

Image Intensifier Tube (IIT)

Generation 2+ and Generation 3, 3631IC Series

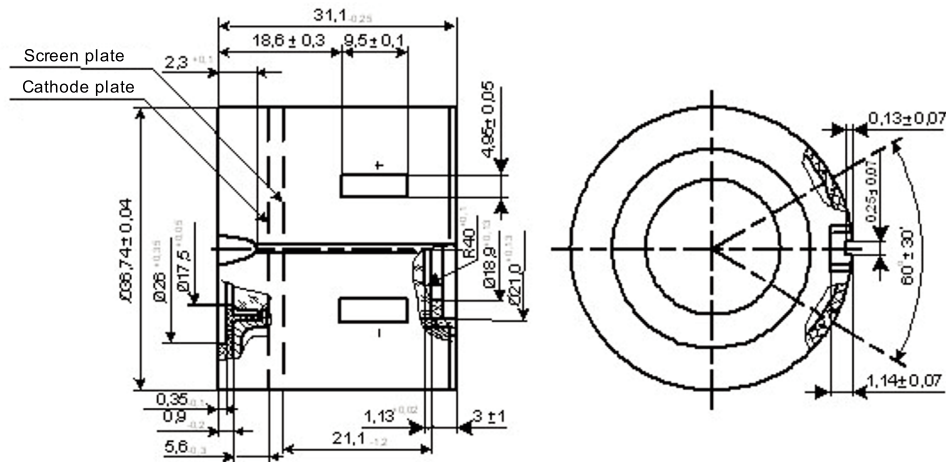
These Gen 2+ and Gen 3 image intensifier tubes consist of high-efficiency multialkali (Gen 2+) or gallium arsenide (Gen 3) photocathodes and are comprised of lightweight materials resulting in an overall unit weight of 80 grams. The glass input window, concave output window and noise limiting microchannel plate in the 3631IC series combine to produce the clearest, highest contrast night vision images among IITs in their class.

Newcon Optik's 3631IC Series tubes have an operational life of more than 10,000 hours and are currently fielded in a variety of environmental conditions around the globe. With an ability to function at extremely low visible and near-infrared light levels, these IITs provide optical advantage in even the darkest tactical theatres. Sensitive, lightweight and rugged the 3631IC Gen 2+ and Gen 3 image intensifier tubes are the choice of special operators and tactical professionals worldwide.



For upgrading your existing equipment:

AN/PVS 14, AN/AVS 9, AN/AVS 6, NIGHT WITNESS M3, NVS 14
NVS 33, DN 532/533, DN 482/483



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Image Intensifier Tube (IIT) - 3631IC Series Specification

Tube Specifications			
Model	NCXT3631IC	N3063631IC	N3XT3631IC
Grade	XT	HD	XT
Photocathode operating diameter, mm	17.5	17.5	17.5
High-Light Resoluition @ 20fc (min) lp/mm	12	12	12
Photocathode material	S-25	GaAs	GaAs
Resolution, lp/mm (minimum)	57	57	64
Photocathode sensitivity, $\mu\text{A}/\text{lm}$			
@ 2856°K, $\mu\text{A}/\text{lm}$	750	1350	1800
@ 830 nm, mA/W	45	135	190
FOM (maximum)	1250	1250	1600
EBI, $\times 10^{-11}$ lm/cm ² (maximum)	2.5	2.5	2.5
Luminous Gain, fL/fc*			
@2x10 ⁻⁶ fc	40,000-70,000	40,000-70,000	40,000-70,000
@2x10 ⁻⁴ fc	10,000-20,000	10,000-20,000	10,000-20,000
Image magnification	1	1	1
Dark background brightness, max, cd/m ²	1.5×10^{-3}	5×10^{-3}	5×10^{-3}
Output brightness, fL*	2.0 - 4.0	2.0 - 4.0	2.0 - 4.0 (up to 16)
Output brightness, uniformity (maximum)			
2856°K, and @ 880nm	3.1	3.1	3.1
Signal-to-noise ratio (minimum)	20	20	24
Current consumption, (maximum), mA	20	25	25
Voltage, V	2.8 ± 0.8	2.8 ± 0.8	2.8 ± 0.8
Weight, g	80	80	80

MTF (Minimum)			
@2.5 lp/mm	92%	92%	92%
@7.5 lp/mm	80%	80%	80%
@15.0 lp/mm	61%	61%	61%
@25.0 lp/mm	38%	38%	38%
Mean time before failure, (minimum), hours	10,000	10,000	10,000

Spots Allowed in Each Zone	NCXT3631IC / N3063631IC			N3XT3631IC		
	Zone 1	Zone 2	Zone 3	Zone 1	Zone 2	Zone 3
Spot Size (inch)						
0.012 ~ 0.015	0	0	0	0	0	0
0.009 ~ 0.012	0	0	1	0	0	0
0.006 ~ 0.009	0	1	2	0	1	1
0.003 ~ 0.006	0	2	3	0	2	2

Environmental resistance	
Sinusoidal vibration (vibration strength):	
Frequency range, Hz	1-500
Acceleration, m/s ² (g)	50 (5)
Mechanical shocks:	
Shock, m/s ² (g)	5,000 (500)
Operating temperature range, °C	-40 ... +50
Storage temperature, °C	-45 ... + 60

Fiber optic allowable chicken wire			
Length of chicken wire in inches	Number of allowable		
	Zone 1 < \varnothing 0.295 inch	Zone 2 \varnothing 0.295 ~ \varnothing 0.580 Inch	Zone 3 \varnothing 0.580 ~ \varnothing 0.710 inch
\geq 0.250	0	0	0
0.125 ~ 0.249	0	0	2
0.040 ~ 0.124	0	4	6
0.020 ~ 0.039	2	6	16
0.003 ~ 0.019	4	18	
< 0.003	Disregard	Disregard	Disregard