



Technical Data

FLIR A5 f=9 mm

Part number:

62209-0101

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November 19, 2012, 06:46 PM

Corporate Headquarters

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Telephone: +1-503-498-3547

Website

<http://www.flir.com>

Customer support

<http://support.flir.com>

Legal disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply.

Information and equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited.



Imaging and optical data

IR resolution	80 × 64 pixels
Thermal sensitivity/NETD	≤ 0.05°C @ +30°C (+86°F) / 50 mK
Field of view (FOV) / Minimum focus distance	25° × 20° / fixed focus
Focal length	9 mm (0.35 in.)
Spatial resolution (IFOV)	5.56 mrad
F-number	1.25
Image frequency	60 Hz
Focus	Fixed

Detector data

Focal Plane Array (FPA) / Spectral range	Uncooled VOX microbolometer / 7.5–13 μm
Detector pitch	50 μm
Detector time constant	Typical 12 ms

Measurement

Object temperature range	−40 to +160°C (−40 to 320°F) −40 to +550°C (−40 to +1022°F)
Accuracy	±5°C (±9°F) or ±5% of reading

Ethernet

Ethernet	Control and image
Ethernet, type	Gigabit Ethernet
Ethernet, standard	IEEE 802.3
Ethernet, connector type	RJ-45
Ethernet, communication	GigE Vision ver. 1.2 Client API GenICam compliant
Ethernet, image streaming	8-bit monochrome @ 60 Hz - Signal linear/ DDE - Automatic/ Manual - Flip H&V 14-bit 80 × 64 pixels @ 60 Hz - Signal linear/ DDE GigE Vision and GenICam compatible
Ethernet, power	Power over Ethernet, PoE IEEE 802.3af class 0 Power
Ethernet, protocols	TCP, UDP, ICMP, IGMP, DHCP, GigE Vision

Digital input/output

Digital input, purpose	General purpose
Digital input	1× opto-isolated, "0" < 2, "1"=2–40 VDC

1 800 464 6372
CANADA: 1 800 613 0507



FLIR A5 f=9 mm

P/N: 62209-0101

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Digital input/output

Digital output, purpose	General purpose Output to ext. device (programmatically set)
Digital output	1× opto-isolated, 2–40 VDC, max 185 mA
Digital I/O, isolation voltage	500 VRMS
Digital I/O, supply voltage	2–40 VDC, max 200 mA
Digital I/O, connector type	12-pole M12 connector (shared with Digital Synchronization and External power)
Synchronization In, purpose	Frame sync In to control camera
Synchronization In	1×, non-isolated
Synchronization In, type	LVC Buffer @3.3V, "0" <0.8 V, "1">2.0 V.
Synchronization Out, purpose	Frame sync Out to control another Ax5 camera
Synchronization Out	1×, non-isolated
Synchronization Out, type	LVC Buffer @ 3.3V, "0"=24 MA max, "1"= –24 mA max.
Digital Synchronization, connector type	12-pole M12 connector (shared with Digital I/O and External power)

Power system

External power operation	12/24 VDC, < 2.5 W absolute max
External power, connector type	12-pole M12 connector (shared with Digital I/O and Digital Synchronization)
Voltage	Allowed range 10–30 VDC

Environmental data

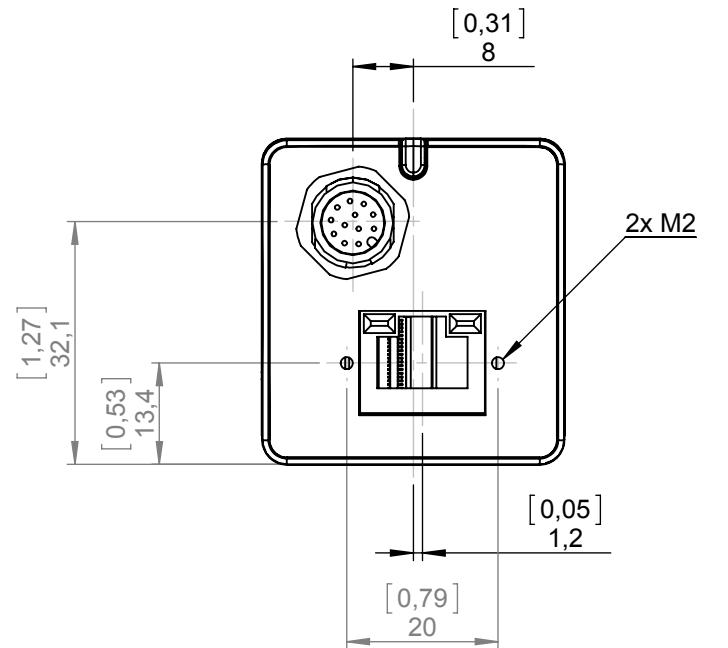
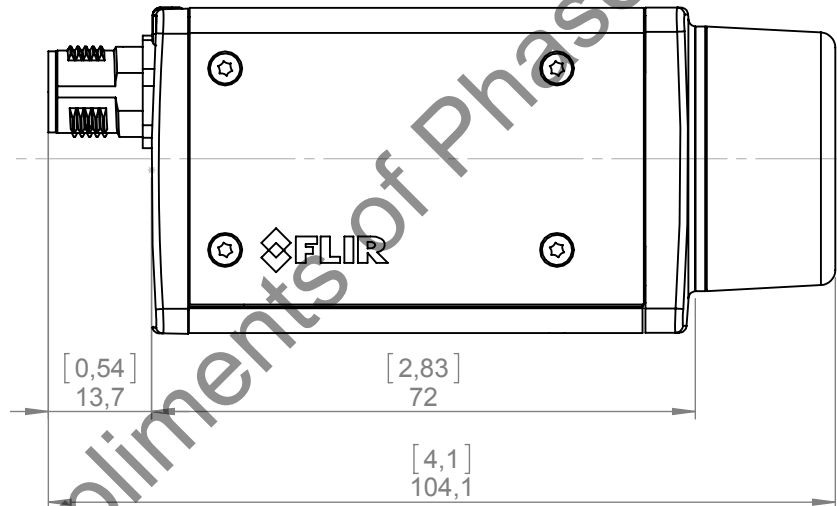
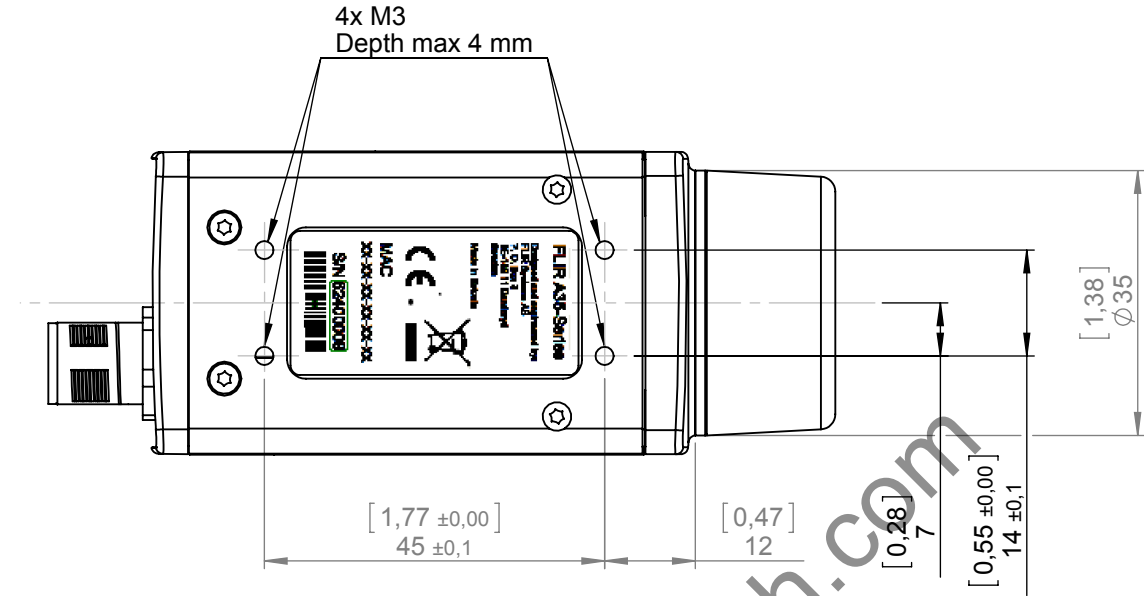
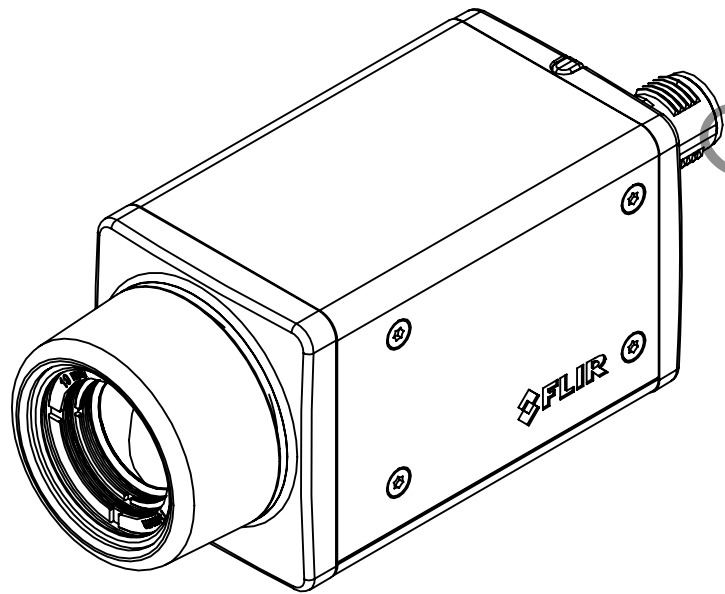
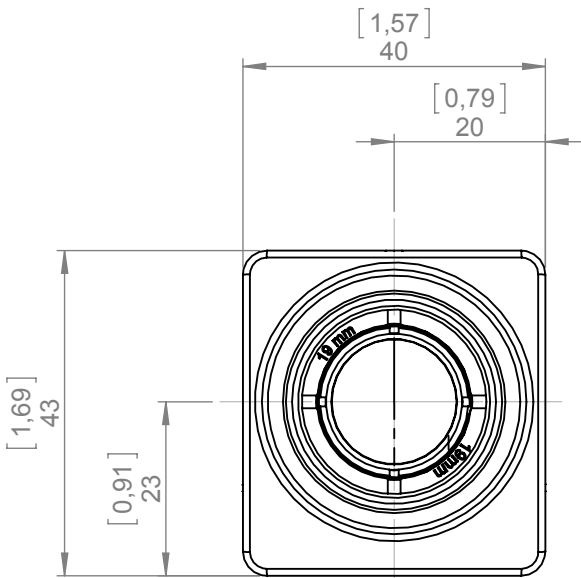
Operating temperature range	–15°C to +50°C (+5°F to +122°F)
Storage temperature range	–40°C to +70°C (–40°F to +158°F)
Humidity (operating and storage)	IEC 60068-2-30/24 h 95% relative humidity +25°C to +40°C (+77°F to +104°F)
EMC	• EN 61000-6-2 (Immunity) • EN 61000-6-3 (Emission) • FCC 47 CFR Part 15 Class B (Emission)
Encapsulation	IP 40 (IEC 60529)
Bump	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)

