NANO

Celera MOTION
A Novanta Company

MicroE
Encoders

Optira™ Series Encoders

Miniature Precision Encoders for the World's Smallest Spaces

By combining the patented PurePrecision™ optical encoder technology from MicroE with state-of-the-art electronics and signal processing, the Optira Series delivers unprecedented performance in an incredibly small and lightweight package.

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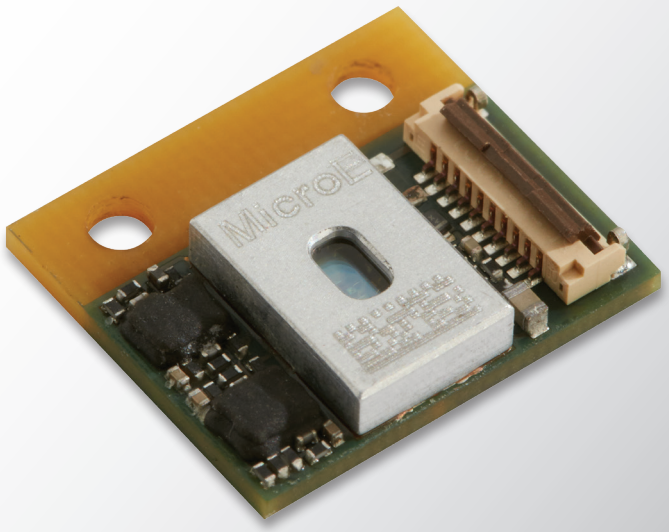

Actual Size

11.4 x 13 mm

MEDICAL | INDUSTRIAL | SCIENTIFIC | MICROELECTRONICS

Accelerate Your Innovation.

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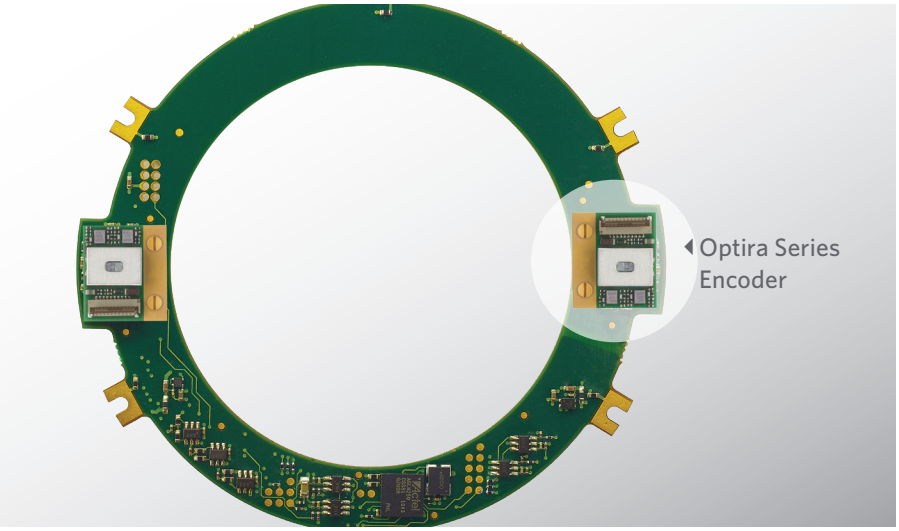

Smaller and Smarter.

Optira is the only encoder in its size class that offers up to 5 nm resolution with all interpolation, AGC, and signal processing performed in the sensor head. No additional PCBs, adapters, or dongles are required for operation.

Patented PurePrecision™ optical technology and industry-leading alignment tolerances from our MicroE encoders make Optira's miniature sensor head extremely easy to install. Optira's two mounting options, industry standard analog and digital incremental encoder outputs, and standard FFC connector provide the durability and flexibility needed by designers of miniature precision motion control systems.

Optira is engineered to deliver industry-leading low power consumption. A 3.3 VDC version is offered, making it ideal for battery-powered precision instruments.

Compatibility with our wide range of linear and rotary gratings and scales enables a miniature installation footprint.

Benefits

- Miniature footprint; interpolation and signal processing in sensor head
- Mechanical and PCB-mount options
- Easy installation
- Simple and flexible cabling/connectivity
- Durable mechanical and electrical design
- Multiple linear and rotary grating/scale options
- Alignment/Status LED in sensor head
- Optional connector board for index calibration and connector flexibility

Specifications	
Dimensions:	11.4 x 13.0 x 3.7 mm
Interfaces:	A-quad-B digital or 1 Vpp Sin/Cos analog
Resolution: (Interpolation in Sensor Head)	5 µm – 5 nm (linear) 2,000 CPR – 75M CPR (rotary)
Accuracy Class:	+/- 1 µm (linear glass) +/- 5 µm (linear metal tape) +/- 2 arc-seconds (rotary)
Input Voltage:	3.3 VDC or 5 VDC
Supply Current:	130 mA with 120Ω across A, B, I 100 mA with 120Ω across Sin/Cos, IW
Max Speed:	4 m/s
Index:	IW for analog and 5 µm digital LSB for 2.5 µm digital and above
Outputs:	Sin/Cos or A-quad-B, Index, Alarm
Status LED:	Yes
Operating Environment:	Atmospheric (standard) Vacuum version available
Scale Pitch:	20 µm
Repeatability: (Hysteresis)	≤ 1 LSB
Typical Sub-Divisional Error (SDE):	< 100 nm RMS
Weight:	< 1.5 g
Grating Compatibility:	Linear and Rotary

Specifications subject to change.

RoHS
CE

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125 Middlesex Turnpike | Bedford, MA 01730 USA
Tel.: 781.266.5200 | innovation@celeramotion.com | celeramotion.com