

**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 Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C App.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.

Notwithstanding 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.

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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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Section X			Who Must Respond	
Identify the type of night vision equipment your company currently sells that are subject to control under 6A002 or 6A003 of the Commerce Control List (CCL) or section 12 of the U.S. Munitions List (USML). Also indicate where the equipment is manufactured.				
			Yes/No	Location of Manufacture
A.	Uncooled infrared focal plane arrays (FPAs)			[In the U.S./Outside of the U.S./Both]
	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.				
B.				
Exemption From Survey				
If you answered "No" to all products listed in Question A above, you may be exempt from completing this U.S. Government survey. Please call one of the BIS contacts listed in "General Instructions" to verify your status.				
Comments:				

Section	General Instructions
A.	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.
B.	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.
C.	<p>Questions related to this survey should be directed to: _____@bis.doc.gov (preferred method of contact for survey questions)</p> <p>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</p>
D.	Upon completion, review and certification of the survey, transmit the survey via e-mail to _____.
E.	<p>For overall questions to the Office of Technology Evaluation (OTE), please contact:</p> <p>Brad Botwin, Director, Industrial Studies Office of Technology Evaluation, Room 1093 U.S. Department of Commerce 1401 Constitution Avenue, NW Washington, DC 20230 bbotwin@bis.doc.gov 202-482-4060</p> <p>Please do not submit completed surveys to this address; all surveys must be submitted electronically.</p>
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Definitions	
	NOTE: Definitions still to be completed

Section 1		Company Information - Headquarters			
A.	Company Name				
	Street Address				
	City				
	State	[State drop-down]			
	Zip Code				
	Phone Number				
	Fax Number				
	Website				
B.	Point of Contact(s) regarding this survey:				
	Name	Title	E-mail	Phone Number	
C.	My company is:	[Owned by a U.S. company, Owned by a non-U.S. company, Not owned by another company]			
	Comments:				

Section 2.a		Uncooled Infrared FPAs				
Identify the number of uncooled infrared FPA product lines, the name of the products lines, and the number of uncooled infrared FPA <u>models</u> 1) less than or equal to 111,000 pixels, 2) greater than 111,000 pixels but less than or equal to 310,000 pixels, and 3) greater than 310,000 pixels your company sold in 2010 that are for military-use only or dual-use (without regard to current jurisdiction).						
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					
For 2011-2012, identify the number of uncooled infrared FPA product lines, the name of the products lines, and the number of uncooled infrared FPA <u>models</u> 1) less than or equal to 111,000 pixels, 2) greater than 111,000 pixels but less than or equal to 310,000 pixels, and 3) greater than 310,000 pixels that your company projects selling that are for military-use only or dual-use (without regard to current jurisdiction).						
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 applications for the uncooled infrared FPAs your company currently sells that are for military-use only or dual-use.						
C.	Military-Use Only					
	Dual-Use					
D.	Are there any differences (i.e., physical/technical characteristics) between the military-use only and dual-use uncooled infrared FPAs your company manufactures? Please explain your answer below.					[Yes/No]
Comments:						

Section 2.b		Uncooled Infrared FPAs - cont.					
Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use uncooled infrared FPAs it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.							
A.	Military-Use Only						
	Dual-Use						
Identify your company's non-U.S. competitors for uncooled infrared FPAs, their country, if they compete with your company's military-use only or dual-use products, and if they produce uncooled infrared FPAs 1) less than or equal to 111,000 pixels, 2) greater than 111,000 pixels but less than or equal to 310,000 pixels, and 3) greater than 310,000 pixels.							
B.	Company Name	Country	Military-Only Products	Dual-Use Products	≤111,000 pixels	>111,000 and ≤310,000 pixels	>310,000 pixels
		[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]	[Yes/No]
Comments:							

Section 2.c Uncooled Infrared FPAs - cont.

Report the value and quantity of your company's U.S. and Non-U.S. sales figures for military-use only and dual-use uncooled infrared FPAs for 2007-2010, and indicate if you sold directly to the U.S. Department of Defense during those years.

	2007					2008				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
A. Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
	2009					2010				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		

Identify the types of dual-use uncooled infrared FPAs your company sold to the the U.S. Department of Defense. If your company had no such sales, move to the next section.

B.