Physical data

Weight	0.200 kg (0.44 lb.)
Camera size (L × W × H)	106 × 40 × 43 mm (4.2 × 1.6 × 1.7 in.)
Tripod mounting	UNC ¼"-20 (on three sides)
Base mounting	4 × M3 thread mounting holes (bottom)
Housing material	Magnesium and aluminum

Shipping information

- Infrared camera with lens
- Cardboard box
- Downloads brochure
- FLIR Tools download card
- FLIR apps card
- Focus adjustment tool
- Getting started guide
- Important information guide
- Optics brochure
- Registration card
- Service & training brochure
- Thank you card
- User documentation CD-ROM

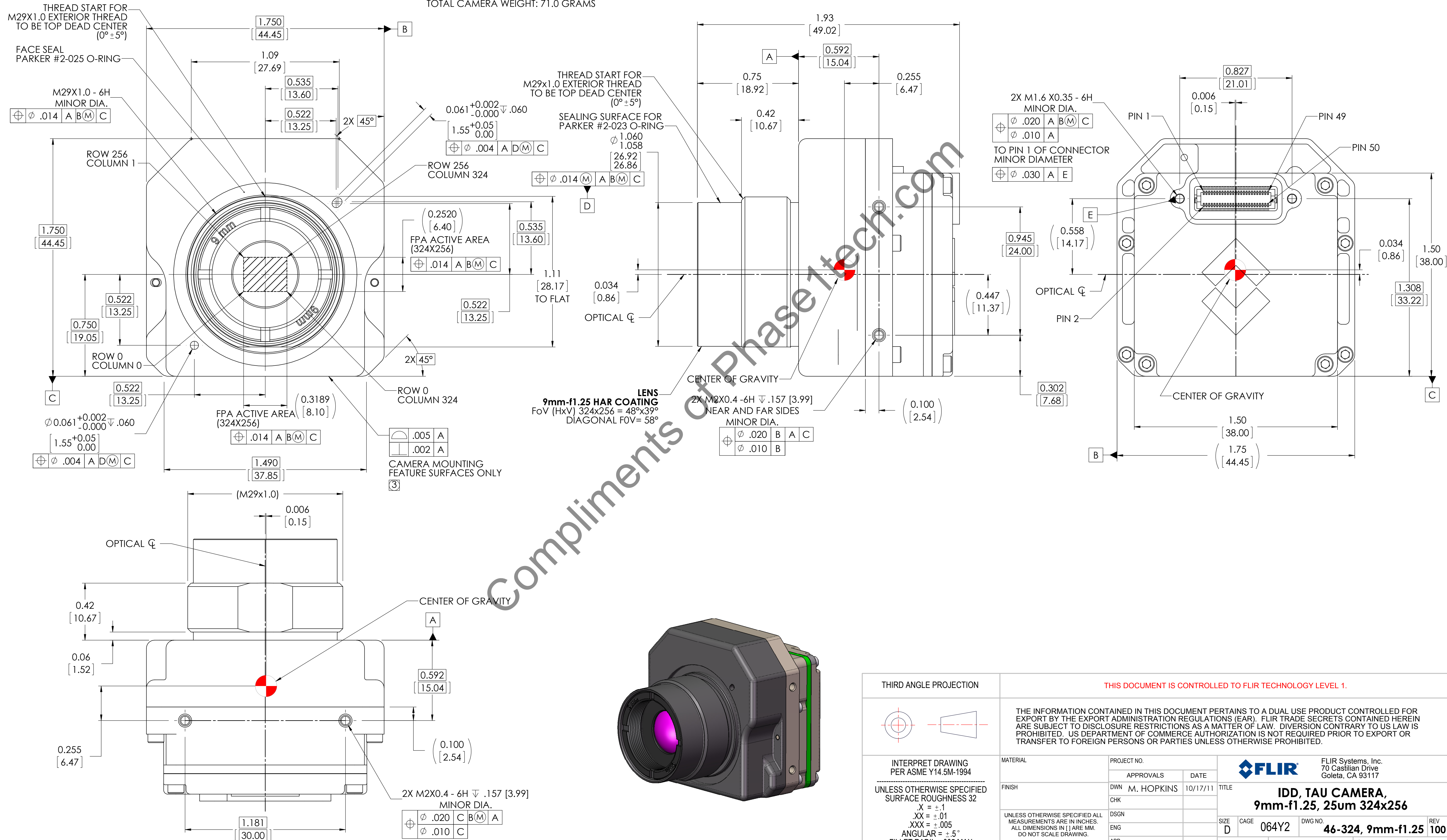


Konstr/Drawn P. MARCUS		Datum/Date 2011-08-19		Kontr/Check BEEH		Material -																				
Ändrad av/Modified by P. MARCUS		Ändrad/Modified 2012-05-07		Ytjämnhet/Roughness Ra µm		Ytbehandling/Surface treatment																				
Där ej annat anges/Unless otherwise stated Gen tol ISO 2768-mK Utdrag ur/Excerpt from ISO 2768-m <table><tr><td>0,5-6</td><td>±0,1</td><td>Hålkälsradier</td></tr><tr><td>(6)-30</td><td>±0,2</td><td>Fillet radii</td></tr><tr><td>(30)-120</td><td>±0,3</td><td></td></tr><tr><td>(120)-400</td><td>±0,5</td><td>Kanter brutna</td></tr><tr><td>(400)-1000</td><td>±0,8</td><td>Edges broken</td></tr></table>				0,5-6	±0,1	Hålkälsradier	(6)-30	±0,2	Fillet radii	(30)-120	±0,3		(120)-400	±0,5	Kanter brutna	(400)-1000	±0,8	Edges broken	Benämning/Denomination Ax5 Assy		Skala/Scale 1:1				Blad/Sheet 1(2)	
				0,5-6	±0,1	Hålkälsradier																				
				(6)-30	±0,2	Fillet radii																				
				(30)-120	±0,3																					
				(120)-400	±0,5	Kanter brutna																				
(400)-1000	±0,8	Edges broken																								
ArtNo.		T198121		Size																						
Ritn nr/Drawing No				Rev																						
T198121				A																						

