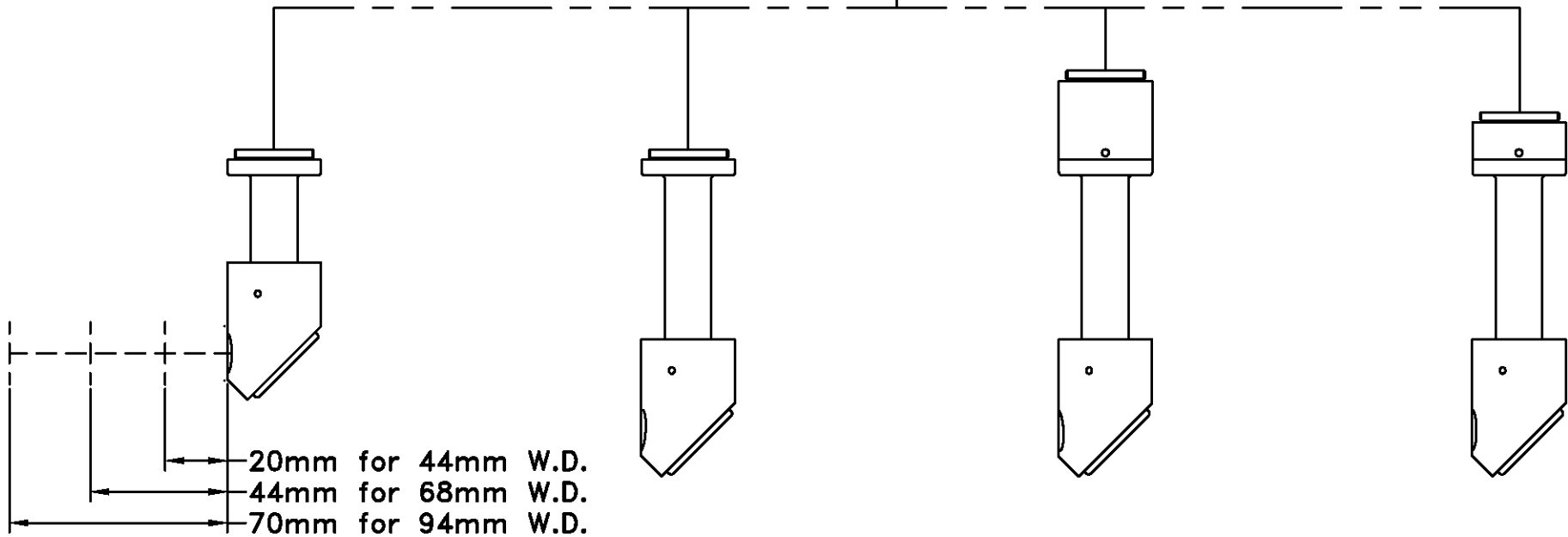
INFINITY Photo-Optical Company
 2530 Frontier Ave., Boulder, CO 80301
 303/440-4544 Fax 303/440-4144

**INFINISTIX 76mm WD 0.73x AND
 130mm WD 0.73x**

Date: 10/18/11 MB		SIZE A	FSCM NO.	DWG NO.	REV -
Modified:		SCALE NONE		SHEET	1 of 1

InfiniStix™ with 90° Mirror mounted

Power Module Amplifier
(optional)