Comments:

Section 3.a Uncooled Infrared Cameras (Including Camera Cores)

Identify the number of uncooled infrared camera product lines, the name of the products lines, and the number of uncooled infrared camera models 1) less than or equal to 111,000 pixels, 2) greater than 111,000 pixels but less than or equal to 310,000 pixels, and 3) greater than 310,000 pixels your company **sold in 2010** sells that are for military-use only or dual-use (without regard to current jurisdiction).

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					

For 2011-2012, identify the number of uncooled infrared camera product lines, the name of the products lines, and the number of uncooled infrared camera models 1) less than or equal to 111,000 pixels, 2) greater than 111,000 pixels but less than or equal to 310,000 pixels, and 3) greater than 310,000 pixels that your company **projects** selling that are for military-use only or dual-use (without regard to current jurisdiction).

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 applications for the uncooled infrared cameras your company currently sells that are for military-use only or dual-use.

C. Military-Use Only	
Dual-Use	

How does your company obtain the FPAs it uses in its uncooled infrared cameras? If purchased from other companies, list the names and locations of the companies that provide you with uncooled infrared FPAs.

[My company manufactures FPAs/ My company purchases FPAs/ My company manufactures and purchases FPAs]

D.	Company Name	Country	Company Name	Country
		[country drop-down]		[country drop-down]

Comments:

Section 3.b		Uncooled Infrared Cameras (Including Camera Cores)- cont.	
A.	Are there any differences (i.e., physical/technical characteristics) between the military-use only and dual-use uncooled infrared cameras your company manufactures? Please explain your answer below.	[Yes/No]	
B.	Are there any differences (i.e., physical/technical characteristics) between the FPAs you use in the military-use only and dual-use uncooled infrared cameras your company manufactures? Please explain your answer below.	[Yes/No]	
C.	How many dual-use uncooled infrared camera models does your company license through the State Department? List the name of the camera's product line and explain why.		
Comments:			

Section 3.c		Uncooled Infrared Cameras (Including Camera Cores) - cont.					
A.	Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use uncooled infrared cameras it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.						
	Military-Use Only						
	Dual-Use						
B.	Identify your company's non-U.S. competitors for uncooled infrared cameras, their country, if they compete with your company's military-use only or dual-use products, and if they produce uncooled infrared cameras 1) less than or equal to 111,000 pixels, 2) greater than 111,000 pixels but less than or equal to 310,000 pixels, and 3) greater than 310,000 pixels.						
	Company Name	Country	Military-Only Products	Dual-Use Products	≤111,000 pixels	>111,000 and ≤310,000 pixels	>310,000 pixels
		[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]	[Yes/No]
Comments:							

Section 3.d Uncooled Infrared Cameras (Including Camera Cores)- cont.

Report the value and quantity of your company's U.S. and Non-U.S. sales figures for military-use only and dual-use uncooled infrared cameras for 2007-2010, and indicate if you sold directly to the U.S. Department of Defense during those years.

	2007					2008				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
A. Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
	2009					2010				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		

Identify the types of dual-use uncooled infrared cameras your company sold to the the U.S. Department of Defense. If your company had no such sales, move to the next section.

B.

Comments:

Section 4.a		Cooled Infrared FPAs		
Identify the number and name of the cooled infrared FPA product lines your company currently sells that are for military-use only or dual-use (without regard to current jurisdiction).				
A.		Number of Product Lines	Name of Product Lines	
	Military-Use Only			
	Dual-Use			
For 2011-2012, identify the number and name of the cooled infrared FPA product lines your company projects selling that are for military-use only or dual-use (without regard to current jurisdiction).				
B.		Number of Product Lines	Name of Product Lines	
	Military-Use Only			
	Dual-Use			
Identify the specific applications for the cooled infrared FPAs your company currently sells that are for military-use only or dual-use.				
C.	Military-Use Only			
	Dual-Use			
D.	Are there any differences (i.e., physical/technical characteristics) between the commercial-only and military-only cooled infrared FPAs your company manufactures? Please explain your answer below.			[Yes/No]
Comments:				

Section 4.b Cooled Infrared FPAs - cont.

A.	Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use cooled infrared FPAs it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.							
	Military-Use Only							
	Dual-Use							

B.	Identify your company's non-U.S. competitors for cooled infrared FPAs, their country, and if they compete with your company's military-use only or dual-use cooled infrared FPAs.			
	Company 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./No competing products]

Comments:	
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Section 4.c

Cooled Infrared FPAs - cont.