NOTES: UNLESS OTHERWISE SPECIFIED

1. INDICATED DIMENSIONS ARE FOR AN ARRAY SIZE OF 324x256.
 2. CONNECTOR INTERFACE: HIROSE 50 PIN DF12-50DS-0.5V(86). MATING CONNECTOR P/N DF12(5.0)-50DP-0.5V(86). FOR PIN-OUT DESIGNATIONS SEE TAU CAMERA USERS MANUAL.
 3. INDICATED TOLERANCES APPLY TO CAMERA MOUNTING SURFACES ONLY. OTHER SURFACES ARE CAST AND HAVE DRAFT.
 4. INDICATED ALLOWABLE TRAVEL FOR FOCUS.
 5. CAMERA WEIGHT NO LENS: 50.5 GRAMS, LENS WEIGHT, 9mm-f1.25: 20.5 GRAMS
TOTAL CAMERA WEIGHT: 71.0 GRAMS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	100	INITIAL RELEASE ECN 115992	10/17/11	BC



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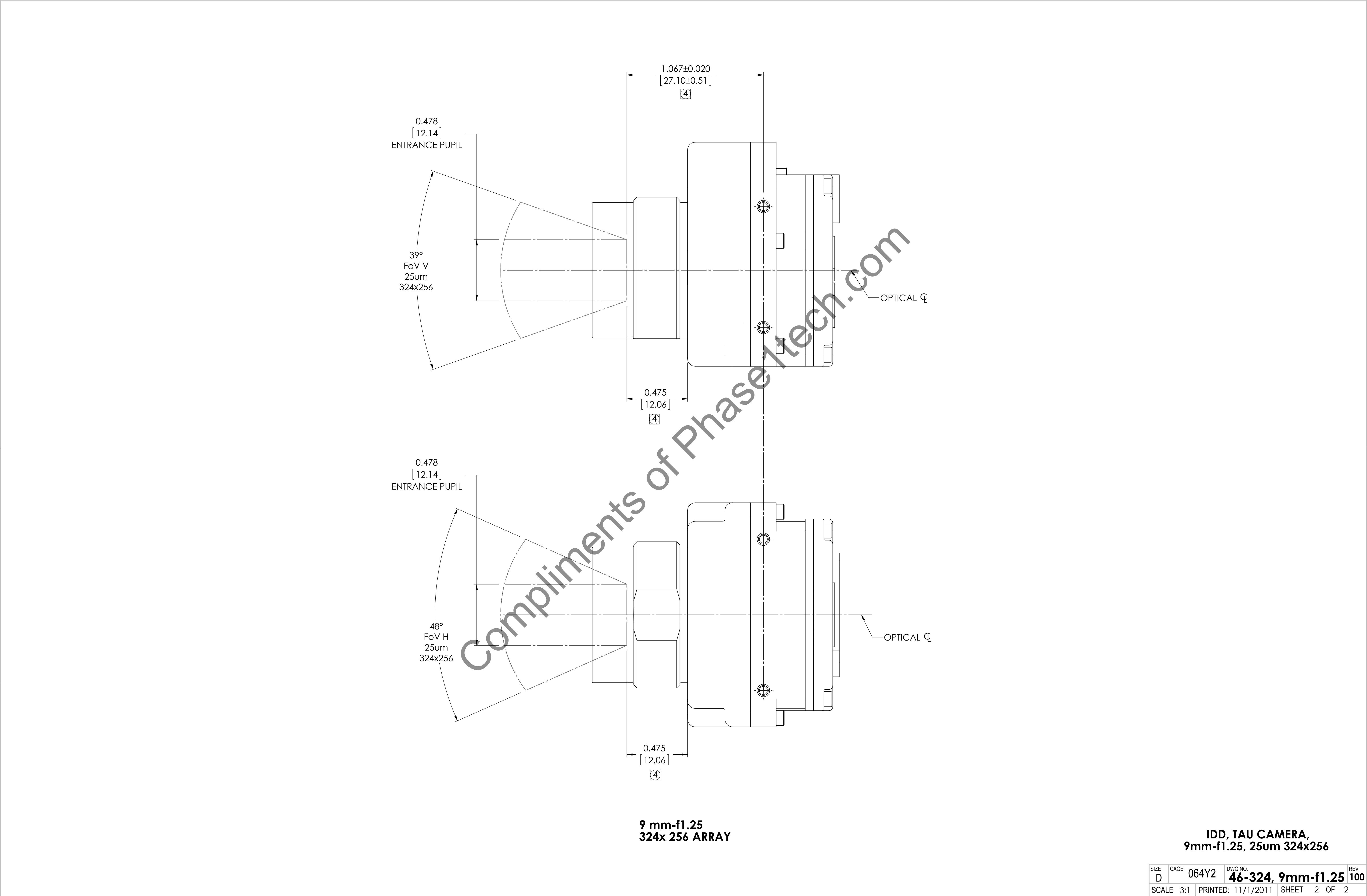
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DWG NO. 46-324, 9mm-f1.25 SH 2 REV 100

