

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
 Bid Receiving - PWGSC / Réception des soumissions  
 → TPSGC  
 10th Floor, 4900 Yonge Street /  
 10e étage, 4900 rue Yonge  
 Toronto  
 Ontario  
 M2N 6A6

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
 Public Works and Government Services Canada  
 Ontario Region  
 10th Floor, 4900 Yonge Street  
 Toronto  
 Ontario  
 M2N 6A6

<b>Title - Sujet</b> Binocular Night Vision Goggles	
<b>Solicitation No. - N° de l'invitation</b> W7719-205489/A	<b>Amendment No. - N° modif.</b> 004
<b>Client Reference No. - N° de référence du client</b> W7719-205489	<b>Date</b> 2019-12-18
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$TOR-031-7845	
<b>File No. - N° de dossier</b> TOR-9-42064 (031)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2020-01-03</b>	
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Schmidt, Jeff	<b>Buyer Id - Id de l'acheteur</b> tor031
<b>Telephone No. - N° de téléphone</b> (647) 281-7423 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/</b> <b>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

**Amendment 004 has been issued to answer bidder questions (Part 1) and make change to the Solicitation (Part 2).**

**Note:** Due to the number of modifications to Annex A, Requirement and Annex D, Technical Evaluation, the two Annexes will be deleted in their entirety and replaced with the Annexes below.

**Part 1 - Bidder Questions**

**Q1:** Regarding Annex D, Technical Evaluation, Items 1.36 & 2.36, would DRDC consider removing these requirements? If not can DRDC provide the technical specifications and drawings that will be considered in determining what an equivalent item is? After a lengthy search online no information on this item can be found.

**A1:** DRDC has modified this specification in Annex A and Annex D to, 'the NVG mount must be compatible with a standard/universal helmet shroud such as that found on an advance combat helmet or modular integrated communications helmet.'

**Q2:** We respectfully request a two week extension of the due date of the above referenced solicitation.

**A2:** The Solicitation Closing Date has been extended to 3 January 2020. Due to DRDC's updated delivery date of 17 July 2020, this solicitation will not be extended past 3 January 2020

**Q3:** In regards to Annex D, Technical Evaluation, Criteria 2.10 (Annex A, Statement of Work, Item 3.1.10), Diopter Adjustment, the stated diopter adjustment range is +3 to -6. Would DRDC accept a system that is +2 to -6?

**A3:** Yes, the modification has been made to in Annex A and Annex D below.

**Q4:** In regards to Annex D, Technical Evaluation, Criteria 1.22 and 2.22 (Annex A, Statement of Work, Item 3.1.22 and 3.3.22), I<sup>2</sup> tube phosphor type, White. Will DRDC accept green?

**A4:** No, green will not be accepted.

**Q5:** In regards to some of the criteria for the Regular and Wide NVG specifications, will DRDC accept the following changes?

**Annex A, Requirement**

**3.1 Regular (40 degree) FOV Binocular NVGs**

Item	Specifications	Requirement	Requested Change
3.1.2	Weight (incl. 2x objective caps, battery, eyecups and lanyard)	Less than 561 g	Less than 562 g
3.1.3	Height	A maximum of 82 mm or less	A maximum of 88.9 mm or less
3.1.4	Width	A maximum of 114 mm or less	A maximum of 114.3mm or less
3.1.5	Length	A maximum of 102 mm or less	A maximum of 116.84 mm or less
3.1.9	Objective lenses focus range	A minimum of 20 cm to infinity (continuous)	A minimum of 25 cm to infinity (continuous)
3.1.10	Diopter adjustment	-6 dp or lower to +3 dp or higher	-6 dp or lower to +2 dp or higher
3.1.18	Battery life @ 20°C with 1.5V lithium with IR	Minimum 23 hours	Minimum 23 hours (Can include combination used with

	illuminator off		battery pack)
3.1.33	Inter-pupillary adjustment	58 mm or less to 77 mm or higher.	55 mm or less to 72 mm or higher

### 3.2 Accessories for Regular FOV NVG

Item	Description	Required quantity	Requested Change
3.2.3	A light-weight, low-profile, force-to-overcome mount	10	Will you accept a Wilcox G24 mount? <b>Response:</b> Yes, A Wilcox G24 mount will be accepted.
3.2.4	Head Harness	10	Will you accept a Ops Core Skullcrusher? <b>Response:</b> Yes, an Ops Core Skullcrusher will be accepted.
3.2.9	Magnifier (3x or higher)	3	Can this be removed? <b>Response:</b> No, however, it will be optional.
3.2.10	NVD Compass	3	Can this be removed? <b>Response:</b> No, however, it will be optional.