Report the value and quantity of your company's U.S. and Non-U.S. sales figures for military-use only and dual-use cooled infrared FPAs for 2007-2010, and indicate if you sold directly to the U.S. Department of Defense during those years.

	2007					2008				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
A. Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
	2009					2010				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		

Identify the types of dual-use cooled infrared FPAs your company sold to the the U.S. Department of Defense. If your company had no such sales, move to the next section.

B.

Comments:

Section 5.a Cooled Infrared Cameras (Including Camera Cores)

Identify the number and name of the cooled infrared camera product lines your company currently sells that are for military-use only or dual-use (without regard to current jurisdiction).		
A.	Number of Product Lines	Name of Product Lines
Military-Use Only		
Dual-Use		

For 2011-2012, identify the number and name of the cooled infrared camera product lines your company projects selling that are for military-use only or dual-use (without regard to current jurisdiction).		
B.	Number of Product Lines	Name of Product Lines
Military-Use Only		
Dual-Use		

Identify the specific applications for the cooled infrared cameras your company currently sells that are for military-use only or dual-use.	
C.	
Military-Use Only	
Dual-Use	

How does your company obtain the FPAs it uses in its cooled infrared cameras? If purchased from other companies, list the names and locations of the companies that provide you with cooled infrared FPAs.			[My company manufactures FPAs/ My company purchases FPAs/ My company manufactures and purchases FPAs]	
D.	Company Name	Country	Company Name	Country
		[country drop-down]		[country drop-down]

Comments:

Section 5.b		Cooled Infrared Cameras (Including Camera Cores) - cont.	
A.	Are there any differences (i.e., physical/technical characteristics) between the military-use only and dual-use cooled infrared cameras your company manufactures? Please explain your answer below.	[Yes/No]	
B.	Are there any differences (i.e., physical/technical characteristics) between the FPAs you use in the military-use only and dual-use cooled infrared cameras your company manufactures? Please explain your answer below.	[Yes/No]	
C.	How many dual-use cooled infrared camera models does your company license through the State Department? List the name of the camera's product line and explain why.		
Comments:			

Section 5.c Cooled Infrared Cameras (Including Camera Cores) - cont.

A. Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use cooled infrared FPAs it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.

Military-Use Only								
Dual-Use								

B. Identify your company's non-U.S. competitors for cooled infrared FPAs, their country, and if they compete with your company's military-use only or dual-use cooled infrared FPAs.

Company 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./No competing products]

Comments:

Section 5.d Cooled Infrared Cameras (Including Camera Cores) - cont.

Report the value and quantity of your company's U.S. and Non-U.S. sales figures for military-use only and dual-use cooled infrared cameras for 2007-2010, and indicate if you sold directly to the U.S. Department of Defense during those years.

	2007					2008				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
A. Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
	2009					2010				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		

Identify the types of dual-use cooled infrared cameras your company sold to the the U.S. Department of Defense. If your company had no such sales, move to the next section.

B.

Comments:

Section 6.a		Image Intensifier Tubes			
Identify the number of image intensifier tube product lines, the name of your products lines, and the number of Gen II and Gen III or higher <u>models</u> your company currently sells that are for military-use only or dual-use (without regard to current jurisdiction).					
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 of image intensifier tube product lines, the name of your products lines, and the number of Gen II and Gen III or higher <u>models</u> your company projects selling that are for military-use only or dual-use (without regard to current jurisdiction).					
B.		Number of Product Lines	Name of Product Lines	Gen II models	Gen III or higher models
	Military-Use Only				
	Dual-Use				
Identify the specific applications for the image intensifier tubes your company currently sells that are for military-use only or dual-use (for both commercial and military use).					
C.	Military-Use Only				
	Dual-Use				
D.	Are there any differences (i.e., physical/technical characteristics) between the military-use only and dual-use image intensifier tubes your company manufactures? Please explain your answer below.				[Yes/No]
Comments:					

Section 6.b Image Intensifier Tubes - cont.						
A.	Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use image intensifier tubes it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.					
	Military-Use Only					
	Dual-Use					
B.	Identify your company's non-U.S. competitors for image intensifier tubes, their country, if they compete with your company's military-use only or dual-use products, and if they produce Gen II or Gen III or higher image intensifier tubes.					
	Company Name	Country	Military-Only Products	Dual-Use Products	Gen II	Gen III or higher
		[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:						

Section 6.c Image Intensifier Tubes - cont.

