

4. MANUAL

- 4.1 During installation and operation, application of force more than 1N (0.1kgf) to the input and output windows of IIT is prohibited. Touching input and output optical surfaces with fingers or solid objects is prohibited. Maximal axial and lateral force applied to the IIT while fastening is 10N (1kgf)
- 4.2 Exposing the turned-off IIT to direct sunlight and continuous (more than 0.1h) exposing it to diffused light with illumination rate more than 100 lx is prohibited.
- 4.3 Switching on the IIT can be made only with photocathode illumination rate less than 0.1lx
- 4.4 Maximal power supply voltage cannot exceed the established requirements.
- 4.5 In order to avoid failure of the IIT power supply, the application equipment circuit should allow the installation of a non-polar capacitor with a capacitance 1µF parallel to the voltage input terminals (e.g. model K10-47a)
- 4.6 Relative humidity in the application equipment during the IIT operation should not exceed 40%. Other operation directives are to be performed according to RD 110708.

5 STORAGE REGULATIONS

IIT should be stored according to the State Standard 21493.

6 MANUFACTURER'S WARRANTY

The Manufacturer guarantees that the quality of IIT corresponds to the KPCE.433240.005 TU, provided the Consumer complies all the terms and conditions of storage, installation and operation listed in the datasheet. The Warranty Period should be stipulated in the sales contract. MTTF is 10 000 hrs within the Warranty Period. Guaranteed storage life is 5 years from the date of acceptance, for the rechecked IIT - from the date of recheck.

7 UNSATISFACTORY EQUIPMENT LIST

In case of premature failure, IIT and its datasheet should be returned to the Manufacturer with the following information:

- Storage time _____
 - Date of operation beginning _____
 - Date of failure _____
 - Basic data of the operational mode _____
 - Running hours in the described mode, h _____
 - Reasons for taking IIT out of operation or storage _____
 - Fulfillment date _____ date _____ signature _____
- If the fulfilled datasheet is absent, claimed, as defected Goods are not accepted.

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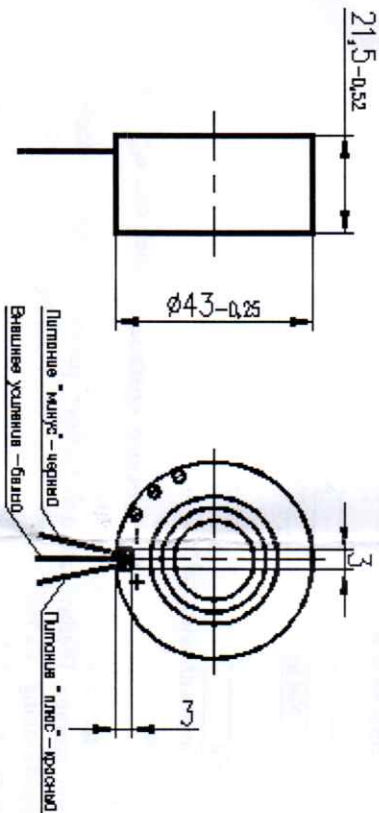
Image Intensifier Tube
EPM215G-10-11AR

DATASHEET

1 GENERAL INFORMATION

Image Intensifier Tube (IIT) EPM215G-10-11AR with a direct image transfer, multialkali photocathode, microchannel plate for electron multiplication, embedded power supply with external gain adjustment, input and output window on a flat glass, is designed to amplify weak light fluxes in night-vision equipment for national and economic use.

Serial Number 04714 Date of Manufacturing 2103



2 BASIC TECHNICAL REQUIREMENTS

2.1 Electrical parameters on the moment of supply are shown in Table 1.

Table 1.

Name of parameter, Measure unit	Norm		Measure ment data	Comment
	Not less	Not more		
Integral photocathode sensitivity, $\mu\text{A}/\text{lm}$	500		670	
Photocathode sensitivity with KC-27 filter, $\mu\text{A}/\text{lm}$	280		360	
Spectral sensitivity at wave length 850 nm, m ΔW	40		45	
Luminous gain, rel. unit	20 000		55300	
Resolution limit, lp/mm	56		79,1	
E.B.I, cd/m^2		1.5×10^{-3}	14.10-3	
Degree of purity of visual area	Paragraph 3.3.3, table 3		Correspo nds with TU	
Brightness of screen luminescence in the range from 0,005 to 0,4 lx, cd/m^2	2.0	8.0		Guaranteed
Power supply range, V	2.0	3.6		Guaranteed
Input current, mA		25		Guaranteed

2.2 Electrical parameters changing in the process of operation:

Luminous gain – not less than 12000.

2.3 Electrical parameters changing in the process of storage:

Luminous gain – not less than 16000

2.4 Maximum operational modes are shown in Table 2.

Table 2.

Name of parameter, Measure unit	Norm		
	Not less	nominal	Not more
Photocathode illumination, lx	-	10^{-4}	10^{-1} *
Power voltage, V	2,0		3,6

* IIT operation time with photocathode illumination $1 \cdot 10^{-1}$ lx should not exceed 5hrs

for all the operation time.

2.5 Minimal running hours of IIT provided operation modes and terms set by KFCE.433240.005 TU not less than 10 000 hrs.

2.6 Minimal storage lifetime at manufacturer packing in heated warehouses, storage with air conditioning, as well as installed at protected equipment or in protected ZIP LOCK bag is not less than 6 years.

2.7 IIT overall size: diameter, mm – does not exceed 43; length, mm – does not exceed 21,5. Product mass, g – does not exceed 60.



2.8 Non-ferrous metals content:

Copper and its alloys 0.12 g in details and solder

Nickel and its alloys 1.52 g in details

3 INFORMATION ON ACCEPTANCE

IIT EPM215G-10-11AR serial number 04714 satisfies technical requirements KFCE.433240.005 TU and is considered exploitable.

Acceptance date	19.09.2021
QC D seal	
Signature	
Reinspection date	
QC D seal	
Signature	