

PHOTONIS

NIGHT VISION

ONYX

ONYX Image Intensifier

Natural Black & White Images

ONYX is the optional black & white (B&W) vision of PHOTONIS.

Studies show that nighttime scenes appear remarkably more natural in B&W compared to the usual green. PHOTONIS offers B&W Night Vision for them who want to have a natural vision at night. B&W provides clearer information about the contrast, shapes and shadows.

ONYX is available as an option on XD-4™ and XR5™.

At night, seeing is useful... Understanding is crucial.

XR5™ “ONYX”

Resolution	Minimum	Typical	Maximum	Unit
Limiting resolution	64	72		lp/mm
High light level resolution (>200 lux)	55			lp/mm
MTF (Modulation Transfer Function)	Minimum	Typical	Maximum	Unit
2.5 lp/mm		94		%
7.5 lp/mm		85		%
15 lp/mm		70		%
25 lp/mm		50		%
30 lp/mm		40		%
Signal-to-noise Ratio (SNR)	Minimum	Typical	Maximum	Unit
Signal-to-noise Ratio (@ 108 µlx)	23	25		
Auto-Gating Power Supply Unit	Minimum	Typical	Maximum	Unit
Luminance dynamic range	1 x 10 ⁻⁶		5 x 10 ⁴	lux
Input voltage	2	2.7	3.5	Volt
Input current		25	35	mA
Other Technical Data	Minimum	Typical	Maximum	Unit
Phosphor	P45			
MTTF	10.000			hours
Halo		0.8		mm
Gain at 2 x 10 ⁻⁵ lx	7.000		10.000	cd/m ² /lx
Gain at 2 x 10 ⁻⁶ fc	22.000		30.000	fL/fc
Max. Output Brightness	4		12	cd/m ²
E.B.I.		0.15	0.25	µlx
Output uniformity 2850K		2:1	3:1	
Weight		80	95	grams
Shock resistance	500			g

XD-4™ “ONYX”

Minimum	Typical	Maximum	Unit
57	64		lp/mm
20*			lp/mm
Minimum	Typical	Maximum	Unit
	92		%
	80		%
	58		%
	45		%
	35		%
Minimum	Typical	Maximum	Unit
20	23		
Minimum	Typical	Maximum	Unit
1 x 10 ⁻⁶		5 x 10 ⁴ **	lux
2	2.7	3.5	Volt
	16	26	mA
Minimum	Typical	Maximum	Unit
P45			
10.000			hours
	0.8		mm
7.000		10.000	cd/m ² /lx
22.000		30.000	fL/fc
4		12	cd/m ²
	0.15	0.25	µlx
	2:1	3:1	
	80	95	grams
500			g

* With Auto-Gating 50 lp/mm ** When fitted with Auto-Gating

Test panel questionnaire results*

Questionnaire item	White better	No preference	Green better
Overall Quality	85	0	15
Naturalness	85	0	15
Degree of Detail	86	0	14
Range of Shades	74	0	26
Full Moon Similarity	79	0	21
Depth Perception	79	0	21
Night Mission Preference	73	8	19

“Nighttime scenes appeared remarkably more natural with the white phosphor than with the typical green phosphor” *

“White phosphor was like viewing the world at twilight and it provided clearer information about the contrast, shapes and shadows” *

“There seemed to be more discriminable shades of intensity between white and black than between green and black and depth perception was ‘phenomenal’ compared to green phosphor NVG’s” *

* Source: the independent research ‘Object recognition and contrast sensitivity with image intensifier employing white phosphor versus green phosphor displays’ by V. Cuglock-Knopp, John Merritt and Edward Bender

PHOTONIS

For more information, please visit www.photonis.com

PHOTONIS Netherlands B.V.
Dwaziewegen 2
9301 ZR RODEN
The Netherlands

PHOTONIS France SAS
Avenue Roger Roncier
19100 Brive La Gaillarde
France

Sales Night Vision contact information:
T: +31 (0)505 01 88 08
F: +31 (0)505 01 14 56

E: nightvision@photonis.com