

Parallel-Needle Array Electrodes

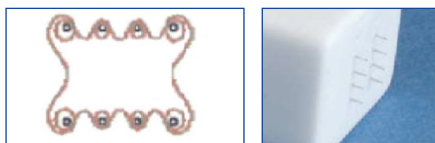
TECHNICAL SPECIFICATIONS

PARALLEL-NEEDLE ARRAY ELECTRODE INCLUDES

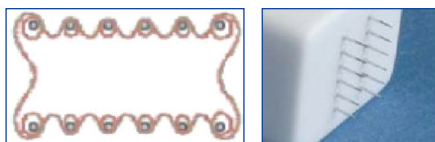
- Variety of Electrode Tip Sizes (See Specifications)
- Electrode Connector Cable
- User Manual

NEEDLE ARRAY DESIGN

- Uniform, Reliable Electric Fields
- Miniature Needles Minimize Tissue Trauma
- Disposable, Sterile
- Medical-grade plastic and surgical steel construction
- Safety-assured design
- Multiple configurations and sizes to choose



4 mm x 4 E-Field



4 mm x 6 E-Field

MINIATURE ELECTRODE ARRAY FOR IN VIVO ELECTROPORATION

BTX Parallel-Needle Array Electrodes are miniature needles precisely positioned to provide superior, highly-uniform electric fields in dermal tissue as part of the AgilePulse™ *In Vivo* Gene Delivery Electroporation System. Applications for these systems include intra-dermal DNA Vaccine research, intra-muscular gene delivery, and Antibody Production or Cancer Chemotherapy research.

The miniature parallel-needle array is inserted directly into the target site for fast, reliable in vivo electroporation. The electric fields produced are the closest approximation of parallel plate electrodes, treating approximately 80% of the target area with 95% of the applied electric field.

The Parallel-Needle Array Electrode includes the Electrode Connector Cable and the Sterile Electrode Tip containing the miniature parallel-needle array.

Several needle lengths and row spacing are available for various intra dermal or intra muscular applications.

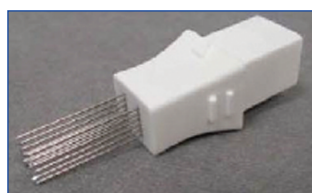
Parallel-Needle Array Electrodes

ID SPECIFICATIONS

	47-0040	47-0043	47-0045	47-0050	47-0060
Needle Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Needle Tip	Smooth Fine Point	Smooth Fine Point	Smooth Fine Point	Smooth Fine Point	Smooth Fine Point
Spacing in Row	1.5 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
Spacing Between Rows	4-mm	4-mm	4-mm	4-mm	6-mm
Needles per Row	4	3	4	6	6
Needle Diameter	0.3 mm	0.3 mm	0.3 mm	0.3 mm	0.3 mm
Needle Length	2-mm	3-mm	5-mm	2-mm	5-mm



47-0070 Intra-Muscular Array



47-0080 Intra-Muscular Array

LARGE NEEDLE ARRAY SPECIFICATIONS

	47-0070	47-0080	47-0086
Needle Material	Stainless Steel	Stainless Steel	Stainless Steel
Needle Tip	Smooth Fine Point	Trocar Point	Trocar Point
Needle Spacing in Row	1.5 mm	1.5 mm	1.5 mm
Row Spacing	6-mm	6-mm	6-mm
Needles per Row	6	6	6
Needle Diameter	0.3 mm	0.7 mm	0.7 mm
Needle Length	10-mm	25-mm	16-mm

ORDERING INFORMATION

Part #	Delivery Site	Row Spacing	Needles per Row	Needle Length
47-0040	Dermal	4-mm	4	2-mm
47-0043	Dermal	4-mm	3	3-mm
47-0045	Dermal	4-mm	4	5-mm
47-0050	Dermal	4-mm	6	2-mm
47-0060	Dermal	6-mm	6	2-mm
47-0070	Muscle	6-mm	6	10-mm
47-0080	Muscle	6-mm	6	25-mm
47-0086	Muscle	6-mm	6	16-mm

Sterile Electrode Tips are numbered and shipped in individual Tyvek pouches. A cover is included to protect the needles during shipping and handling. Side grips provide on the body ensure safe handling and easy application.

**Specifications may change without notice.*

TECHNICAL & CUSTOMER SERVICE

For further references regarding specific applications and optimization, please contact BTX Technical Support:

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BTX[®]

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