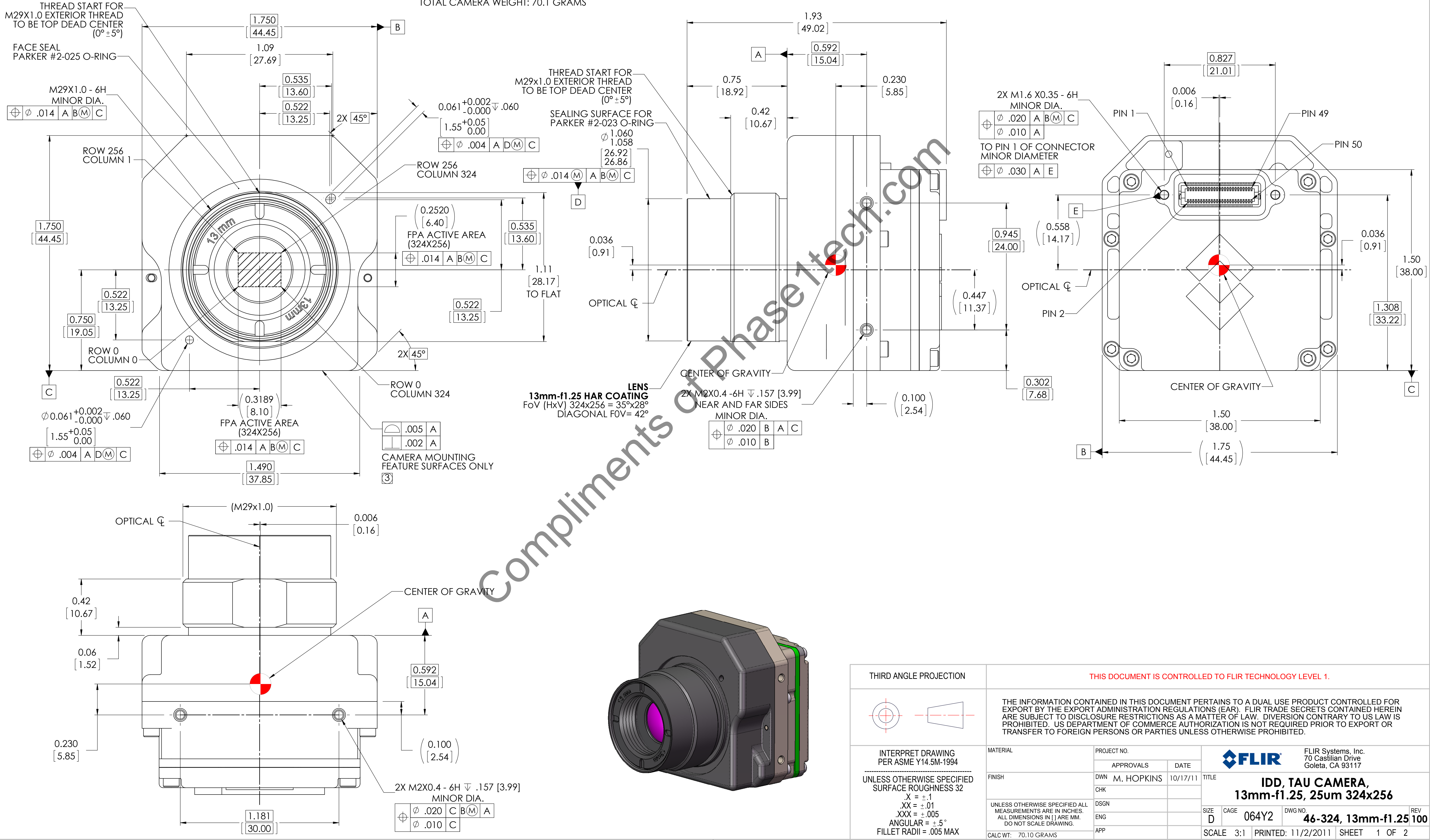
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D	064Y2	46-324, 9mm-f1.25	100
SCALE	3:1	PRINTED: 11/1/2011	SHEET 2 OF 2
SOLIDWORKS MODEL: 46-Tau Camera Core MODEL REVISIONB-WC			

NOTES: UNLESS OTHERWISE SPECIFIED

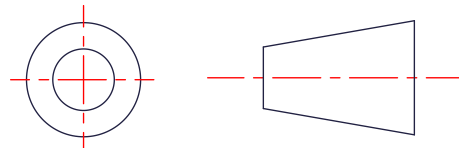
- INDICATED DIMENSIONS ARE FOR AN ARRAY SIZE OF 324x256.
- CONNECTOR INTERFACE: HIROSE 50 PIN DF12-50DS-0.5V(86). MATING CONNECTOR P/N DF12(5.0)-50DP-0.5V(86). FOR PIN-OUT DESIGNATIONS SEE TAU CAMERA USERS MANUAL.

- INDICATED TOLERANCES APPLY TO CAMERA MOUNTING SURFACES ONLY. OTHER SURFACES ARE CAST AND HAVE DRAFT.
- INDICATED ALLOWABLE TRAVEL FOR FOCUS.
- CAMERA WEIGHT NO LENS: 50.5 GRAMS, LENS WEIGHT, 13mm-f1.25: 19.6 GRAMS
TOTAL CAMERA WEIGHT: 70.1 GRAMS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	100	INITIAL RELEASE ECN 115992	10/17/11	BC



THIRD ANGLE PROJECTION



INTERPRET DRAWING
PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED
SURFACE ROUGHNESS 32
.X = ±.1
.XX = ±.01
.XXX = ±.005
ANGULAR = ±.5°
FILLET RADII = .005 MAX

THIS DOCUMENT IS CONTROLLED TO FLIR TECHNOLOGY LEVEL 1.

THE INFORMATION CONTAINED IN THIS DOCUMENT PERTAINS TO A DUAL USE PRODUCT CONTROLLED FOR EXPORT BY THE EXPORT ADMINISTRATION REGULATIONS (EAR). FLIR TRADE SECRETS CONTAINED HEREIN ARE SUBJECT TO DISCLOSURE RESTRICTIONS AS A MATTER OF LAW. DIVERSION CONTRARY TO US LAW IS PROHIBITED. US DEPARTMENT OF COMMERCE AUTHORIZATION IS NOT REQUIRED PRIOR TO EXPORT OR TRANSFER TO FOREIGN PERSONS OR PARTIES UNLESS OTHERWISE PROHIBITED.

MATERIAL		PROJECT NO.		TITLE	SIZE	CAGE	DWG NO.	REV
FINISH		APPROVALS	DATE					
UNLESS OTHERWISE SPECIFIED ALL MEASUREMENTS ARE IN INCHES. ALL DIMENSIONS IN [] ARE MM. DO NOT SCALE DRAWING.		DWN	M. HOPKINS	IDD, TAU CAMERA, 13mm-f1.25, 25um 324x256	D	064Y2	46-324, 13mm-f1.25	100
CALC WT: 70.10 GRAMS		CHK						
		ENG						
		APP						
SCALE 3:1 PRINTED: 11/2/2011 SHEET 1 OF 2					SOLIDWORKS MODEL: 46-Tau Camera Core MODEL REVISION: B-WC			



FLIR Systems, Inc.
70 Castilian Drive
Goleta, CA 93117

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DWG NO. 46-324, 13mm-f1.25 SH 2 REV 100

