OMB Control Number: 0694 - 0119 Expiration Date: 01/31/2013

TECHNOLOGY ASSESSMENT:
Night Vision Focal Plane Arrays (FPAs), Sensors, and Cameras



SCOPE OF ASSESSMENT

The U.S. Department of Commerce, Bureau of Industry and Security (BIS), Office of Technology Evaluation (OTE), is conducting a technology assessment regarding the U.S. night vision industry. The purpose of this assessment is to determine the nature of night vision focal plane arrays (FPAs), sensors, and cameras manufactured for military-use only and dual-use (for both commercial and military use).

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law (50 U.S.C. app. Sec. 2155). Failure to respond can result in a maximum fine of \$10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C App. Sec. 2155). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Not withstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUEST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 6 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. 0694 - 0119), Washington, D.C. 20503.

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BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

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Sec	tion X Who Must Respond		
	Identify the type of night vision equipment your company currently sells that are subject to co		
	Commerce Control List (CCL) or section 12 of the U.S. Munitions List (USML). Also indicate	where the equipn	nent is manufactured.
		Yes/No	Location of Manufacture
	Uncooled infrared focal plane arrays (FPAs)		[In the U.S./Outside of the U.S./Both]
A.	Uncooled infrared cameras (including camera cores)		
	Cooled infrared FPAs		
	Cooled infrared cameras (including camera cores)		
	Image intensifier tubes		
	Image intensifier tube cameras and direct-view equipment		
	Low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc)		
	Cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc)		
	Provide a brief description of the function of your company in the space below.		
ь			
B.			
	Exemption From Survey		
If vo	ou answered "No" to all products listed in Question A above, you may be exempt from complet	ing this U.S. Gov	vernment survev. Please
	one of the BIS contacts listed in "General Instructions" to verify your status.		
Co	omments:		

Section **General Instructions** Your company is required to complete this survey using an Excel template, which can be downloaded from the BIS website. At your request, BIS staff will e-mail the Excel survey template directly to your company. For your convenience, a PDF version of the survey is available on the BIS website to aid internal data collection. PLEASE DO NOT submit the PDF version of your company's response to BIS. Do not copy and paste responses within this survey. Responses should be made manually. Copy and paste can disrupt the data collection process. If your survey response is corrupted as a result of copying and pasting responses, a new survey will be sent to you for completion. If information is not available from your records in the form requested, you may furnish estimates. Please indicate in the comment box on the page when you use an estimate. Questions related to this survey should be directed to: @bis.doc.gov (preferred method of contact for survey questions) Teresa Telesco, Trade and Industry Analyst (202) 482-4959 Katharine Huang, Trade and Industry Analyst (202) 482-1271 Meaghan Archer, Trade and Industry Analyst (202) 482-7980 D. Upon completion, review and certification of the survey, transmit the survey via e-mail to For overall questions to the Office of Technology Evaluation (OTE), please contact: Brad Botwin, Director, Industrial Studies Office of Technology Evaluation, Room 1093 U.S. Department of Commerce E. 1401 Constitution Avenue, NW Washington, DC 20230 bbotwin@bis.doc.gov 202-482-4060 Please do not submit completed surveys to this address; all surveys must be submitted electronically. BUSINESS CONFIDENTIAL - Per Section 705(d) of the Defense Production Act

De finition of					
	Definitions				
	NOTE: Definitions still to be completed				

Sec	tion 1	Company Information - He	adquarters	
	Company Name		•	
	Street Address			
	City			
A.	State	[State drop-down]		
	Zip Code			
	Phone Number			
	Fax Number			
	Website			
	Point of Contact(s) regarding th	nis survey:		
В.	Name	Title	E-mail	Phone Number
Б.				
C.	My company is:	[Owned by a U.S. company, Owned by	a non-U.S. company, Not owned by anot	her company]
	Comments:			