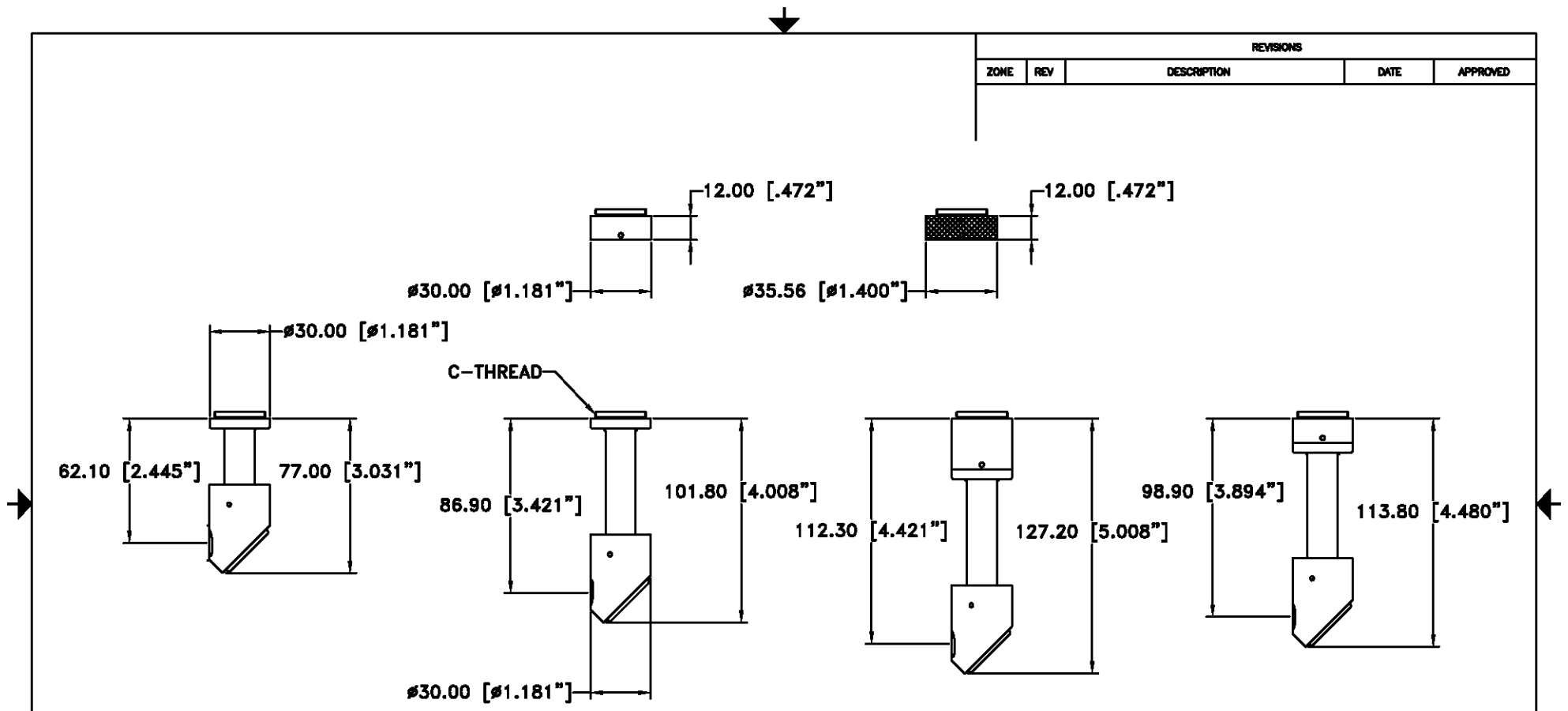
44mm W.D./1.00x
68mm W.D./0.66x
94mm W.D./0.50x