### 3.3 Wide (47+ degree) FOV Binocular NVGs

Item	Specifications	Requirement	Requested Change
3.3.2	Weight (incl. 2x objective caps, battery, eyecups and lanyard)	Less than 502 g	Less than 650 grams with AA Battery installed and no accessories
3.3.3	Height	A maximum of 83 mm or less	A maximum of 91.4 mm or less
3.3.4	Width	A maximum of 111 mm or less	A maximum of 114.3 mm or less
3.3.5	Length	A maximum of 115 mm or less	A maximum of 121.9 mm or less
3.3.9	Objective lenses focus range	A minimum of 25 cm to infinity (continuous)	A minimum of 45 cm +/- 3 cm to Infinity
3.3.10	Diopter adjustment	-6 dp or lower to +3 dp or higher	- 0.5 dp to + 0.1 dp. Could extend +2/-2 range
3.3.11	Eye relief	A minimum of 20 mm or higher	A minimum of 25 mm or higher
3.3.18	Battery life @ 20°C with 1.5V lithium with IR illuminator off	Minimum 20 hours	Average 16 hours at 25 degrees Celsius. Greater than or equal to 24 hours on four (4) AA Lithium Batteries with optional 4-cell Battery Pack.
3.3.33	Inter-pupillary adjustment	Yes. 54 mm or less to 76 mm or higher.	55 mm or less to 72 mm or higher

### 3.4 Accessories for wide FOV NVG

Item	Description	Required quantity	Requested Change
3.4.4	A light-weight, low-profile, force-to-overcome mount	4	Will you accept a Wilcox G24 mount? <b>Response:</b> Yes, A Wilcox G24 mount will be accepted.
3.4.5	Head Harness	4	Will you accept a Ops Core Skullcrusher?

Solicitation No. - N° de l'invitation  
W7719-205489/A  
Client Ref. No. - N° de réf. du client  
W7719-205489

Amd. No. - N° de la modif.  
004  
File No. - N° du dossier  
TOR-9-42064

Buyer ID - Id de l'acheteur  
tor031  
CCC No./N° CCC - FMS No./N° VME

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			<b>Response:</b> Yes, an Ops Core Skullcrusher will be accepted.
3.4.10	Magnifier (3x or higher) (optional; only if available)	1	Can this be removed? <b>Response:</b> No, however, it will be optional.
3.4.11	NVD Compass (optional; only if available)	1	Can this be removed? <b>Response:</b> No, however, it will be optional.

**A5:** All proposed changes have been accepted and modifications have been made to Annex A and Annex D below.

## Part 2 - Changes to the Solicitation

***Due to the number of modifications to Annex A, Requirement and Annex D, Technical Evaluation, the two Annexes will be deleted in their entirety and replaced with the Annexes below.***

### At PART 6 - RESULTING CONTRACT CLAUSES, Article 6.4.3 Delivery Date

Delete: All the deliverables must be received on or before 30 June 2020.

Insert: All the deliverables must be received on or before 17 July 2020.

### At Annex A, Requirement

Delete in its entirety.

Insert:

#### **ANNEX "A"**

#### **REQUIREMENT**

#### **BINOCULAR NIGHT VISION GOGGLES FOR DISMOUNTED SOLDIERS**

### **1. BACKGROUND**

Defence Research and Development Canada (DRDC) is supporting a Directorate of Land Requirements (DLR) acquisition project on night vision modernization. As part of this project, DRDC will evaluate different night vision goggle (NVG) configurations (monocular, binocular, wide field of view binocular, binocular with clip-on thermal imager). In order to carry out these evaluations, regular (40 degree) and wide (47+ degree) field of view (FOV) binocular NVGs must be acquired that are as close as possible to each other, other than the changes that enable and optimize the wider field of view. As such, regular and wide FOV binocular NVGs are being sought that are manufactured by the same manufacturer. The systems should differ in as few ways as possible (other than differences related to optimizing the wider FOV) so that any performance differences can be attributed to the FOV differences between systems.

