



B.IV4



Strip-type biosensor



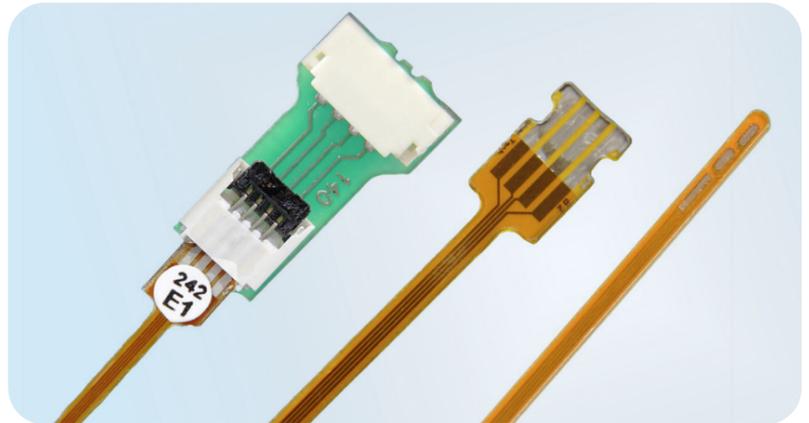
For various bioanalytical applications



Benefits and characteristics



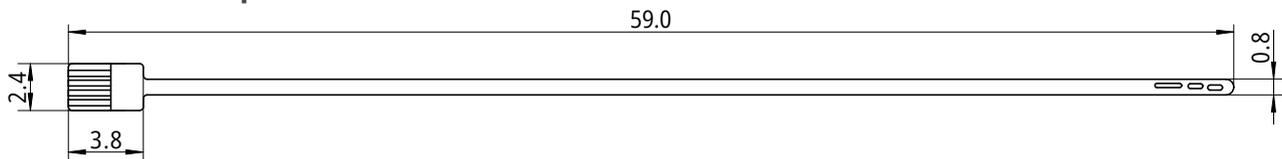
- Enzyme-based amperometric measurement
- Excellent long-term stability
- Reference, counter, and blank electrodes on-chip
- Outstanding reliability
- Fast response time
- Gamma and beta sterilization compatible
- Small size
- Suitable for dip-in applications
- For industrial applications



Left: B.IV4 sensor with JST; **Center:** B.IV4 sensor FPC area; **Right:** B.IV4 sensor sensing area