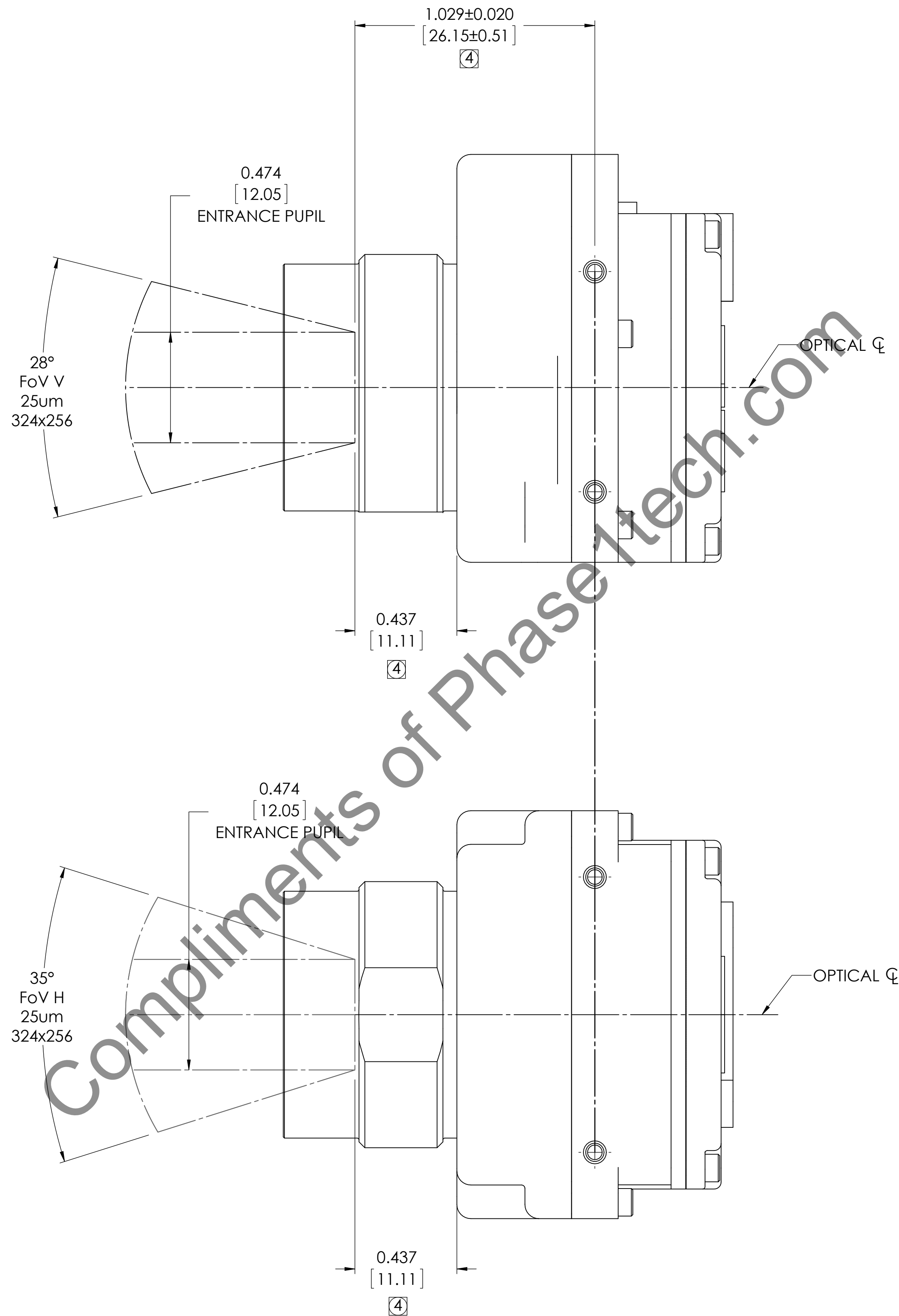
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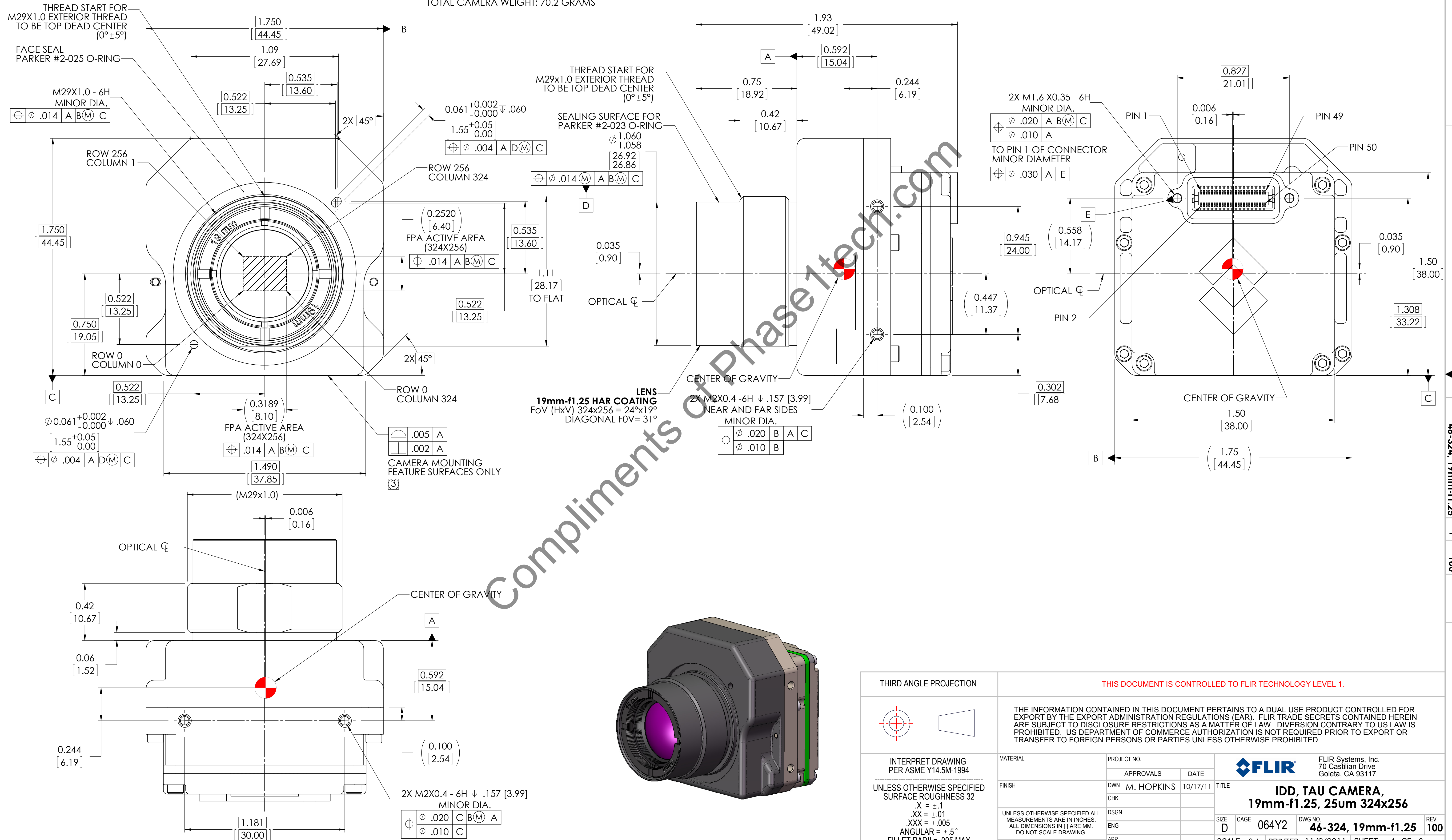


DWG NO. 46-324, 13mm-f1.25 SH 2 REV 100

NOTES: UNLESS OTHERWISE SPECIFIED

1. INDICATED DIMENSIONS ARE FOR AN ARRAY SIZE OF 324x256.
2. CONNECTOR INTERFACE: HIROSE 50 PIN DF12-50DS-0.5V(86). MATING CONNECTOR P/N DF12(5.0)-50DP-0.5V(86). FOR PIN-OUT DESIGNATIONS SEE TAU CAMERA USERS MANUAL.
3. INDICATED TOLERANCES APPLY TO CAMERA MOUNTING SURFACES ONLY. OTHER SURFACES ARE CAST AND HAVE DRAFT.
4. INDICATED ALLOWABLE TRAVEL FOR FOCUS.
5. CAMERA WEIGHT NO LENS: 50.5 GRAMS, LENS WEIGHT, 19mm-f1.25: 19.7 GRAMS TOTAL CAMERA WEIGHT: 70.2 GRAMS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	100	INITIAL RELEASE ECN 115992	10/17/11	BC



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DWG NO. 46-324, 19mm-f1.25 SH 2 REV 100

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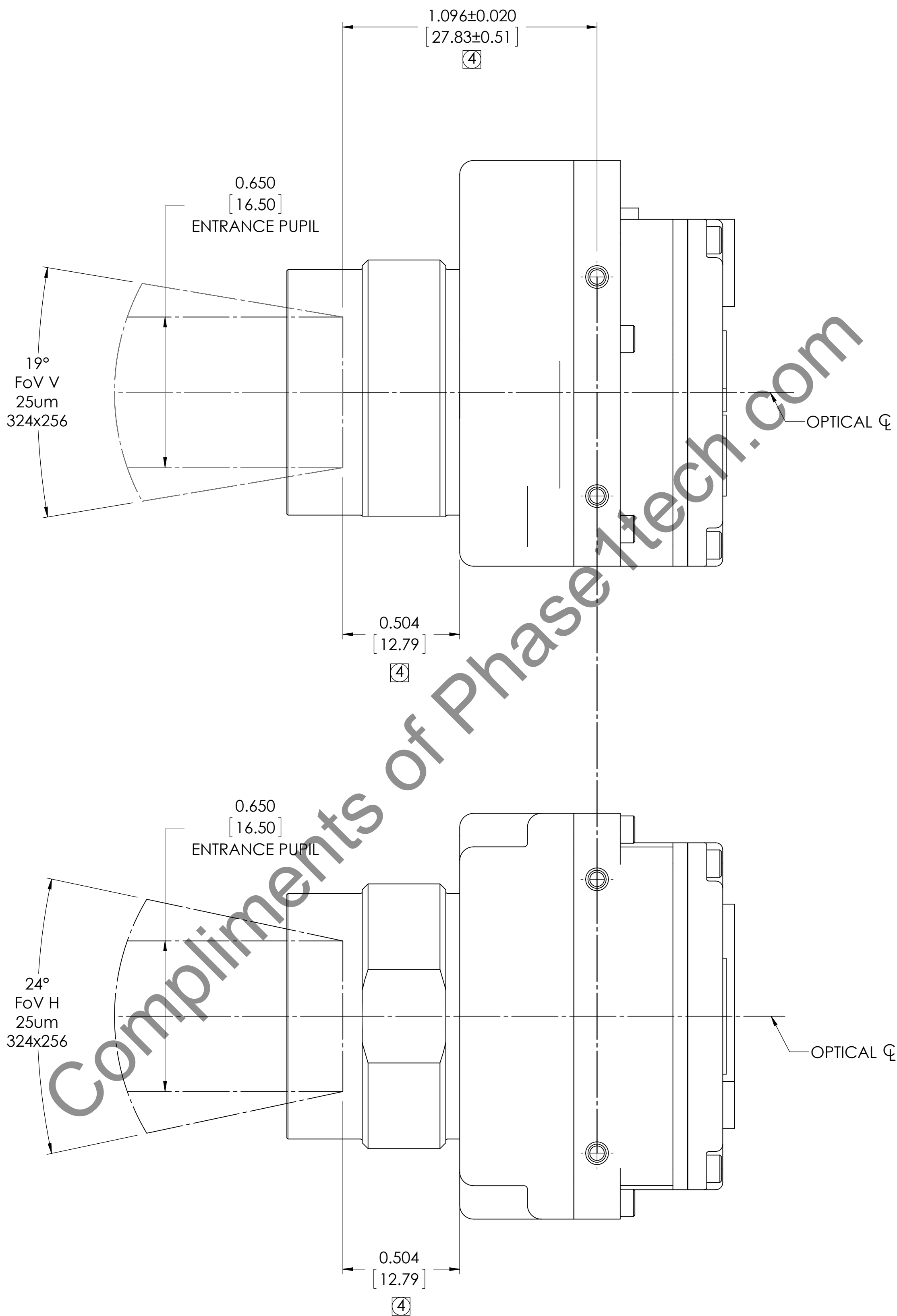
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19 mm-f1.25
324x 256 ARRAY