Report the value and quantity of your company's U.S. and Non-U.S. sales figures for military-use only and dual-use image intensifier tubes for 2007-2010, and indicate if you sold directly to the U.S. Department of Defense during those years.

A.		2007					2008				
		U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
		Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
	Military-Use Only			[Yes/No]					[Yes/No]		
	Dual-Use			[Yes/No]					[Yes/No]		
		2009					2010				
		U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
		Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
	Military-Use Only			[Yes/No]					[Yes/No]		
	Dual-Use			[Yes/No]					[Yes/No]		

Identify the types of dual-use image intensifier tubes your company sold to the the U.S. Department of Defense. If your company had no such sales, move to the next section.

B.

Comments:

Section 7.a Image Intensifier Tube Cameras and Direct-View Equipment					
Identify the number of image intensifier tube camera and direct-view equipment product lines, the name of your products lines, and the number of Gen II and Gen III or higher models your company currently sells that are for military-use only or dual-use (without regard to current jurisdiction).					
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 of image intensifier tube camera and direct-view equipment product lines, the name of your products lines, and the number of Gen II and Gen III or higher models your company projects selling that are for military-use only or dual-use (without regard to current jurisdiction).					
B.		Number of Product Lines	Name of Product Lines	Gen II models	Gen III or higher models
	Military-Use Only				
	Dual-Use				
Identify the specific applications for the image intensifier tube cameras and direct-view equipment your company currently sells that are for military-use only or dual-use (for both commercial and military use).					
C.	Military-Use Only				
	Dual-Use				
D.	How does your company obtain the image intensifier tubes it uses in its image intensifier tube cameras and direct-view equipment? If purchased from other companies, list the names and locations of the companies that provide you with image intensifier tubes.				[My company manufactures tubes/ My company purchases tubes/ My company manufactures and purchases tubes]
	Company Name	Country	Company Name	Country	
		[country drop-down]		[country drop-down]	
Comments:					

Section 7.b		Image Intensifier Tube Cameras and Direct-View Equipment- cont.	
A.	Are there any differences (i.e., physical/technical characteristics) between the military-use only and dual-use image intensifier tube cameras and direct-view equipment your company manufactures? Please explain your answer below.	[Yes/No]	
B.	Are there any differences (i.e., physical/technical characteristics) between the tubes you use in the military-use only and dual-use image intensifier tube cameras direct-view equipment your company manufactures? Please explain your answer below.	[Yes/No]	
C.	How many models of dual-use image intensifier tube cameras and direct-view equipment does your company license through the State Department? List the name of the camera's product line and explain why.		
Comments:			

Section 7.c Image Intensifier Tube Cameras and Direct-View Equipment- cont.

A.	Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use image intensifier tube cameras and direct-view equipment it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.					
	Military-Use Only					
	Dual-Use					

B.	Identify your company's non-U.S. competitors for image intensifier tube cameras and direct-view equipment, their country, if they compete with your company's military-use only or dual-use products, and if they produce Gen II or Gen III or higher image intensifier tube cameras and direct-view equipment.					
	Company Name	Country	Military-Only Products	Dual-Use Products	Gen II	Gen III or higher
		[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:	
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Section 7.d Image Intensifier Tube Cameras and Direct-View Equipment- cont.

Report the value and quantity of your company's U.S. and Non-U.S. sales figures for military-use only and dual-use image intensifier tube cameras and direct-view equipment for 2007-2010, and indicate if you sold directly to the U.S. Department of Defense during those years.

	2007					2008				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
A. Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
	2009					2010				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		

Identify the types of dual-use image intensifier tube cameras and direct-view equipment your company sold to the the U.S. Department of Defense. If your company had no such sales, move to the next section.

B.

