

MCP-DETECTORS

LLC VTC "BASPIK" detectors are made of high quality MCPs of different configurations, sizes and technical parameters. Vital difference of our firm detectors is that you can make an individual order for a detector which matches your device application and specifications.



MCP-detectors' application range covers the following sciences:

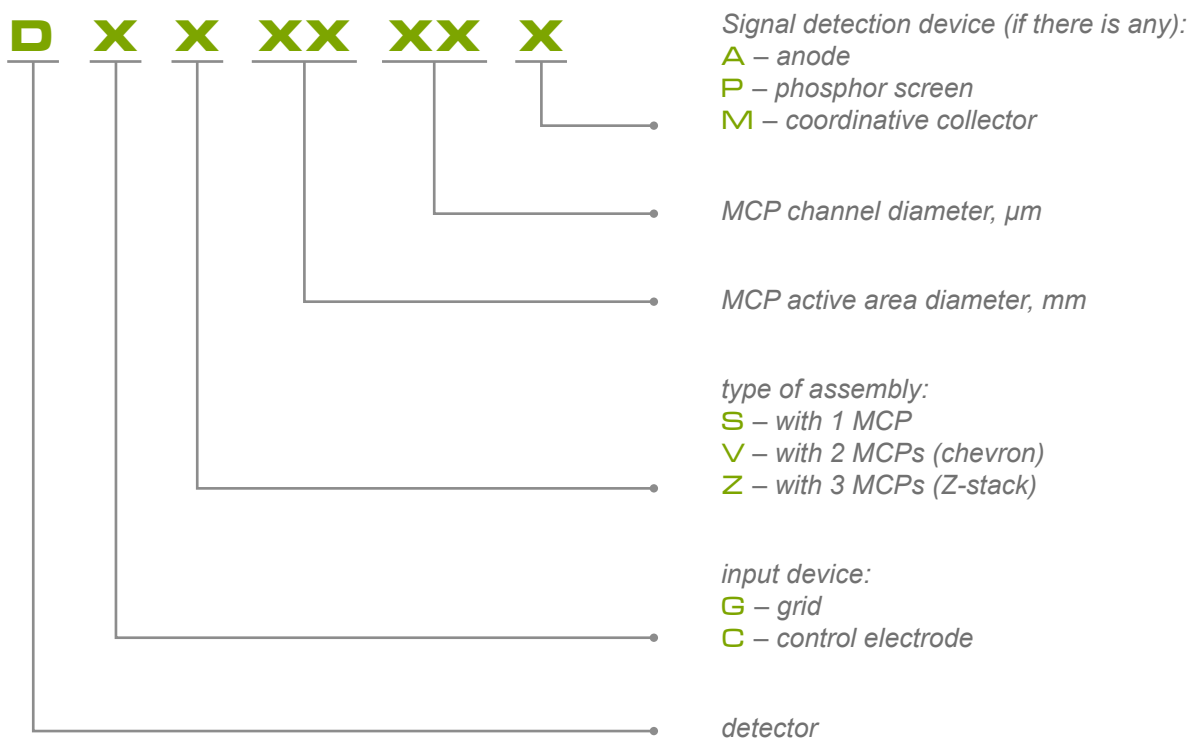
- Astrophysics and Space Research;
- Experimental and Nuclear Physics;
- Electron and Ion Microscopy;
- Spectrometry;
- Medical practice.

The singularity of Z-stack MCP produced by "Baspik" is that it has spaces between microchannel plates (having separate supplies) and it makes it possible to obtain the gain of more than 1×10^7 (shevron) and 1×10^9 (Z-stack) in contrast to other similar assemblies which do not have spaces between the plates and have the gain of 1×10^6 and 1×10^8 respectively.

THE AVAILABLE MODIFICATIONS OF MCPS ARE:

- With a metal anode;
- with a phosphor screen;
- with a control electrode.