### **2. ACRONYMS**

DLR	Directorate of Land Requirements
DRDC	Defence Research and Development Canada
SOR	Statement of Requirement
TA	Technical Authority
fov	Field of View
NVS	Night Vision Goggles
FOM	Figure of Merit
SNR	Signal to Noise Ratio
BNVG	Binocular Night Vision Goggles
NVD	Night Vision Device

### **3. REQUIREMENTS**

#### **3.1 Regular (40 degree) FOV Binocular NVGs**

**Required quantity: 10**

The Contractor must provide the regular (40 degree) FOV Binocular NVGs with the following specifications:

Item	Specifications	Requirement
3.1.1	Architecture	Binocular central bridge with two side arms each consisting of an i <sup>2</sup> tube and two optical channels
3.1.2	Weight (incl. 2x objective caps, battery, eyecups and lanyard)	Less than 562 g
3.1.3	Height	A maximum of 88.9 mm or less
3.1.4	Width	A maximum of 114.3mm or less
3.1.5	Length	A maximum of 116.84 mm or less
3.1.6	Magnification	1x
3.1.7	Field of view	40°
3.1.8	Objective lenses aperture	A minimum of F/1.2 or better
3.1.9	Objective lenses focus range	A minimum of 25 cm to infinity (continuous)
3.1.10	Diopter adjustment	-6 dp or lower to +2 dp or higher
3.1.11	Eye relief	A minimum of 25 mm or higher
3.1.12	Magnification difference between left and right optical channels	A maximum of 3% or less
3.1.13	Convergence at 0 dp	A maximum of 1° or less
3.1.14	Divergence at 0 dp	A maximum of 1° or less
3.1.15	Dipvergence at 0 dp	A maximum of 0.7° or less
3.1.16	Distortion	A maximum of 4% or less
3.1.17	Battery	One (1) 1.5V lithium AA battery
3.1.18	Battery life @ 20°C with 1.5V lithium with IR illuminator off	Minimum 23 hours (Can include combination used with battery pack)
3.1.19	Protection against inverted polarity	Yes. No battery discharge when batteries are inverted.
3.1.20	IR illuminator	Yes
3.1.21	Image intensifying tube length	18 mm
3.1.22	I <sup>2</sup> tube phosphor type	white
3.1.23	I <sup>2</sup> tube figure of merit (FOM)	No less than 2200
3.1.24	I <sup>2</sup> tube resolution	No less than 72 lp/mm
3.1.25	I <sup>2</sup> tube signal to noise ratio at 108 µlux	No less than 31
3.1.26	I <sup>2</sup> tube haloing effect	No more than 0.95 mm
3.1.27	I <sup>2</sup> tube maximum Equivalent Background Input (EBI) at 23°C	No more than 0.25 µlux
3.1.28	I <sup>2</sup> tube automated bright source protection	Yes
3.1.29	I <sup>2</sup> tube minimum lifetime	A minimum of 10,000 hrs
3.1.30	Autogating	Yes
3.1.31	Manual gain control	Yes
3.1.32	Automatic cut-off in stowed position	Must be achieved independent of head position with a compatible mount.
3.1.33	Inter-pupillary adjustment	55 mm or less to 72 mm or higher
3.1.34	Side arm rotation	Yes, independent. Left and right side arms must rotated out of the way independently (one up one down, both down, both up configurations)
3.1.35	Clip-on thermal imager compatible	Yes. Must include functionality for a clip-on thermal

		imager
3.1.36	Mount compatibility	The NVG mount must be compatible with a standard/universal helmet shroud such as that found on an advance combat helmet or modular integrated communications helmet
3.1.37	Manufacturer	Binocular Night Vision goggles (NVGs) must be manufactured by the same manufacturer as those in Section 3.3

### 3.2 Accessories for Regular FOV NVG

The Contractor must provide the following accessories for requirement 3.1:

Note: 3.2.9 and 3.2.10 are optional and can be provided by the Contractor, if available.