44mm W.D./1.50x
68mm W.D./1.00x
94mm W.D./0.75x

44mm W.D./2.00x
68mm W.D./1.33x
94mm W.D./1.00x

44mm W.D./3.00x
68mm W.D./2.00x
94mm W.D./1.50x

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



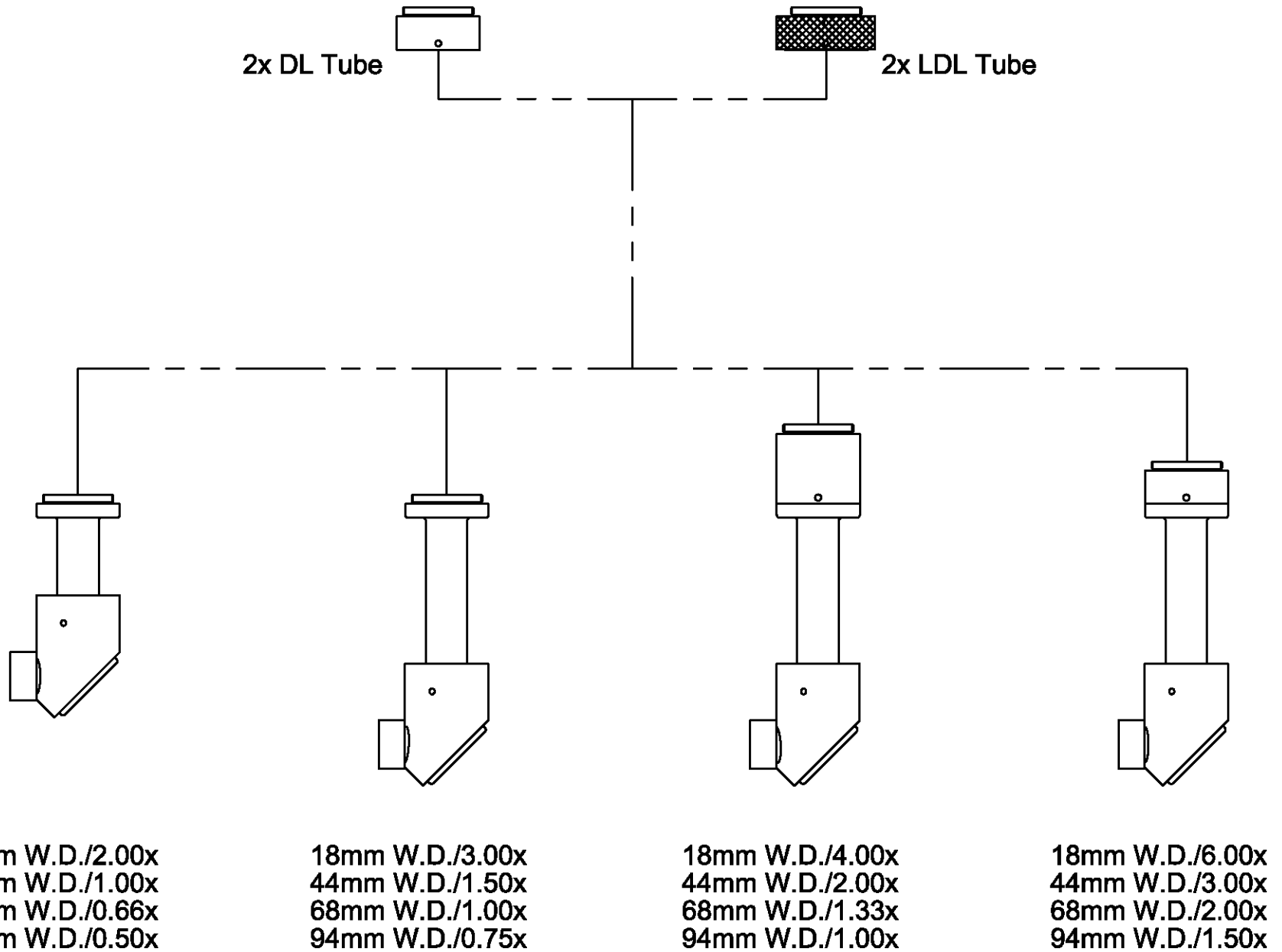
NOTES:

- 1. SURFACE ANODIZED BLACK

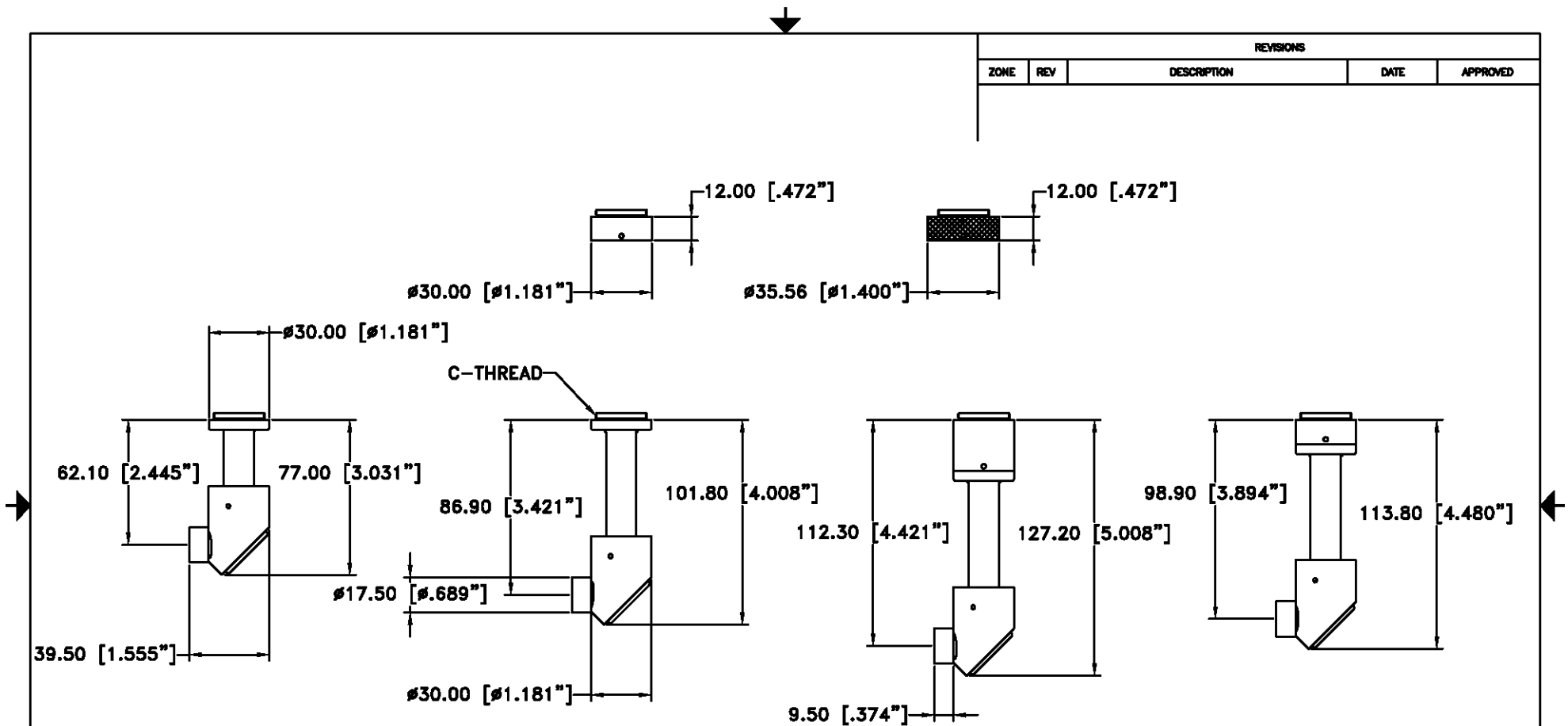
ALL DIM ARE mm [Inches] AND ARE FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE.		INFINITY Photo-Optical Company 2530 Frontier Ave., Boulder, CO 80301 303/440-4544 Fax 303/440-4144		
INFINISTIX w/90 DEGREE MIRROR DIMENSIONS		Date: 12/15/08 MB		
Size B	FSCM NO. 	DWG NO. -	REV -	
Modified:	SCALE NONE		SHEET 1 OF 1	

InfiniStix™ 90°

Power Module Amplifier
(optional)



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



NOTES:

1. SURFACE ANODIZED BLACK

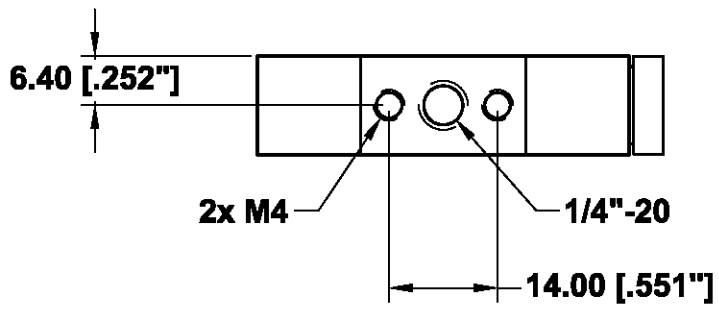
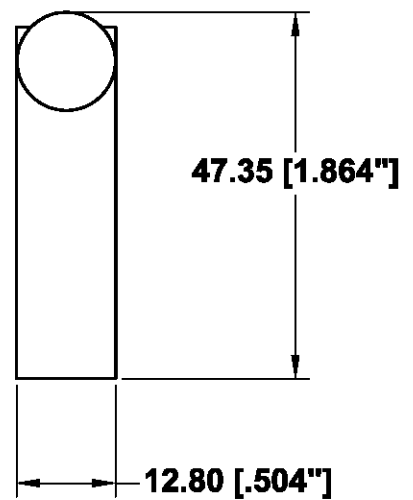
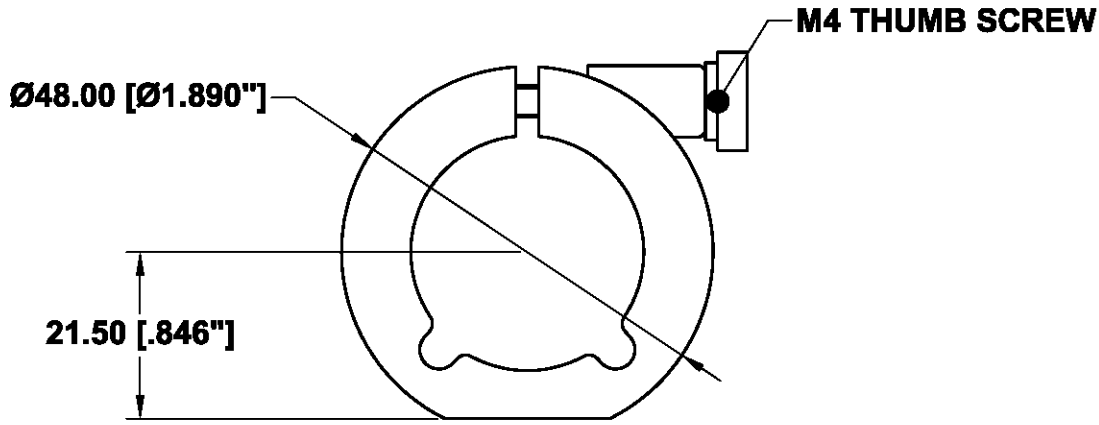
ALL DIM ARE mm [Inches] AND ARE FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE.