Sec	than or equal to 111,000 pi	ixels, 2) greater than 1	Uncooled Infrared FPAs duct lines, the name of the products I 11,000 pixels but less than or equal to hely or dual-use (without regard to curr	o 310,000 pixels, and		
A.		Number of Product Lines	Name of Product Lines	number of models ≤111,000 pixels	number of models >111,000 and ≤310,000 pixels	number of models >310,000 pixels
	Military-Use Only					
	Dual-Use					
	models 1) less than or equa	al to 111,000 pixels, 2)	nfrared FPA product lines, the name of greater than 111,000 pixels but less of for military-use only or dual-use (with	than or equal to 310,	000 pixels, and 3) gre t jurisdiction).	
В.		Number of Product Lines	Name of Product Lines	number of models ≤111,000 pixels	number of models >111,000 and ≤310,000 pixels	number of models >310,000 pixels
	Military-Use Only					
	Dual-Use					
	Identify the specific applica	tions for the uncooled	infrared FPAs your company currentl	ly sells that are for mil	itary-use only or dual	-use.
C.	Military-Use Only					
	Dual-Use					
D.	Are there any differences (FPAs your company manu		characteristics) between the military- ain your answer below.	use only and dual-use	e uncooled infrared	[Yes/No]
	Comments:					

Sec	ction 2.b	Un	cooled Infrared FPAs -	cont.			
	Identify the 10-digit Harr	monized Tariff Schedule	(HTS) codes your compa	any uses to classify the		and dual-use uncoo	led infrared FPAs it
Α.		TS codes do not go to the	ne 10-digit level, provide	as many digits as poss	sible.	I	
	Military-Use Only						
	Dual-Use	11.0					
		non-U.S. competitors for			•		•
		y produce uncooled infrai	•	equal to 111,000 pixel	s, 2) greater than	111,000 pixeis but i	ess than or equal to
	3 TU,000 pixels, and 3) g	reater than 310,000 pixe	IS.			. 444 000	
	Company Name	Country	Military-Only Products	Dual-Use Products	≤111,000 pixels	>111,000 and	>310,000 pixels
		[constant door down]	DVac in the LLC Mac	Diag in the LLC Mag	D/ /N - 1	≤310,000 pixels	D/aa/Na1
		[country drop down]	[Yes, in the U.S./Yes, outside the U.S./Yes, both in	[Yes, in the U.S./Yes, outside the U.S./Yes, both	[Yes/No]	[Yes/No]	[Yes/No]
			and outside the U.S./No	in and outside the U.S./No			
В.			competing products]	competing products]			
В.							
	0		1	l	L	L	
	Comments:						

				2007		2008			N 110			
		U	.S.	DOD	Non-		U.		DOD		n-U.S.	
		Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity	
, N	Military-Use Only			[Yes/No]					[Yes/No]			
۲. ۲	Dual-Use			[Yes/No]					[Yes/No]			
				2009			2010					
	U.S.		.S.	DOD	Non-	·U.S.	U.	S.	DOD	Noi	n-U.S.	
		Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity	
N	Military-Use Only			[Yes/No]					[Yes/No]			
	Dual-Use			[Yes/No]					[Yes/No]			
3.	dentify the types of dua	al-use uncooled in	frared FPAs you	r company sol	d to the the U.S.	Department of D	Defense. If your co	ompany had no	such sales, m	nove to the next	section.	

