

## 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
<b>Constructive dimensions</b>			
Diameter (max), mm		38	
Useful photocathode diameter, mm		25	
Fit length, mm		70 <sub>±2</sub>	
Weight, g		100	
<b>Electrical and lighting parameters</b>			
Luminous photocathode sensitivity, A/lm	5x10 <sup>-5</sup>	-	-
Luminous anode sensitivity, A/lm	-	30	-
Supply voltage, V	-	-	1800
Dark current, A	-	-	2x10 <sup>-8</sup>
Energetic resolution, %	-	-	11
Energy equivalent of its noise, keV	-	-	1,5
Insulation resistance, MOm	10 <sup>3</sup>	-	-
Nonlinearity of luminescence characteristics in impulse regime when the anode current 2x10 <sup>-2</sup> , %	-	-	10
Insulation resistance, MOm	10 <sup>11</sup>	-	-
Readiness time, s	-	-	10
Instability, %	-	-	12
Anode capacity – all electrode, connected together, pF	-	-	25
Maximum position of spectral characteristics, nm	400	-	490
<b>Resistance to external factors</b>			
Sinusoidal vibration (vibration strength):			
- frequency range, Hz		1÷2000	
- acceleration amplitude, m/s <sup>2</sup> (g)		200 (20)	
Mechanical shock with peak shock acceleration, m/c <sup>2</sup> (g)			
- single action		20000 (2000)	
- repeated action		1500 (150)	
Operating temperature of ambient, °C		minus 60; +85	
High pressure air, kPa (kgf/cm <sup>2</sup> )		294 (3)	
Low working pressure, kPa (mm Hg)		1,33x10 <sup>-4</sup> (10 <sup>-6</sup> )	
MTF, h		2000	



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