IDD, TAU CAMERA,
19mm-f1.25, 25um 324x256

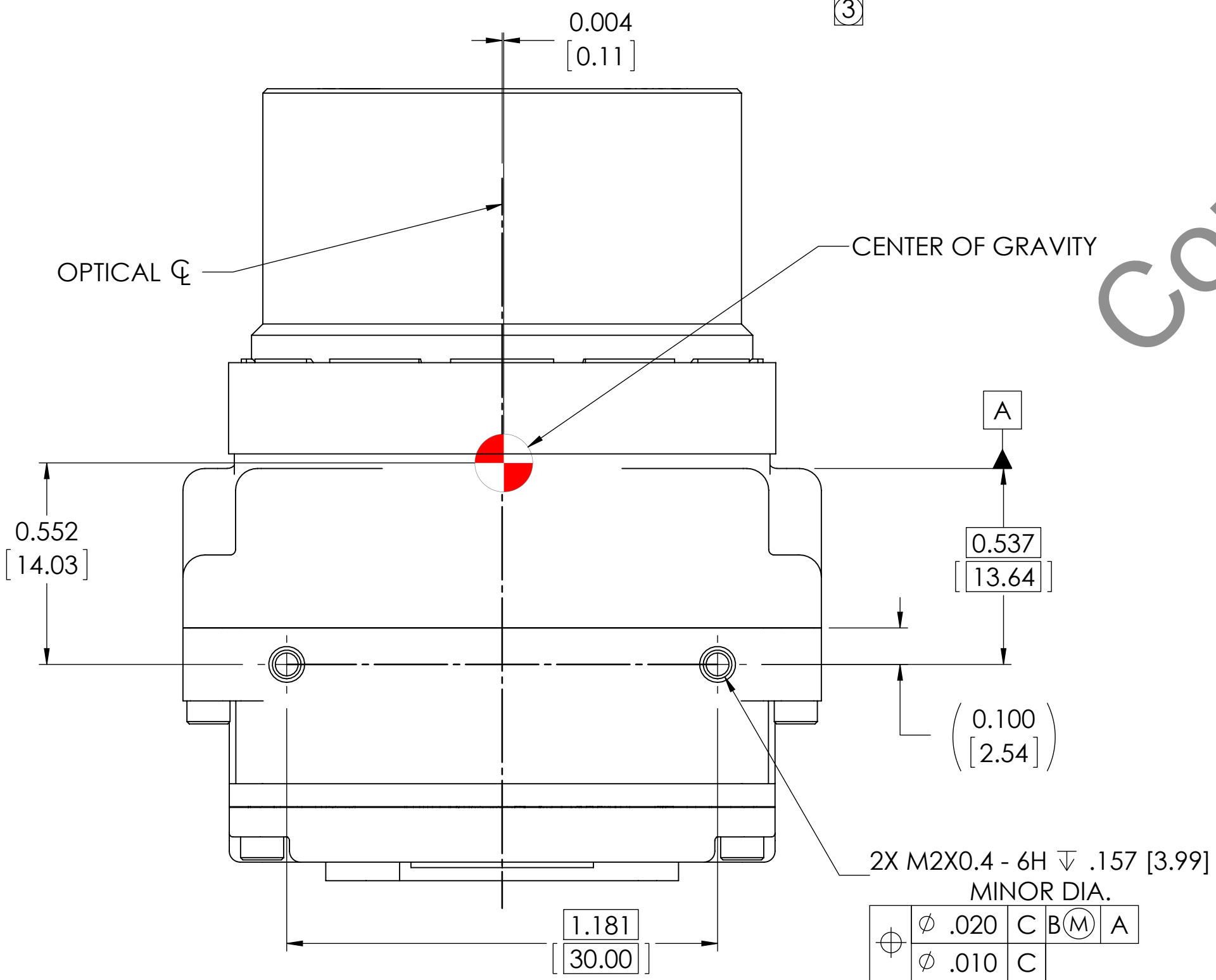
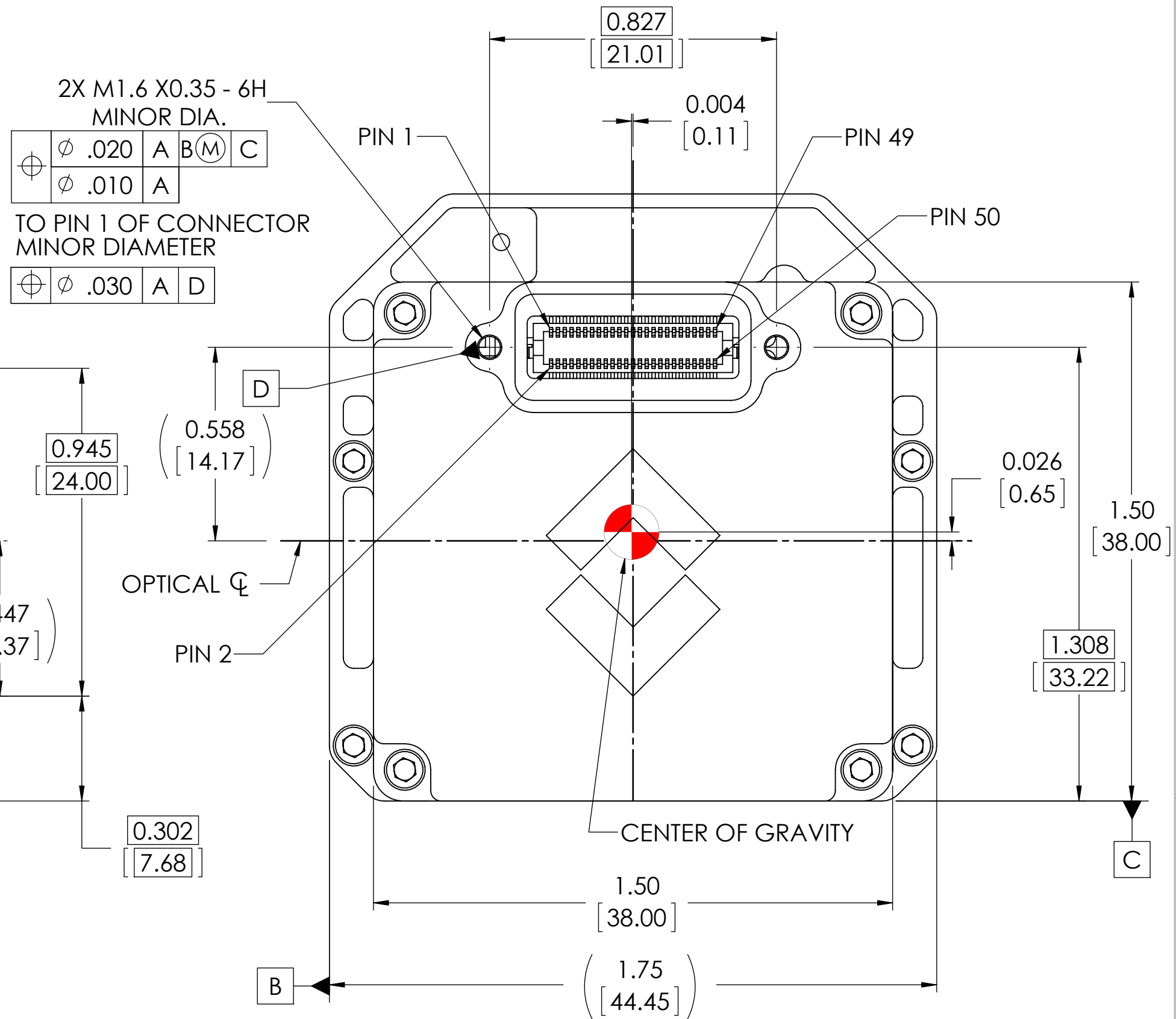
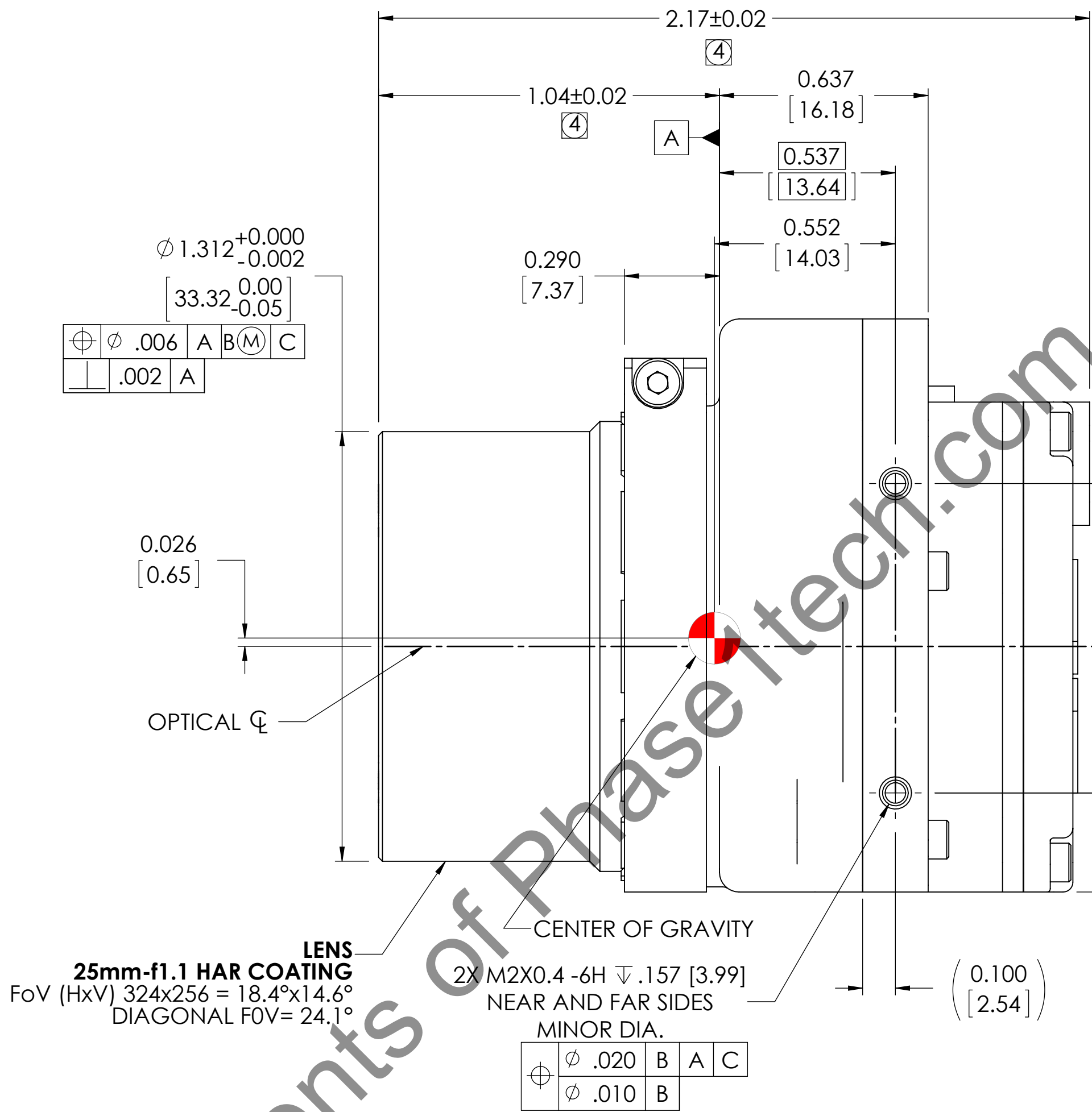