Sec	tion 3.a		Uncooled Infrared Cameras (Includent)	ding Camera Cores)		
	or equal to 111,000 pixe	els, 2) greater than	mera product lines, the name of the part o	to 310,000 pixels, and		nrafred camera models 1) less than 100 pixels your company sold in 2010
A.	Number of Product Lines		Name of Product Lines	number of models ≤111,000 pixels	number of models >111,000 and ≤310,000 pixels	number of models >310,000 pixels
	Military-Use Only					
	Dual-Use					
			poled infrared camera product lines, t			
			kels, 2) greater than 111,000 pixels be			3) greater than 310,000 pixels that
	your company projects	selling that are for	military-use only or dual-use (without	regard to current juris	· · · · · · · · · · · · · · · · · · ·	
B.		Number of Product Lines	Name of Product Lines	number of models ≤111,000 pixels	number of models >111,000 and ≤310,000 pixels	number of models >310,000 pixels
	Military-Use Only					
	Dual-Use					
	Identify the specific app	lications for the und	cooled infrared cameras your compar	y currently sells that a	are for military-use only	or dual-use.
C.	Military-Use Only					
	Dual-Use					
	, ,		t uses in its uncooled infrared camera that provide you with uncooled infrare	•	other companies, list	[My company manufactures FPAs/ My company purchases FPAs/ My company manufactures and purchases FPAs]
D.	Company	Name	Country	Compa	ny Name	Country
			[country drop-down]			[country drop-down]
	Comments:					

Section	3.b	Uncooled Infrared Cameras (Including Camera Cores)- cont.	
		ferences (i.e., physical/technical characteristics) between the military-use only and dual-use uncooled infrared	[Yes/No]
	cameras your co	mpany manufactures? Please explain your answer below.	
Α.			
A.			
		ferences (i.e., physical/technical characteristics) between the FPAs you use in the military-use only and dual-	[Yes/No]
	use uncooled infr	rared cameras your company manufactures? Please explain your answer below.	
В.			
В.			
		use uncooled infrared camera models does your company license through the State Department? List the	
	name of the cam	era's product line and explain why.	
C.			
C.			
C	comments:		

Sec	tion 3.c	Unc	ooled Infrared Camera	s (Including Camera	Cores) - cont.		
Α.	Identify the 10-digit Harr	nonized Tariff Schedule (products' HTS codes do	(HTS) codes your compa	any uses to classify the	military-use only a	and dual-use uncoo	led infrared
Λ.	Military-Use Only						
	Dual-Use						
	use products, and if they	non-U.S. competitors for produce uncooled infrar and 3) greater than 310,	red cameras 1) less than		•		•
	Company Name	Country	Military-Only Products	Dual-Use Products	≤111,000 pixels	>111,000 and ≤310,000 pixels	>310,000 pixels
		[country drop down]	outside the U.S./Yes, both in and outside the U.S./No		[Yes/No]	[Yes/No]	[Yes/No]
B.							
	Comments:						

	<u> </u>	2007 U.S. DOD Non-U.S.						Non-U.S.				
	Value (\$)	Quantity	DOD sales?	Value (\$)	Quantity	Value (\$)	Quantity	DOD sales?	Value (\$)	Quantity		
Military-Use Only	Value (ψ)	Quantity	[Yes/No]	ναιας (ψ)	Quantity	value (ψ)	Quantity	[Yes/No]	ναιαθ (ψ)	Quantity		
Dual-Use			[Yes/No]					[Yes/No]				
			2009				2010					
U.S.		S.	DOD	Non-	U.S.	U.	S.	DOD	Nor	n-U.S.		
	Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity		
Military-Use Only			[Yes/No]					[Yes/No]				
Dual-Use			[Yes/No]					[Yes/No]				
Identify the types of du	al-use uncooled inf	rared cameras y	our company	sold to the the U	J.S. Department of	of Defense. If your	company had	no such sales,	move to the nex	kt section.		

Sec	Section 4.a Cooled Infrared FPAs							
	Identify the number and nan dual-use (without regard to o		d FPA product lines your company currently sells that are for military-use only or					
Α.		Number of Product Lines	Name of Product Lines					
	Military-Use Only							
	Dual-Use							
	For 2011-2012, identify the use only or dual-use (without		e cooled infrared FPA product lines your company projects selling that are for military-diction).					
В.		Number of Product Lines	Name of Product Lines					
	Military-Use Only							
	Dual-Use							
	Identify the specific applicati	ons for the cooled infra	red FPAs your company currently sells that are for military-use only or dual-use.					
C.	Military-Use Only							
	Dual-Use							
	,		naracteristics) between the commercial-only and military-only cooled [Yes/No]					
	Infrared FPAs your company	manufactures? Please	e explain your answer below.					
D.								
	Comments:							

