

ONYX



At night, Seeing is useful - Understanding is crucial

Test panel questionnaire results ¹⁾

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” ¹⁾

“White phosphor was like viewing the world at twilight and it provided clearer information about the contrast, shapes and shadows” ¹⁾

“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” ¹⁾

PHOTONIS
NIGHT VISION



Technical specifications

Resolution		XR5™ “ONYX”							
	Minimal	Typical	Maximum	UNIT					
Limiting resolution	64	70		lp/mm					
MTF (Modulation Transfer Function)		Minimal	Typical	Maximum	UNIT				
2.5 lp/mm		92		%					
7.5 lp/mm		80		%					
15 lp/mm		58		%					
25 lp/mm		45		%					
30 lp/mm		35		%					
Signal to Noise Ratio		Minimal	Typical	Maximum	UNIT				
Signal to noise (@108µlx)	23	25							
Other Technical Data		Minimal	Typical	Maximum	UNIT				
MTTF	10.000			Hrs					
HALO (spot 0.2 mm)		0.6	0.8	mm					
Gain at 2.10 ⁻⁵ lx	7.000		10.000	cd/m ² /lx					
Max. Output Brightness	4		8	cd/m ²					
E.B.I.			0.25	µlx					
Luminous sensitivity at 2850K	700	800		µA/lm					
Radiant sensitivity at 830nm	60	70		mA/W					
Output uniformity at 2850K			3:1						
Weight		80	95	grams					
Shock resistance	500			g					
Autogating Power Supply Unit		Standard on the XR5™				Option on the XD-4™			
	Minimal	Typical	Maximum	UNIT	Minimal	Typical	Maximum	UNIT	
Luminance dynamic range	1.10 ⁻⁶		5X10 ⁴	lux	1.10 ⁻⁶		5X10 ⁴	lux	
Input voltage	2	2.7	3.5	Volt	2	2.7	3.5	Volt	
Input current			35	mA			35	mA	

Resolution		XD-4™ “ONYX”						
	Minimal	Typical	Maximum	UNIT				
Limiting resolution	57	64		lp/mm				
MTF (Modulation Transfer Function)		Minimal	Typical	Maximum	UNIT			
2.5 lp/mm		90		%				
7.5 lp/mm		72		%				
15 lp/mm		54		%				
25 lp/mm		35		%				
30 lp/mm		28		%				
Signal to Noise Ratio		Minimal	Typical	Maximum	UNIT			
Signal to noise (@108µlx)	19	23						
Other Technical Data		Minimal	Typical	Maximum	UNIT			
MTTF	10.000			Hrs				
HALO (spot 0.2 mm)		0.6	0.8	mm				
Gain at 2.10 ⁻⁵ lx	7.000		10.000	cd/m ² /lx				
Max. Output Brightness	4		8	cd/m ²				
E.B.I.			0.25	µlx				
Luminous sensitivity at 2850K	600	700		µA/lm				
Radiant sensitivity at 830nm	45	60		mA/W				
Output uniformity at 2850K			3:1					
Weight		80	95	grams				
Shock resistance	500			g				
Autogating Power Supply Unit		Option on the XD-4™						
	Minimal	Typical	Maximum	UNIT	Minimal	Typical	Maximum	UNIT
Luminance dynamic range	1.10 ⁻⁶		5X10 ⁴	lux	1.10 ⁻⁶		5X10 ⁴	lux
Input voltage	2	2.7	3.5	Volt	2	2.7	3.5	Volt
Input current			35	mA			35	mA

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NIGHT VISION

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