INFINITY Photo-Optical Company
 2530 Frontier Ave., Boulder, CO 80301
 303/440-4544 Fax 303/440-4144

INFINISTIX 90 DEGREE DIMENTIONS

Date: 01/04/02 MB	SIZE B	FSCM NO.	DWG NO.	-	REV A
Modified: 12/02/08 MB	SCALE NONE	-	SHEET	1 OF 1	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



This drawing is for informational purposes only. No other rights or privileges are granted or implied.

ALL DIM ARE mm [inches] AND ARE FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE.

INFINITY Photo-Optical Company
 2530 Frontier Ave., Boulder, CO 80301
 303/440-4544 Fax 303/440-4144

SMALL MOUNTING CLAMP

Date: 03/19/01 MB		SIZE A	FSCM NO.	DWG NO. 990 170	REV A
Modified: 04/06/01 MB		SCALE NONE	SHEET 1 of 1		

INFINITY PHOTO-OPTICAL COMPANY LIMITED WARRANTY

INFINITY PHOTO-OPTICAL COMPANY hereby warrants its products to be free from defects in workmanship or materials for the warranty period set forth below. INFINITY PHOTO-OPTICAL COMPANY, at its option, shall repair or replace the defective product without cost to the purchaser, and such repair or replacement shall be the full extent of this express limited warranty. INFINITY PHOTO-OPTICAL COMPANY shall not be liable for any other damages either direct or consequential.

This warranty is made to the original purchaser, and is effective only on new equipment purchased from INFINITY PHOTO-OPTICAL COMPANY, or a dealer authorized by INFINITY PHOTO-OPTICAL COMPANY to sell the product.

This warranty is valid only when the product is returned to the authorized dealer from whom it was purchased, or returned directly to INFINITY PHOTO-OPTICAL COMPANY, freight prepaid, with proof of date of purchase.

This warranty does not extend to any defect, malfunction or failure caused by misuse, abuse or the use of the product with equipment for which it may not have been intended. Any unauthorized repair voids this warranty.

The warranty period for all products manufactured by INFINITY PHOTO-OPTICAL COMPANY is five (5) years from date of original purchase. Parts or components made or sourced from other manufacturers shall be solely covered by that manufacturer's warranty.

The warranty contained herein is the only warranty made by INFINITY PHOTO-OPTICAL COMPANY. Any implied warranty of merchantability and/or fitness for a particular purpose is expressly excluded from this warranty. INFINITY PHOTO-OPTICAL COMPANY shall not be liable for any expense, loss, incidental or consequential damages which may arise in connection with the use of this equipment. Recovery under this warranty is limited to repair or replacement of the equipment as provided above.

INFINITY PHOTO-OPTICAL COMPANY reserves the right to modify designs, equipment and accessories without notice.