Sec	tion 4.b		Cooled Infrared FPAs - cont.		
^		nized Tariff Schedule (HTS) codes of go to the 10-digit level, provide as	your company uses to classify the ms many digits as possible.	ilitary-use only and dual-use cooled	infrared FPAs it sells. If your
Α.	Military-Use Only				
	Dual-Use				
	Identify your company's no infrared FPAs.	on-U.S. competitors for cooled infrar	red FPAs, their country, and if they co	ompete with your company's military	y-use only or dual-use cooled
	Con	mpany Name	Country	Military-Only Products	Dual-Use Products
			[country drop down]	[Yes, in the U.S./Yes, outside the U.S./Yes both in and outside the U.S./No competing products]	[Yes, in the U.S./Yes, outside the U.S./Yes, both in and outside the U.S./No competing products]
B.					
	Comments:			•	

		0	2007	Non	11.0		0	2008	No	- 11.0
		.S.	DOD	Non-		U.		DOD		n-U.S.
	Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		<u> </u>
Dual-Use			[Yes/No]					[Yes/No]		<u> </u>
		2009						2010		
	U	.S.	DOD	Non-	U.S.	U.	.S.	DOD	Nor	n-U.S.
	Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
Identify the types of	dual-use cooled infra	red FPAs your co	ompany sold t	o the the U.S. D	epartment of Defe	ense. If your comp	any had no sud	ch sales, move	to the next sect	ion.

Sec	tion 5.a	Coo	led Infrared Cameras (Ir	ncluding Camera Cores)				
	Identify the number and (without regard to curre		infrared camera product I	ines your company currently sells that are for m	nilitary-use only or dual-use			
A.		Number of Product Lines		Name of Product Lines				
	Military-Use Only							
	Dual-Use							
	For 2011-2012, identify only or dual-use (without			amera product lines your company projects sel	ling that are for military-use			
В.		Number of Product Lines	Name of Product Lines					
	Military-Use Only							
	Dual-Use							
		plications for the coole	ed infrared cameras your	company currently sells that are for military-use	only or dual-use.			
C.	Military-Use Only							
	Dual-Use							
		•	uses in its cooled infrared is that provide you with co	cameras? If purchased from other companies, poled infrared FPAs.	[My company manufactures FPAs/ My company purchases FPAs/ My company manufactures and purchases FPAs]			
D.	Compan	y Name	Country	Company Name	Country			
			[country drop-down]		[country drop-down]			
	Comments:							

Sec	tion 5.b	Cooled Infrared Cameras (Including Camera Cores) - cont.	
		ences (i.e., physical/technical characteristics) between the military-use only and dual-use cooled infrared cameras your ures? Please explain your answer below.	[Yes/No]
A.			
		ences (i.e., physical/technical characteristics) between the FPAs you use in the military-use only and dual-use cooled our company manufactures? Please explain your answer below.	[Yes/No]
В.			
		e cooled infrared camera models does your company license through the State Department? List the name of the ne and explain why.	
C.			
	Comments:		

Sec	tion 5.c	Cooled Infrared	Cameras (Including Camera Cores	s) - cont.	
Α.		nized Tariff Schedule (HTS) codes to to the 10-digit level, provide as	your company uses to classify the miss many digits as possible.	ilitary-use only and dual-use cooled	infrared FPAs it sells. If your
Λ.	Military-Use Only				
	Dual-Use				
	Identify your company's noi infrared FPAs.	n-U.S. competitors for cooled infrar	ed FPAs, their country, and if they co	ompete with your company's military	r-use only or dual-use cooled
	Com	npany Name	Country	Military-Only Products	Dual-Use Products
			[country drop down]	[Yes, in the U.S./Yes, outside the U.S./Yes, both in and outside the U.S./No competing products]	
B.					
	Comments:			•	

to the U.S. Departmen		,	2007							
	U.		DOD		-U.S.	U.		DOD		n-U.S.
	Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
		2009						2010		
	U.	S.	DOD	Non-	-U.S.	U.	S.	DOD	Nor	n-U.S.
	Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
Identify the types of du	al-use cooled infrar	ed cameras you	ir company so	ld to the the U.S	. Department of I	Defense. If your co	mpany had no	such sales, m	ove to the next s	section.
		<u> </u>	•		•	•				