STRUCTURE OF DESIGNATION OF THE PRODUCT MODEL



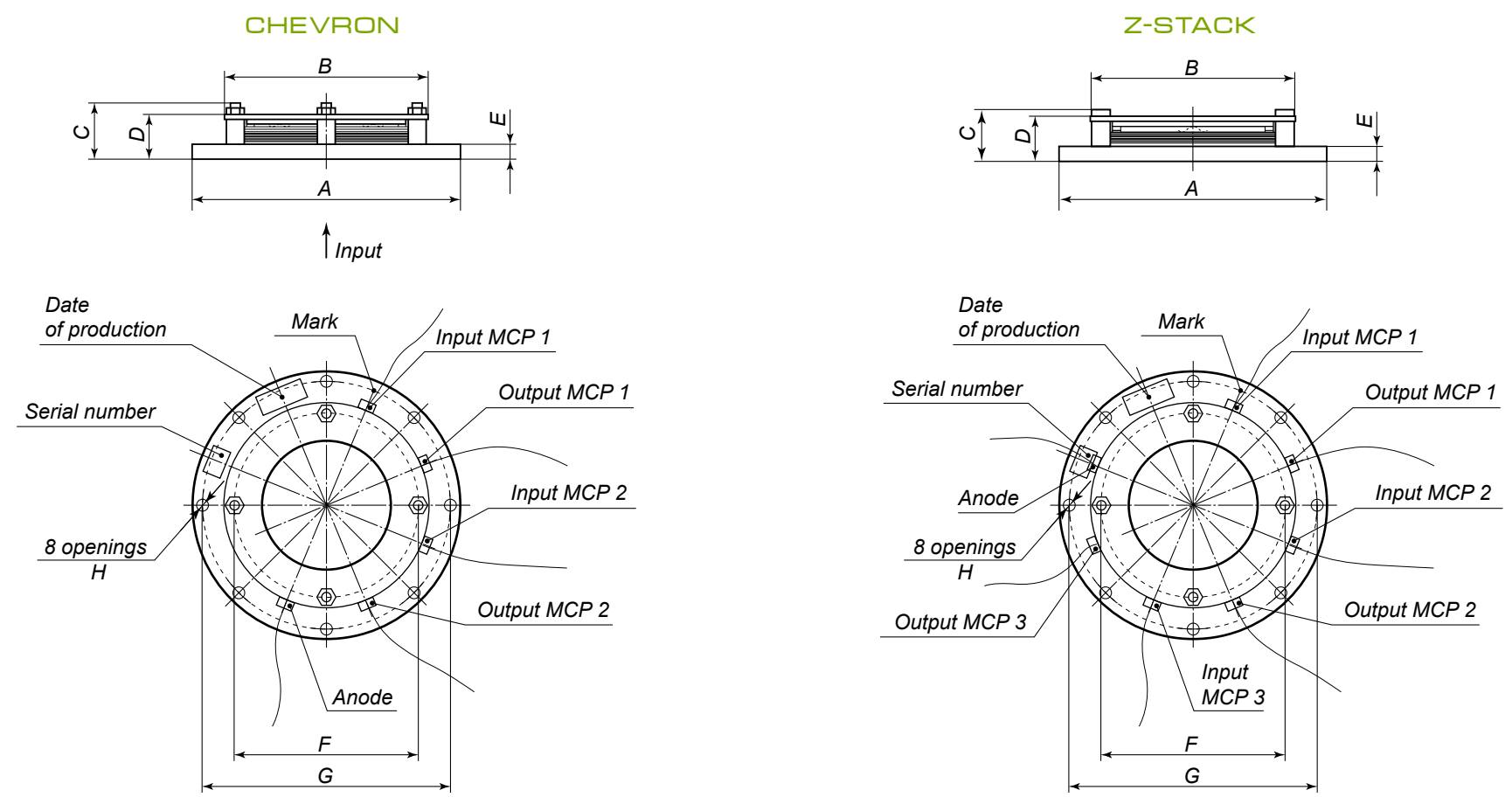
SPECIFICATION

| ASSEMBLY TYPE | UNIT | 1 MCP | | | CHEVRON (2 MCP) | | | Z-STACK (3 MCP) | | |
|---|---------------------|---|--------------------|--------------------|---------------------------|--------------------|--------------------|---------------------------|--------------------|--------------------|
| | | DS25 10 DS256 DS258 | DS50 10 DS50 15 | DS56 12 DS56 15 | DV25 10 DV256 DV258 | DV50 10 DV50 15 | DV56 12 DV56 15 | DZ25 10 DZ256 DZ258 | DZ50 10 DZ50 15 | DZ56 12 DZ56 15 |
| Outer diameter of MCP | mm | 33 | 50 | 56 | 33 | 50 | 56 | 33 | 50 | 56 |
| Active Diameter | mm | 25 | 44 | 50 | 25 | 44 | 50 | 25 | 44 | 50 |
| MCP Pore Size | μm | 6, 8, 10 | 10, 12, 15 | 12, 15 | 6, 8, 10 | 10, 12, 15 | 12, 15 | 6, 8, 10 | 10, 12, 15 | 12, 15 |
| Center-to-Center Spacing | μm | 8, 9.5, 12 | 12, 15, 19 | 15, 19 | 8, 9.5, 12 | 12, 15, 19 | 15, 19 | 8, 9.5, 12 | 12, 15, 19 | 15, 19 |
| MCP Thickness | mm | 0.3, 0.32, 0.4 | 0.5, 0.75 | 0.48, 0.75 | 0.3, 0.32, 0.4 | 0.5, 0.75 | 0.48, 0.75 | 0.3, 0.32, 0.4 | 0.5, 0.75 | 0.48, 0.75 |
| Bias Angle | degree | 6 - 8; 12 - 13 | | | | | | | | |
| MCP Resistance | Ω | $5 \times 10^7 + 2 \times 10^8$ | | | | | | | | |
| Maximum Operating Voltage | V | 1000 | | | 2800 | | | 3500 | | |
| Detector Height | mm | max. 12 | | | max. 15 | | | max. 20 | | |
| Detector Diameter | mm | max. 54 | max. 76 | max. 82 | max. 54 | max. 76 | max. 82 | max. 54 | max. 76 | max. 82 |
| Single-electron Pulse Height Resolution | % | exponent | | | max. 70 | max. 80 | max. 100 | max. 30 | | |
| Maximum Dark Pulses Count Rate Density | cps/cm ² | max. 3 | | | | | | | | |
| Minimum gain | | 1×10^4 | | | 1×10^7 | | | 1×10^9 | | |
| Modifications | | with a metal anode, and a phosphor screen | | | | | | with a metal Anode | | |