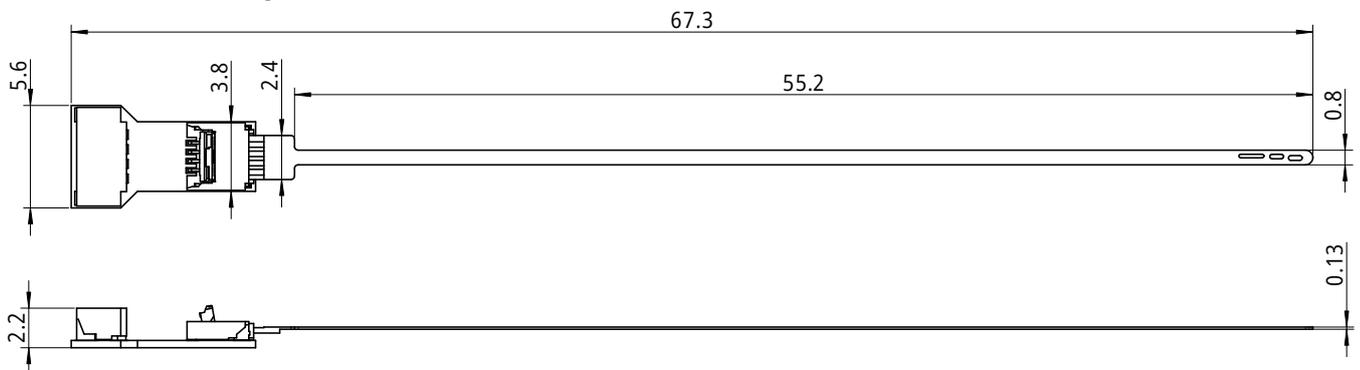
Illustration

B.IV4 sensor, flex print cable termination



B.IV4 sensor with FPC, all dimensions in mm

B.IV4 sensor, JST 4-pin connector



B.IV4 sensor with 4-pin, 0.8 mm pitch connector, all dimensions in mm



Technical data

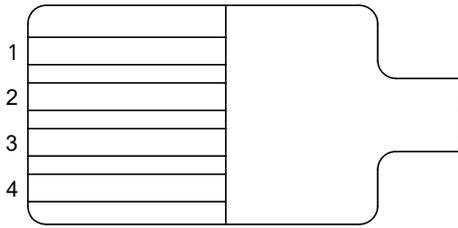


| | |
|--|---|
| Dimensions: | See illustration above. Dimensions in mm |
| Measurement principle: | Enzymatic amperometric (oxidase enzymes and H ₂ O ₂ oxidation) |
| Working electrode: | Platinum covered with enzyme membrane |
| Blank electrode: | For background compensation |
| Reference electrode: | Silver/silver chloride |
| Counter electrode: | Platinum |
| Analytes and measurement range: | Glucose 0.1 mM to 50 mM |
| | Lactate 0.05 mM to 25 mM |
| | Glutamine Contact iST Jobst |
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| | Notes: - measured in acetate buffer at 37 °C - other measurement ranges and analytes on request |
| Sensitivity at 37 °C: | Glucose Typically: 0.4 nA/mM |
| Sterilization | Irradiation (beta, gamma) |
| | - recommended dose: < 25 kGy |
| | - sensitivity increases according to applied dose |
| | - lifetime decreases according to applied dose |
| | Initial bioburden < 1 CFU per sensor |
| | Do not use organic solvents, for more information, contact iST Jobst |
| Time (t _{90%}) to first measurement: | ~ 30 min after storage at 37 °C |
| Response time (t _{90%}): | < 90 s in acetate buffer at 37 °C |
| Temperature influence: | Glucose: ~3.8 %/K |
| | Lactate: ~3.2 %/K |
| Storage conditions: | +4 °C to +35 °C, desiccated |
| Shelf life at recommended storage conditions: | > 6 months (from delivery) |
| | > 2 years from fabrication |
| Operational lifetime (typical): | Glucose: > 120 days at 20 mM |
| | Lactate: > 7 days at 8 mM |
| | Notes: - measured in acetate buffer at 37 °C - lifetime may vary in other buffer systems |
| Operating temperature: | 15-42 °C |
| pH range: | 6-8 |
| Drift at 37 °C: | < 5 %/day |
| Suitable pH buffer systems: | Bicarbonate, acetate, imidazole, for more information, contact iST Jobst |
| | - to be used in buffered media only |
| | - buffer must contain chloride, [Cl ⁻] ca. 110 mM - not suitable for direct use in tap water or DI-water |
| Electrical connection: | FPC: compatible with 0.5 mm pitch FFC/FPC ZIF connectors |
| | JST: JST header 4-pin 0.8 mm female |

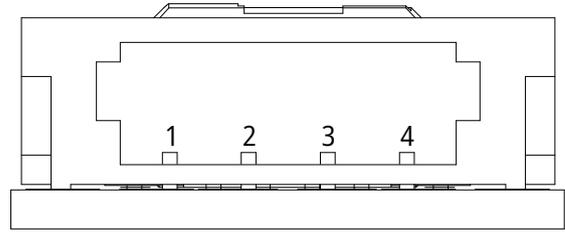
General note: Performance data in this document was determined in acetate buffer at 37 °C, pH 7 and normal atmospheric conditions. All parameters may vary in other media.



Pin assignment



B.IV4 FPC sensor contacts



B.IV4 sensor JST 4-pin 0.8 mm pitch connector side

| 1 | 2 | 3 | 4 |
|-----------|---------|-------|--------------------|
| Reference | Counter | Blank | Glucose or Lactate |

Order information

| Product description | Product name | Product number | Order code iST |
|----------------------------------|----------------|----------------|----------------|
| Biosensor glucose | B.IV4.G.1X.FPC | 1.00102.000 | 105127 |
| Biosensor glucose, JST connector | B.IV4.G.1X.JST | 1.00102.002 | 105192 |
| Biosensor lactate, JST connector | B.IV4.L.1X.JST | 1.00102.003 | 105191 |
| Other analytes | | On request | On request |

Disclaimer

Evaluation product for professionals to be used solely for research and development purposes! Not for medical and diagnostic use. Not to be used on humans. For more information, contact iST Jobst.



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