Sec	tion 6.a		Image Intensifier Tubes		
	,	•	oduct lines, the name of your products lines, and the number		en III or higher
	models your company curi	rently sells that are f	or military-use only or dual-use (without regard to current ju	urisdiction).	
Α.		Number of Product Lines	Name of Product Lines	Gen II models	Gen III or higher models
	Military-Use Only				
	Dual-Use				
	For 2011-2012, identify the	number of image in	tensifier tube product lines, the name of your products lines	s, and the number	of Gen II and Gen III
	or higher models your com	pany projects selling	g that are for military-use only or dual-use (without regard t	o current jurisdicti	on).
В.		Number of Product Lines	Name of Product Lines	Gen II models	Gen III or higher models
	Military-Use Only				
	Dual-Use				
			ntensifer tubes your company currently sells that are for mil	litary-use only or c	lual-use (for both
C.	commercial and military us	e).			
0.	Military-Use Only				
	Dual-Use				
	Are there any differences (i.e., physical/technica	al characteristics) between the military-use only and dual-u	se image	[Yes/No]
D.	intensifier tubes your comp	any manufactures?	Please explain your answer below.		
D.					
	Comments:				

Sec	tion 6.b		Image Intens	ifier Tubes - cont.			
^				ur company uses to clas provide as many digits		y and dual-use image	intensifer tubes it
Α.	Military-Use Only		,		•		
	Dual-Use						
		•	ors for image intensifien III or higher image in	er tubes, their country, if tensifier tubes.	they compete with you	r company's military-u	se only or dual-use
	Company Name		Country	Military-Only Products	Dual-Use Products	Gen II	Gen III or higher
			[]	[Yes, in the U.S./Yes, outside the U.S./Yes, both in and outside the U.S./No competing products]		[Yes/No]	[Yes/No]
B.							
	Comments:						

Sec	Report the value and c				Intensifier Tub es figures for mi		nd	dual-use image i	ntensifier tubes	s for 2007-201	0, and indicate i	f you sold directly
	to the U.S. Departmen	t of Defense during	tnose years.	2007				2008				
		U.	S.	DOD	Non	-U.S.		U.	S.	DOD	Noi	n-U.S.
		Value (\$)	Quantity	sales?	Value (\$)	Quantity	Ш	Value (\$)	Quantity	sales?	Value (\$)	Quantity
^	Military-Use Only			[Yes/No]						[Yes/No]		
Α.	Dual-Use			[Yes/No]						[Yes/No]		
			2009							2010		
	U.S.		S.	DOD	Non-U.S.		U.S.		DOD	Noi	n-U.S.	
		Value (\$)	Quantity	sales?	Value (\$)	Quantity	11	Value (\$)	Quantity	sales?	Value (\$)	Quantity
	Military-Use Only			[Yes/No]						[Yes/No]		
	Dual-Use			[Yes/No]						[Yes/No]		
	Identify the types of du	al-use image intens	sifer tubes your o	company sold	to the the U.S. I	Department of D	efe	nse. If your com	pany had no su	ich sales, mov	e to the next see	ction.
В.		-										
	Comments:											