MCP-DETECTORS WITH A PHOSPHOR SCREEN

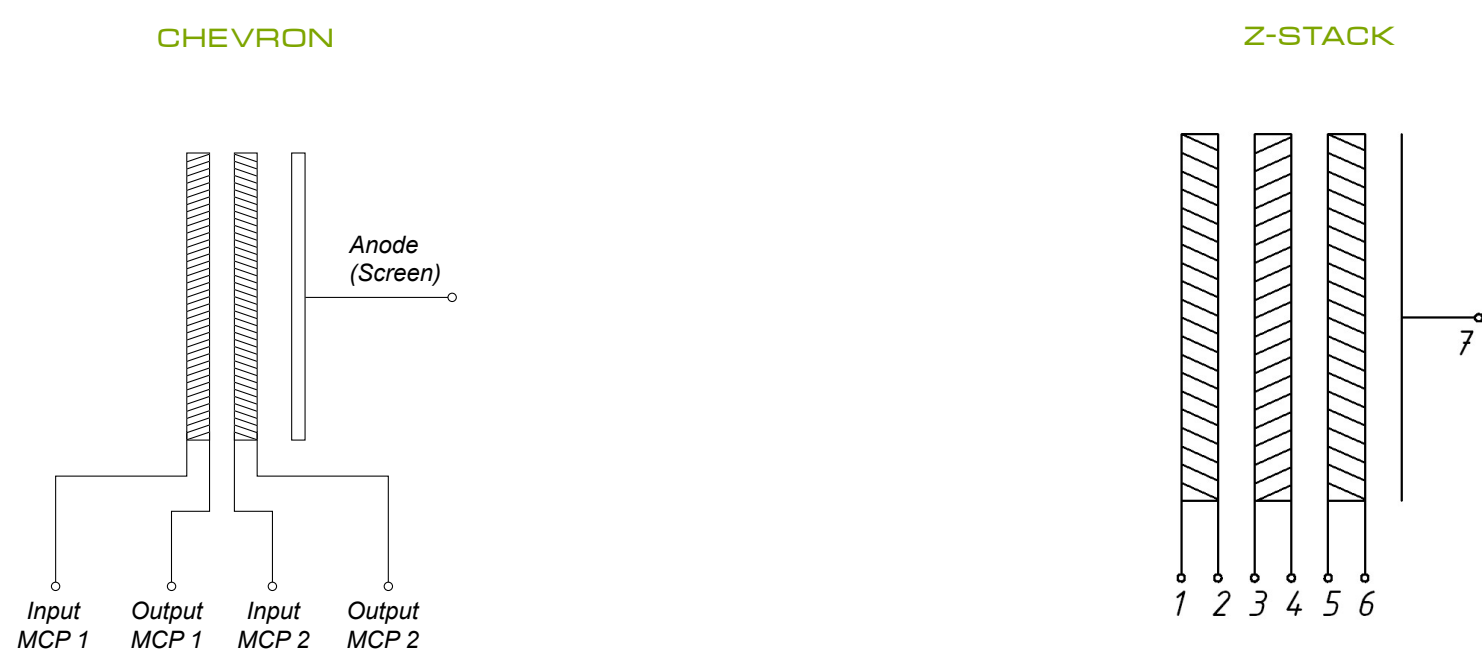
| PHOSPHOR SCREEN | RADIATION WAVE PEAK | LUMINESCENCE COLOUR | 10% OF DECAY TIME |
|-----------------------|---------------------|---------------------|-------------------|
| K-67 (analog of P-43) | 550 | yellow-green | 1 ms |

DIMENSIONAL OUTLINES



| | PHYSICAL CHARACTERISTICS | ACTIVE AREA DIAMETER | | |
|---|-----------------------------------|----------------------|--------|--------|
| | | 25 | 50 | 56 |
| A | MCP Diameter | 54 | 76 | 82 |
| B | MCP Assembly Diameter | 41 | 58 | 64 |
| C | Maximum Height | 18 | 20 | 20 |
| D | MCP Assembly Height | max.16 | max.18 | max.18 |
| E | Height of Flange | 3 | 3 | 3 |
| F | Setting Diameter of Assembly Pins | 36,6 | 53,6 | 59,6 |
| G | Detector Setting Diameter | 50 | 68 | 74 |
| H | Fixing Hole Diameter | 2,4 | 3,5 | 3,5 |

CIRCUIT DIAGRAMS



Aunion Tech Co.,Ltd

Floor 3, F Building, No. 86 Caobao road, Shanghai 200235 P.R. China
 Tel: +86-21-51083793 Fax: +86-21-34241962
 E-Mail: info@auniontech.com Website: www.auniontech.com