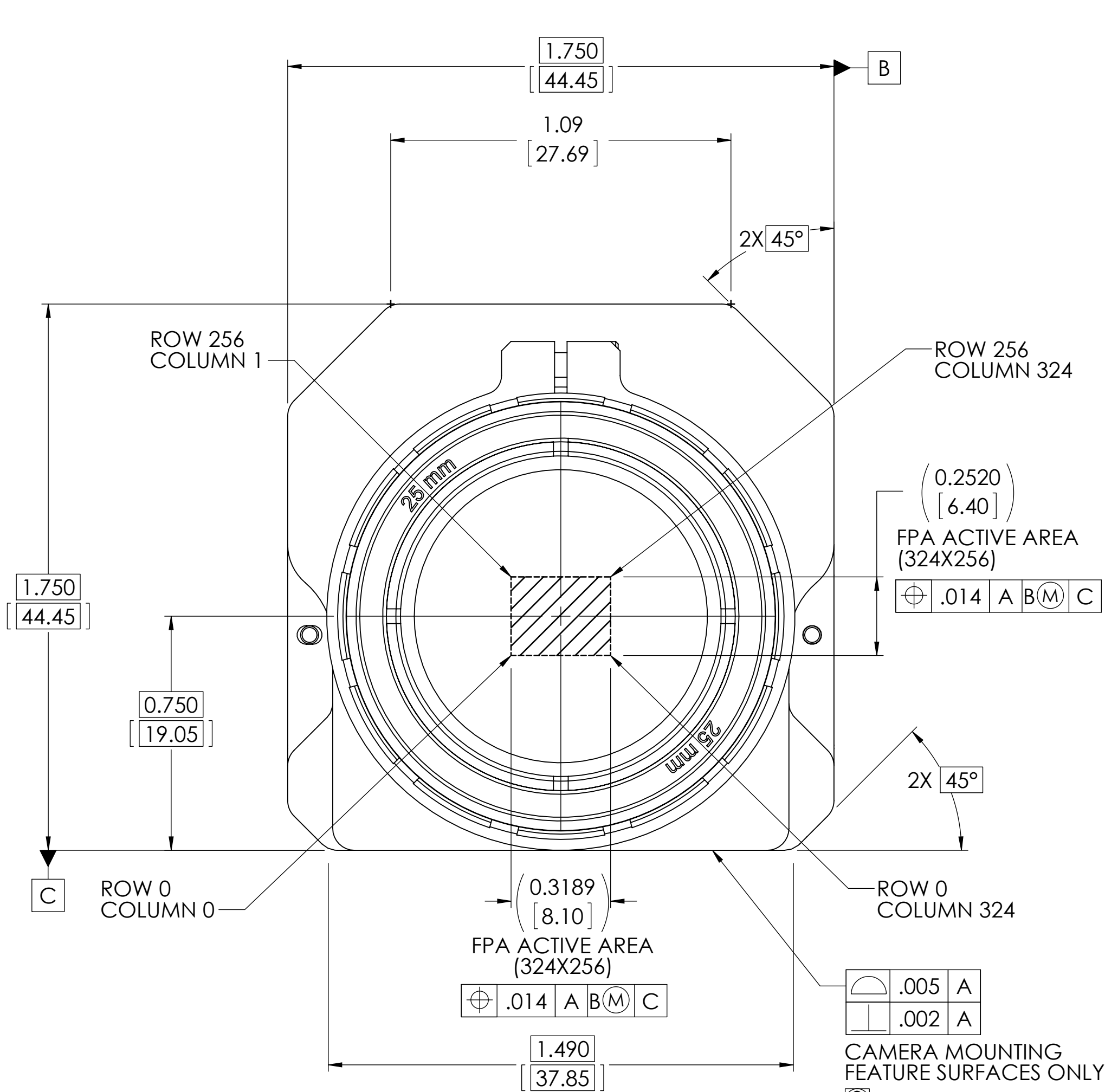
SIZE	CAGE	DWG NO.	REV
D	064Y2	46-324, 19mm-f1.25	100
SCALE	3:1	PRINTED: 11/2/2011	SHEET 2 OF 2
SOLIDWORKS MODEL: 46-Tau Camera Core MODEL REVISIONB-WC			