Comments:

Section 8.a Low Light Level FPAs/Sensors (e.g., EMCCD, EBCMOS, APD, etc)		
Identify the number and name of the low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) product lines your company currently sells that are for military-use only or dual-use (without regard to current jurisdiction).		
A.	Number of Product Lines	Name of Product Lines
	Military-Use Only	
	Dual-Use	
For 2011-2012, identify the number and name of the low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) product lines your company projects selling that are for military-use only or dual-use (without regard to current jurisdiction).		
B.	Number of Product Lines	Name of Product Lines
	Military-Use Only	
	Dual-Use	
Identify the specific applications for the low light level FPAs/sensors (e.g. EMCCD, EBCMOS, APD, etc) your company currently sells that are for military-use only or dual-use.		
C.	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.		[Yes/No]
D.		
Comments:		

Section 8.b Low Light Level FPAs/Sensors (e.g., EMCCD, EBCMOS, APD, etc) - cont.

A. Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.

Military-Use Only								
Dual-Use								

D. 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 compete with your company's military-use only or dual-use low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc).

Company 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./No competing products]

Comments:

Section 8.c Low Light Level FPAs/Sensors (e.g., EMCCD, EBCMOS, APD, etc) - cont.

Report the value and quantity of your company's U.S. and Non-U.S. sales figures for military-use only and dual-use low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) for 2007-2010, and indicate if you sold directly to the U.S. Department of Defense during those years.

	2007					2008				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
A. Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[Yes/No]					[Yes/No]		
	2009					2010				
	U.S.		DOD sales?	Non-U.S.		U.S.		DOD sales?	Non-U.S.	
	Value (\$)	Quantity		Value (\$)	Quantity	Value (\$)	Quantity		Value (\$)	Quantity
Military-Use Only			[Yes/No]					[Yes/No]		
Dual-Use			[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 such sales, move to the next section.

B.

Comments:

Section 9.a Cameras Using Low Light Level FPAs/Sensors (e.g., EMCCD, EBCMOS, APD, etc)

Identify the number and name of product lines of cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) your company **currently** sells that are for military-use only or dual-use (without regard to current jurisdiction).

A.		Number of Product Lines	Name of Product Lines
	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** selling that are for military-use only or dual-use (without regard to current jurisdiction).

B.		Number of Product Lines	Name of Product Lines
	Military-Use Only		
	Dual-Use		

Identify the specific applications for the cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) your company currently sells that are for military-use only or dual-use.

C.	Military-Use Only	
	Dual-Use	

How does your company obtain the low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) it uses in its cameras using low light level FPAs/sensors? If purchased from other companies, list the names and locations of the companies that provide you with low light level FPAs/sensors.

[My company manufactures FPAs/sensors / My company purchases FPAs/sensors / My company manufactures and purchases FPAs/sensors]

D.	Company Name	Country	Company Name	Country
		[country drop-down]		[country drop-down]

Comments:

Section 9.b		Cameras Using Low Light Level FPAs/Sensors (e.g., EMCCD, EBCMOS, APD, etc)	
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.	[Yes/No]	
B.	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.	[Yes/No]	
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:			

Section 9.c Cameras Using Low Light Level FPAs/Sensors (e.g., EMCCD, EBCMOS, APD, etc) - cont.							
A.	Identify the 10-digit Harmonized Tariff Schedule (HTS) codes your company uses to classify the military-use only and dual-use cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) it sells. If your products' HTS codes do not go to the 10-digit level, provide as many digits as possible.						
	Military-Use Only						
	Dual-Use						
B.	Identify your company's non-U.S. competitors for cameras using low light level FPAs/sensors (e.g., EMCCD, EBCMOS, APD, etc) their country and if they compete with your company's military-use only or dual-use cameras using low light level FPAs/sensors.						
	Company 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]
C.	Identify the types of dual-use cameras using 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 such sales, move to the next section.						
Comments:							

Section 10 Research and Development		
List any of your company's current products that directly resulted from U.S. Department of Defense funding, identify the type of product, and what percent of the product's research and development funding came from the U.S. Department of Defense.		
Product	Type of Product	DOD Funding Percentage
A.	[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]
Comments:		

Section 11 Impact Export Controls	
Describe how the jurisdiction of your company's items under the USML or CCL has affected your sales, investments in R&D, competitiveness, and overall business strategy.	
A. Uncooled infrared FPAs	
Uncooled infrared cameras	
Cooled infrared FPAs	
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 supplied in response to this questionnaire is complete and correct to the best of his/her knowledge. It is a criminal offense to willfully make a false statement or representation to any department or agency of the United States Government as to any matter within its jurisdiction (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 comments or any other information you wish to include regarding this assessment.

How many hours did it take to complete this survey?

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