Item	Description	Required quantity
3.2.1	Eyecups (2 per unit)	10
3.2.2	Neck Lanyard	10
3.2.3	A light-weight, low-profile, force-to-overcome mount	10
3.2.4	Head Harness	10
3.2.5	Counterweight	10
3.2.6	Sacrificial lenses (2 per unit)	10
3.2.7	Soft pouch	10
3.2.8	User Manual	10
3.2.9	Magnifier (3x or higher) (optional; only if available)	3
3.2.10	NVD Compass (optional; only if available)	3

### 3.3 Wide (47+ degree) FOV Binocular NVGs

Required quantity: 4

The Contractor must provide the requirement with the following specifications:

Item	Specifications	Requirement
3.3.1	Architecture	Binocular central bridge with two side arms each consisting of an i <sup>2</sup> tube and two optical channels
3.3.2	Weight (incl. 2x objective caps, battery, eyecups and lanyard)	Less than 650 g
3.3.3	Height	A maximum of 91.4 mm or less
3.3.4	Width	A maximum of 114.3 mm or less
3.3.5	Length	A maximum of 121.9 mm or less
3.3.6	Magnification	1x
3.3.7	Field of view	A minimum of 47° or higher
3.3.8	Objective lenses aperture	A minimum of F/1.2 or better
3.3.9	Objective lenses focus range	A minimum of 45 cm to infinity (continuous)
3.3.10	Diopter adjustment	- 0.5 dp to + 0.1 dp or higher
3.3.11	Eye relief	A minimum of 25 mm or higher
3.3.12	Magnification difference between left and right optical channels	A maximum of 3% or less
3.3.13	Convergence at 0 dp	A maximum of 1° or less

3.3.14	Divergence at 0 dp	A maximum of 1° or less
3.3.15	Dipvergence at 0 dp	A maximum of 1° or less
3.3.16	Distortion	A maximum of 4% or less
3.3.17	Battery	One (1) 1.5V lithium AA battery
3.3.18	Battery life @ 20°C with 1.5V lithium with IR illuminator off	Minimum 16 hours at 25 degrees Celsius. Can include the option to be extended past 20 hours with lithium batteries.
3.3.19	Protection against inverted polarity	Yes. No battery discharge when batteries are inverted.
3.3.20	IR illuminator	Yes
3.3.21	Image intensifying tube length	18 mm
3.3.22	I <sup>2</sup> tube phosphor type	white
3.3.23	I <sup>2</sup> tube figure of merit (FOM)	No less than 2200
3.3.24	I <sup>2</sup> tube resolution	No less than 72 lp/mm
3.3.25	I <sup>2</sup> tube signal to noise ratio at 108 µlux	No less than 31
3.3.26	I <sup>2</sup> tube haloing effect	No more than 0.95 mm
3.3.27	I <sup>2</sup> tube maximum Equivalent Background Input (EBI) at 23°C	No more than 0.25 µlux
3.3.28	I <sup>2</sup> tube automated bright source protection	Yes
3.3.29	I <sup>2</sup> tube minimum lifetime	A minimum of 10,000 hrs
3.3.30	Autogating	Yes
3.3.31	Manual gain control	Yes
3.3.32	Automatic cut-off in stowed position	Yes. Must be achieved independent of head position with a compatible mount.
3.3.33	Inter-pupillary adjustment	55 mm or less to 72 mm or higher
3.3.34	Side arm rotation	Yes, independent. Left and right side arms must rotated out of the way independently (one up one down, both down, both up configurations)
3.3.35	Clip-on thermal imager compatible	Yes. Must include functionality for a clip-on thermal imager
3.3.36	Mount compatibility	the NVG mount must be compatible with a standard/universal helmet shroud such as that found on an advance combat helmet or modular integrated communications helmet
3.3.37	Manufacturer	BNVGs must be manufactured by the same manufacturer as those in Section 3.1

### 3.4 Accessories for wide FOV NVG

The Contractor must provide the following accessories for requirement 3.3:

Note: 3.2.9 and 3.2.10 are optional and can be provided by the Contractor, if available.

Item	Description	Required quantity
3.4.1	Eyecups (2 per unit)	4
3.4.2	Battery pack	4
3.4.3	Neck Lanyard	4
3.4.4	A light-weight, low-profile, force-to-overcome mount	4
3.4.5	Head Harness	4
3.4.6	Counterweight	4
3.4.7	Sacrificial lenses (2 per unit)	4

3.4.8	Soft pouch	<b>4</b>
3.4.9	User Manual	<b>4</b>
3.4.10	Magnifier (3x or higher) (optional; only if available)	<b>1</b>
3.4.11	NVD Compass (optional; only if available)	<b>1</b>

**4. OPTIONAL ITEMS**

The Contractor should provide an option to upgrade the i<sup>2</sup> tube quality up to a FOM of 2376 (72 lp/mm, 33 SNR) for item 3.1, Regular (40 degree) FOV Binocular NVGs and Item 3.3, Wide (47+ degree) FOV Binocular NVGs. The optional upgrades be exercised before or during the Period of the Contract should they be available.