NOTES: UNLESS OTHERWISE SPECIFIED

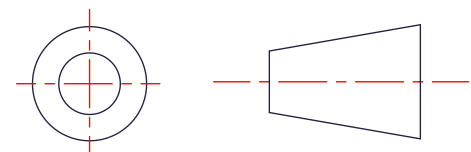
- INDICATED DIMENSIONS ARE FOR AN ARRAY SIZE OF 324x256.
- CONNECTOR INTERFACE: HIROSE 50 PIN DF12-50DS-0.5V(86). MATING CONNECTOR P/N DF12(5.0)-50DP-0.5V(86). FOR PIN-OUT DESIGNATIONS SEE TAU CAMERA USERS MANUAL.

- INDICATED TOLERANCES APPLY TO CAMERA MOUNTING SURFACES ONLY. OTHER SURFACES ARE CAST AND HAVE DRAFT.
- INDICATED ALLOWABLE TRAVEL FOR FOCUS.
- CAMERA WEIGHT NO LENS: 52.1 GRAMS, LENS WEIGHT, 25mm-f1.1: 58.9 GRAMS
TOTAL CAMERA WEIGHT: 111.0 GRAMS

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	100	INITIAL RELEASE ECN 116015	10/17/11	BC



THIRD ANGLE PROJECTION



INTERPRET DRAWING
PER ASME Y14.5M-1994

UNLESS OTHERWISE SPECIFIED
SURFACE ROUGHNESS 32
.X = ±.1
.XX = ±.01
.XXX = ±.005
ANGULAR = ±.5°
FILLET RADII = .005 MAX

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MATERIAL		PROJECT NO.		 FLIR Systems, Inc. 70 Castilian Drive Goleta, CA 93117		
		APPROVALS	DATE			
FINISH	DWN M. HOPKINS	10/17/11	TITLE IDD, TAU CAMERA, 25mm-f1.1, 25um 324x256			
	CHK					
UNLESS OTHERWISE SPECIFIED ALL MEASUREMENTS ARE IN INCHES. ALL DIMENSIONS IN [] ARE MM. DO NOT SCALE DRAWING.	DSGN					
	ENG					
CALC WT: 111.00 GRAMS	APP		SIZE D	CAGE 064Y2	DWG NO. 46-324, 25mm-f1.1	REV 100
			SCALE 3:1	PRINTED: 11/3/2011	SHEET 1 OF 2	



FLIR Systems, Inc.
70 Castilian Drive
Goleta, CA 93117

IDD, TAU CAMERA,
25mm-f1.1, 25um 324x256

SOLIDWORKS MODEL: 46-Tau Camera Core
MODEL REVISION: B-WC

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DWG NO. 46-324, 25mm-f1.1 SH 2 REV 100

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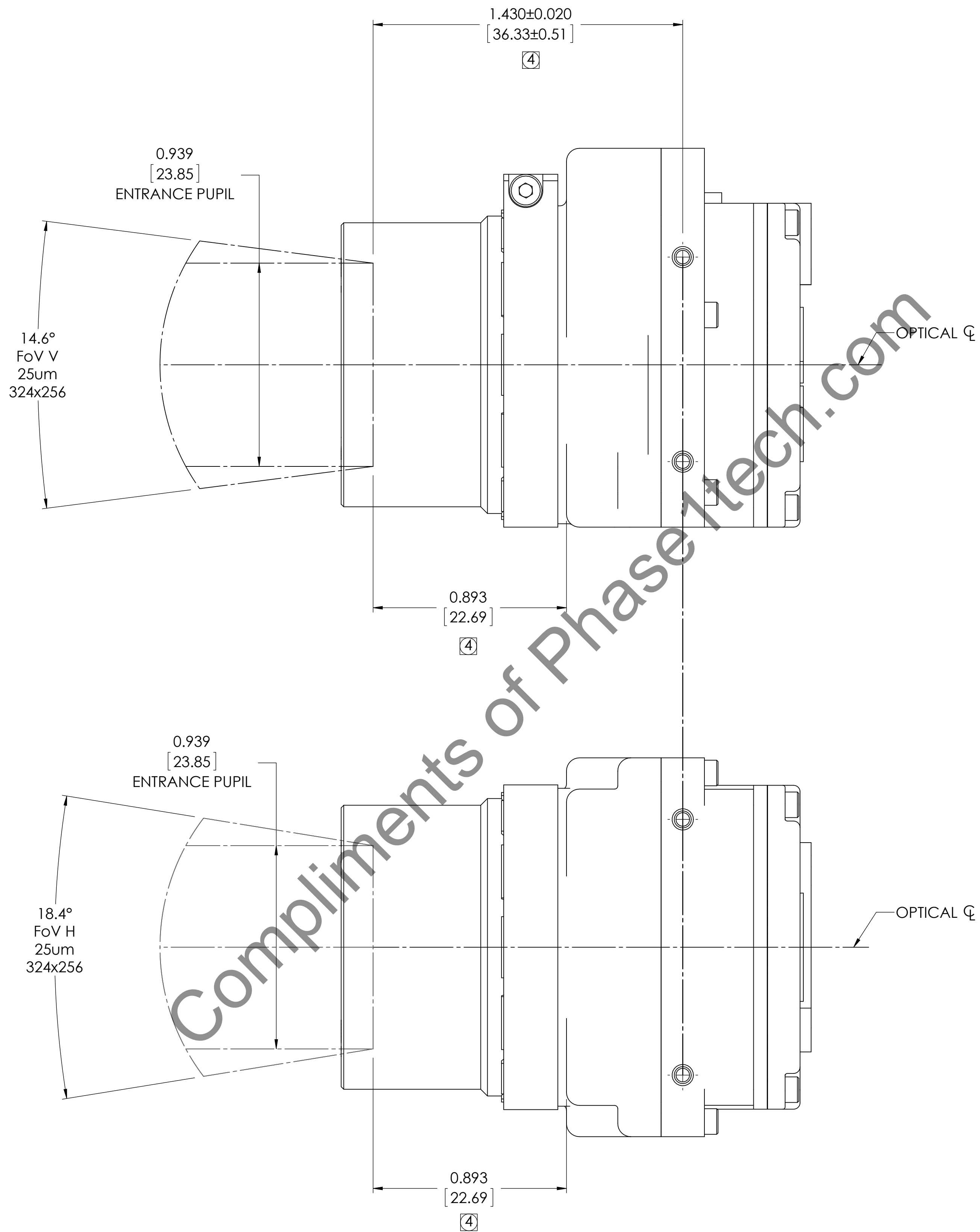
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25 mm-f1.1
324x 256 ARRAY

IDD, TAU CAMERA,
25mm-f1.1, 25um 324x256

SIZE	CAGE	DWG NO.	REV
D	064Y2	46-324, 25mm-f1.1	100
SCALE	3:1	PRINTED: 11/3/2011	SHEET 2 OF 2
SOLIDWORKS MODEL: 46-Tau Camera Core MODEL REVISIONB-WC			