Sec	tion 7.a Identify the number of image inte III or higher models your compan	ensifier tube camera and o	direct-view equip				number of Gen II and Gen
A.		Number of Product Lines		Name of Product Lines		Gen II models	Gen III or higher models
	Military-Use Only						
	Dual-Use						
	For 2011-2012, identify the number Gen II and Gen III or higher model.						
В.		Number of Product Lines		Name of Product Lines		Gen II models	Gen III or higher models
	Military-Use Only						
	Dual-Use						
C.	Identify the specific applications to dual-use (for both commercial and		ube cameras and	d direct-view equipment your con	mpany cur	rrently sells that are	e for military-use only or
C.	Military-Use Only						
	Dual-Use						
D	How does your company obtain to purchased from other companies						[My company manufactures tubes/ My company purchases tubes/ My company manufactures and purchases tubes]
D.	Company Name	Country		Company Name			Country
		[country drop-down]			[0	country drop-down]	
	Comments:						

Sec	tion 7.b	Image Intensifier Tube Cameras and Direct-View Equipment- cont.	
	_	ences (i.e., physical/technical characteristics) between the military-use only and dual-use image eras and direct-view equipment your company manufactures? Please explain your answer below.	[Yes/No]
A.			
		ences (i.e., physical/technical characteristics) between the tubes you use in the military-use only intensifier tube cameras direct-view equipment your company manufactures? Please explain your	[Yes/No]
	answer below.	interiorier tabe camerae arrest view equipment year company manarastarce. Thouse explain year	
B.			
		of dual-use image intensifier tube cameras and direct-view equipment does your company license epartment? List the name of the camera's product line and explain why.	
C.			
	Comments:		

Sect		larmonized Tariff Sch	nedule (HTS) codes yo	meras and Direct-View ur company uses to clas TS codes do not go to th	sify the military-use on		
Α.	Military-Use Only Dual-Use						
	Identify your company			er tube cameras and dire			
	Company Name		Country	Military-Only Products	Dual-Use Products	Gen II	Gen III or higher
В.			[country drop down]	[Yes, in the U.S./Yes, outside the U.S./Yes, both in and outside the U.S./No competing products]	[Yes, in the U.S./Yes, outside the U.S./Yes, both in and outside the U.S./No competing products]	[Yes/No]	[Yes/No]
	Comments:						

ntity DOD sales? [Yes/No] [Yes/No]	Value (\$)	n-U.S. Quantity	
[Yes/No]	Value (\$)	Quantity	
[Yes/No]		_	
2010			
DOD	Nor	Non-U.S.	
ntity sales?	Value (\$)	Quantity	
[Yes/No]			
[Yes/No]			
	ntity sales? [Yes/No] [Yes/No]	ntity sales? Value (\$) [Yes/No]	

Sec	Identify the number and nam	ne of the low light level f	Sensors (e.g., EMCCD, EBCMOS, APD, etc) FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) product lines your company use (without regard to current jurisdiction).			
Α.		Number of Product Lines	Name of Product Lines			
	Military-Use Only					
	Dual-Use					
	•		e low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) product lines your nly or dual-use (without regard to current jurisdiction).			
В.		Number of Product Lines	Name of Product Lines			
	Military-Use Only					
	Dual-Use					
C.	are for military-use only or d		el FPAs/sensors (e.g. EMCCD, EBCMOS, APD, etc) your company currently sells that			
	Military-Use Only					
	Dual-Use					
	Are there any differences (i.e., physical/technical characteristics) between the commercial-only and military-only low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) your company manufactures? Please explain your answer below.					
D.						
	Comments:					

Sec	Section 8.b Low Light Level FPAs/Sensors (e.g., EMCCD, EBCMOS, APD, etc) - cont.								
A.	Identify the 10-digit Harmon EMCCD, EBCMOS, APD, 6							nt level FPAs/sen	sors (e.g.,
	Military-Use Only				-				
	Dual-Use								
Identify your company's non-U.S. competitors for low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc), their country, and if they corcompany's military-use only or dual-use low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc).							f they compete w	vith your	
	Com	npany Name		Cou	ntry	Military-On	ly Products	Dual-Us	e Products
				[country drop down]			outside the U.S./Yes, ie U.S./No competing		d outside the U.S./No
D.									
	Comments:								

