



EKRAN
OPTICAL SYSTEMS



PMT



Photomultiplier tube PMT-153

The photomultiplier 153 is used to convert light signals into electrical and for working in scintillation equipment. The photomultiplier is made on the basic structure of the PMT-141 and differs from it in the absence of built-in voltage divider, increased vibration resistance and impact resistance. The photomultiplier PMT-153 has a translucent antimony-potassium-sodium-cesium photocathode, the electrostatic focusing, 13-dynode multiplied system of louvered type, flat face optical input and reflex output. Photomultiplier, with the exception of the photocathode, filled with polyurethane foam in a dielectric housing, it has flexible wires from the assembling actuator.

Technical specification

Parameter, unit	Standard		
	No less	Nominal	No more
Constructive dimensions			
Diameter (max), mm	38		
Useful photocathode diameter, mm	25		
Fit length, mm	70 ₂		
Weight, g	100		
Electrical and lighting parameters			
Luminous photocathode sensitivity, A/lm	5x10 ⁻⁵	-	-
Luminous anode sensitivity, A/lm	-	30	-
Supply voltage, V	-	-	1800
Dark current, A	-	-	2x10 ⁻⁸
Energetic resolution, %	-	-	11
Energy equivalent of its noise, keV	-	-	1,5
Insulation resistance, MOm	10 ³	-	-
Nonlinearity of luminescence characteristics in impulse regime when the anode current 2x10 ⁻² , %	-	-	10
Insulation resistance, MOm	10 ¹¹	-	-
Readiness time, s	-	-	10
Instability, %	-	-	12
Anode capacity – all electrode, connected together, pF	-	-	25
Maximum position of spectral characteristics, nm	400	-	490
Resistance to external factors			
Sinusoidal vibration (vibration strength): - frequency range, Hz - acceleration amplitude, m/s ² (g)	1÷2000 200 (20)		
Mechanical shock with peak shock acceleration, m/c ² (g) - single action - repeated action	20000 (2000) 1500 (150)		
Operating temperature of ambient, °C	minus 60; +85		
High pressure air, kPa (kgf/cm ²)	294 (3)		
Low working pressure, kPa (mm Hg)	1,33x10 ⁻⁴ (10 ⁻⁶)		
MTF, h	2000		



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