**5. DELIVERY LOCATION**

Defence Research and Development Canada – Toronto Research Centre  
1133 Sheppard Ave W  
Toronto, ON, M3K 2C9  
Canada

**At Annex D, Technical Evaluation**

Delete in its entirety  
Insert:

**ANNEX “D”**

**TECHNICAL EVALUATION**

Each bid will be reviewed for compliance with the mandatory requirements of the bid solicitation. Bids that do not meet each and every Mandatory Technical Criteria in the table below will be considered non-compliant and will receive no further consideration. Simply stating ‘yes’ or ‘no’ does not meet the technical evaluation and will not be considered compliant. The bidder must provide specific information in order to meet each criteria in the technical evaluation.

The bidder should provide make and model of the proposed Binocular Night Vision Goggles and must clearly address each specification with a specification sheet or literature to demonstrate compliance with the Mandatory Technical Criteria.

**1. Regular (40 degree) FOV Binocular NVGs**

**Make:** \_\_\_\_\_  
**Model:** \_\_\_\_\_

The bidder must provide information in their bid to meet or exceed each of the following specifications:

Item	Specifications	Requirement	Bidders should indicate where in their bid they address each criteria.
1.1	Architecture	Binocular central bridge with two side arms each consisting of an i <sup>2</sup> tube and two optical channels	Page/section no.

1.2	Weight (incl. 2x objective caps, battery, eyecups and lanyard)	Less than 562 g	Page/section no.
1.3	Height	A maximum of 88.9 mm or less	Page/section no.
1.4	Width	A maximum of 114.3mm or less	Page/section no.
1.5	Length	A maximum of 116.84 mm or less	Page/section no.
1.6	Magnification	1x	Page/section no.
1.7	Field of view	40°	Page/section no.
1.8	Objective lenses aperture	A minimum of F/1.2 or better	Page/section no.
1.9	Objective lenses focus range	A minimum of 25 cm to infinity (continuous)	Page/section no.
1.10	Diopter adjustment	-6 dp or lower to +2 dp or higher	Page/section no.
1.11	Eye relief	A minimum of 25 mm or higher	Page/section no.
1.12	Magnification difference between left and right optical channels	A maximum of 3% or less	Page/section no.
1.13	Convergence at 0 dp	A maximum of 1° or less	Page/section no.
1.14	Divergence at 0 dp	A maximum of 1° or less	Page/section no.
1.15	Dipvergence at 0 dp	A maximum of 0.7° or less	Page/section no.
1.16	Distortion	A maximum of 4% or less	Page/section no.
1.17	Battery	One (1) 1.5V lithium AA battery	Page/section no.
1.18	Battery life @ 20°C with 1.5V lithium with IR illuminator off	Minimum 23 hours (Can include combination used with battery pack)	Page/section no.
1.19	Protection against inverted polarity	Yes. No battery discharge when batteries are inverted.	Page/section no.
1.20	IR illuminator	Must include IR illuminator	Page/section no.
1.21	Image intensifying tube length	18 mm	Page/section no.
1.22	I <sup>2</sup> tube phosphor type	white	Page/section no.
1.23	I <sup>2</sup> tube figure of merit (FOM)	No less than 2200	Page/section no.
1.24	I <sup>2</sup> tube resolution	No less than 72 lp/mm	Page/section no.
1.25	I <sup>2</sup> tube signal to noise ratio at 108 µlux	No less than 31	Page/section no.
1.26	I <sup>2</sup> tube haloing effect	No more than 0.95 mm	Page/section no.

1.27	I <sup>2</sup> tube maximum Equivalent Background Input (EBI) at 23°C	No more than 0.25 µlux	Page/section no.
1.28	I <sup>2</sup> tube automated bright source protection	Must include I <sup>2</sup> tube automated bright source protection	Page/section no.
1.29	I <sup>2</sup> tube minimum lifetime	A minimum of 10,000 hrs	Page/section no.
1.30	Autogating	Must include autogating	Page/section no.
1.31	Manual gain control	Must include manual gain control	Page/section no.
1.32	Automatic cut-off in stowed position	Must be achieved independent of head position with a compatible mount.	Page/section no.
1.33	Inter-pupillary adjustment	55 mm or less to 72 mm or higher	Page/section no.
1.34	Side arm rotation	Yes, independent. Left and right side arms must rotated out of the way independently (one up one down, both down, both up configurations)	Page/section no.
1.35	Clip-on thermal imager compatible	Yes. Must include functionality for a clip-on thermal imager	Page/section no.
1.36	Mount compatibility	The NVD must be compatible with universal mount NSN 8465-01-551-8656 or equivalent.	Page/section no.