Military-Use Only [Yes/No] [Yes/No] [Yes/No]				2007								
Military-Use Only Dual-Use Yes/No		U.	.S.			-U.S.	. U.S.		B. DOD		Non-U.S.	
Dual-Use [Yes/No] [Yes/No]		Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity	
2009 U.S. DOD Non-U.S. U.S. DOD Non-U.S. Value (\$) Quantity sales? Value (\$) Quantity Value (\$) Quantity Sales? Value (\$)	Military-Use Only			[Yes/No]					[Yes/No]			
U.S. DOD Non-U.S. U.S. DOD Non-U.S. Value (\$) Quantity Sales? Value (\$) Quantity Quantity Value (\$) Quantity Quantity Value (\$) Quantity Quantity Value (\$) Quantity Value (\$) Quantity Quantity Quantity Quantity Quantity Value (\$) Quantity	Dual-Use			[Yes/No]					[Yes/No]			
Value (\$) Quantity Sales? Value (\$) Quantity Value (\$) Quantity Value (\$) Quantity Sales? Value (\$) Quantity Military-Use Only [Yes/No] [Y				2009					2010			
Military-Use Only Dual-Use [Yes/No] [Yes/No] [Yes/No] [Yes/No] [Yes/No] Identify the types of dual-use low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) your company sold to the the U.S. Department of Defense. If your company had no s		U.	S.	DOD	Non	-U.S.	U.S.		DOD	Nor	on-U.S.	
Dual-Use [Yes/No] [Ye		Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity	
Identify the types of dual-use low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) your company sold to the the U.S. Department of Defense. If your company had no s	Military-Use Only			[Yes/No]					[Yes/No]			
	Dual-Use			[Yes/No]					[Yes/No]			
	Dual-Use Identify the types of du	•	el FPAs/sensors	[Yes/No]	D, EBCMOS, AP	D, etc) your comp	pany sold to the th	e U.S. Departr	[Yes/No]	e. If your compa	ny had	

Sec	tion 9.a Camer	as Using Low Light L	evel FPAs/Sensors (e.g	., EMCCD, EBCMOS, APD, etc)				
				vel FPAs/sensors (e.g., EMCCD, EBCMOS, A	APD, etc) your company			
	currently sells that are for m	nilitary-use only or dual	-use (without regard to c	urrent jurisdiction).				
Α.		Number of Product		Name of Product Lines				
,		Lines		Name of Freduct Emee				
	Military-Use Only							
	Dual-Use							
	For 2011-2012, identify the number and name of the product lines of cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc)							
	your company projects selli		use only or dual-use (with	hout regard to current jurisdiction).				
В.		Number of Product		Name of Product Lines				
		Lines		1 11 1111 11				
	Military-Use Only							
	Dual-Use	ana fan tha aanaanaa wa	ing love light love I FDA o/s	TOTAL TO THE COLUMN THE COLUMN TO THE COLUMN TO THE COLUMN TO THE COLUMN TO THE COLUMN	· · · · · · · · · · · · · · · · · · ·			
	that are for military-use only		sing low light level FPAs/s	sensors (e.g., EMCCD, EBCMOS, APD, etc)	your company currently sells			
C.	Military-Use Only	or dual-use.						
	Dual-Use							
	Duai-03c				[My company manufactures			
	How does your company obt	tain the low light level F	PAs/sensors (e.g., EMC	CD, EBCMOS, APD, etc) it uses in its	FPAs/sensors / My company			
	cameras using low light leve	I FPAs/sensors? If pure	chased from other compa	anies, list the names and locations of the	purchases FPAs/sensors / My			
	companies that provide you	with low light level FPA	s/sensors.		company manufactures and			
D.	Company	Nama	Country	Company Name	purchases FPAs/sensors]			
	Company N	vame	Country [country drop-down]	Company Name	Country [country drop-down]			
			[[Country drop-down]		[country drop-down]			
					'			
	Comments:							

Sec A.	Are there any differences (i.e. physical/technical characteristics) between the military-use only and dual-use cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) your company manufactures? Please explain your answer below.
В.	Are there any differences (i.e. physical/technical characteristics) between the FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc.) you use in the military-use only and dual-use cameras using low light level FPAs/sensors your company manufactures? Please explain your answer below.
C.	How many models of dual-use cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) does your company license through the State Department? List the name of the camera's product line and explain why.
	Comments:

Sec	tion 9.c	Cameras Usin	g Low Light Lev	el FPAs/Sensors	(e.g., EMCCD, EE	BCMOS, APD, etc	:) - cont.		
A.	Identify the 10-digit Harmor FPAs/sensors (e.g., EMCC								
	Military-Use Only	,	, ,			I		ĺ	
	Dual-Use								
	Identify your company's not your company's military-use			EMCCD, EBCMC	DS, APD, etc) the	ir country and if t	hey compete with		
	Com	pany Name		Cou	ıntry	Military-On	ly Products	Dual-Use	e Products
				[country drop down]				s, [Yes, in the U.S./Yes, outside the U.S./No U.S./Yes, both in and outside the U.S./No competing products]	
_									
B.									
C.	Identify the types of dual-us Defense. If your company h				EMCCD, EBCMOS	s, APD, etc) your c	company sold to th	ne the U.S. Depar	tment of
O .									
	Comments:								

			2007					2008		
	U.	S.	DOD	Non-	U.S.	U.	S.	DOD	Non	-U.S.
	Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
			2009					2010		
	U.	S.	DOD	Non-	U.S.	U.	S.	DOD	Non	-U.S.
	Value (\$)	Quantity	sales?	Value (\$)	Quantity	Value (\$)	Quantity	sales?	Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide	2		[Yes/No] low light level	FPAs/Sensors Quantity	(e.g., EMCCD,	EBCMOS, APD, 6		[Yes/No] any has expor		and the
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		
Dual-Use For 2009 and 2010, ide destination countries.	2	009	[Yes/No] low light level		(e.g., EMCCD,			[Yes/No] any has expor		

Section 10	Research ar	nd Development	
		y resulted from U.S. Department of Defense funding, identify the ding came from the U.S. Department of Defense.	e type of product, and what
	Product	Type of Product	DOD Funding Percentage
		[Uncooled infrared FPAs/Uncooled infrared cameras/Cooled infrared FPAs/Cooled infrared cameras/Image Intensifier Tubes/Image Intensifier Tube Cameras/ Low Light Level FPAs/Sensors / Cameras Using Low Light Level FPAs/Sensors]	[1 - 25% / 25-50% / 50-75% / 75- 100%/ unknown]
A			
Com	nments:		

Sec	ion 11 Impact Export Con	
	Describe how the jurisdiction of your company's items under the strategy.	JSML or CCL has affected your sales, investments in R&D, competitiveness, and overall business
	Uncooled infrared FPAs	
	Uncooled infrared cameras	
	Cooled infrared FPAs	
A.	Cooled infrared cameras	
	Image intensifier tubes	
	Image intensifier tube cameras	
	Low light level FPAs/sensors (e.g. EMCCDs, EBCMOS, etc)	
	Cameras using low light level FPAs/sensors	
	Comments:	

Section 12	Certification
The undersigned certifies that the information herein su	upplied in response to this questionnaire is complete and correct to the best of
his/her knowledge. It is a criminal offense to willfully ma	ake a false statement or representation to any department or agency of the United
States Government as to any matter within its jurisdiction	on (18 U.S.C.A. 1001 (1984 & SUPP. 1197)).
Company Name	
Name of Authorizing Official	
Title of Authorizing Official	
E-mail Address	
Phone Number and Extension	
Date Certified	
In the box below, please provide any additional comme	ents or any other information you wish to include regarding this assessment.
How many hours did it take to complete this survey?	
BUSINESS CONFIDENTIA	L - Per Section 705(d) of the Defense Production Act