**2. Wide (47+ degree) FOV Binocular NVGs**

**Make:** \_\_\_\_\_  
**Model:** \_\_\_\_\_

The bidder must provide information in their bid to meet or exceed each of the following specifications:

Item	Specifications	Requirement	Bidders should indicate where in their bid they address each criteria.
2.1	Architecture	Binocular central bridge with two side arms each consisting of an i <sup>2</sup> tube and two optical channels	Page/section no.
2.2	Weight (incl. 2x objective caps, battery, eyecups and lanyard)	Less than 650 g	Page/section no.
2.3	Height	A maximum of 91.4 mm or less	Page/section no.
2.4	Width	A maximum of 114.3 mm or less	Page/section no.
2.5	Length	A maximum of 121.9 mm or less	Page/section no.
2.6	Magnification	1x	Page/section no.

2.7	Field of view	A minimum of 47° or higher	Page/section no.
2.8	Objective lenses aperture	A minimum of F/1.2 or better	Page/section no.
2.9	Objective lenses focus range	A minimum of 45 cm to infinity (continuous)	Page/section no.
2.10	Diopter adjustment	- 0.5 dp to + 0.1 dp or higher	Page/section no.
2.11	Eye relief	A minimum of 25 mm or higher	Page/section no.
2.12	Magnification difference between left and right optical channels	A maximum of 3% or less	Page/section no.
2.13	Convergence at 0 dp	A maximum of 1° or less	Page/section no.
2.14	Divergence at 0 dp	A maximum of 1° or less	Page/section no.
2.15	Dipvergence at 0 dp	A maximum of 1° or less	Page/section no.
2.16	Distortion	A maximum of 4% or less	Page/section no.
2.17	Battery	One (1) 1.5V lithium AA battery	Page/section no.
2.18	Battery life @ 20°C with 1.5V lithium with IR illuminator off	Minimum 16 hours at 25 degrees Celsius. Can include the option to be extended past 20 hours with lithium batteries.	Page/section no.
2.19	Protection against inverted polarity	Yes. No battery discharge when batteries are inverted.	Page/section no.
2.20	IR illuminator	Must include IR illuminator	Page/section no.
2.21	Image intensifying tube length	18 mm	Page/section no.
2.22	I <sup>2</sup> tube phosphor type	white	Page/section no.
2.23	I <sup>2</sup> tube figure of merit (FOM)	No less than 2200	Page/section no.
2.24	I <sup>2</sup> tube resolution	No less than 72 lp/mm	Page/section no.
2.25	I <sup>2</sup> tube signal to noise ratio at 108 µlux	No less than 31	Page/section no.
2.26	I <sup>2</sup> tube haloing effect	No more than 0.95 mm	Page/section no.
2.27	I <sup>2</sup> tube maximum Equivalent Background Input (EBI) at 23°C	No more than 0.25 µlux	Page/section no.
2.28	I <sup>2</sup> tube automated bright source protection	must include I <sup>2</sup> tube automated bright source protection	Page/section no.
2.29	I <sup>2</sup> tube minimum lifetime	A minimum of 10,000 hrs	Page/section no.
2.30	Autogating	Must include autogating	Page/section no.
2.31	Manual gain control	Must include manual gain control	Page/section no.

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2.32	Automatic cut-off in stowed position	Yes. Must be achieved independent of head position with a compatible mount.	Page/section no. _____
2.33	Inter-pupillary adjustment	Yes. 54 mm or less to 76 mm or higher.	Page/section no. _____
2.34	Side arm rotation	Yes, independent. Left and right side arms must rotated out of the way independently (one up one down, both down, both up configurations)	Page/section no. _____
2.35	Clip-on thermal imager compatible	Yes. Must include functionality for a clip-on thermal imager	Page/section no. _____
2.36	Mount compatibility	The NVD must be compatible with universal mount NSN 8465-01-551-8656 or equivalent.	Page/section no. _____